Anambah First Nations Heritage

Aboriginal Cultural Heritage Assessment Report

Report prepared for DB20 Pty Limited

February 2024

Sydney Office Level 17, 323 Castlereagh Street Haymarket NSW Australia 2000 T +61 2 9319 4811
Canberra Office 2A Mugga Way Red Hill ACT Australia 2603 T +61 2 6273 7540
GML Heritage Pty Ltd ABN 60 001 179 362
www.gml.com.au

Report Register

The following report register documents the development and issue of the report entitled Anambah First Nations Heritage—Aboriginal Cultural Heritage Assessment Report, undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
21-0037	1	Draft Report for Client Review	25 October 2021
21-0037	2	Draft Report for Client Review	9 December 2021
21-0037	3	Draft Report for Aboriginal Community Review	6 June 2022
21-0037	4	Draft Report for RAP Review	November 2023
21-0037	5	Final Report following RAP Review	February 2024

Quality Assurance

GML Heritage Pty Ltd operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2016.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Copyright

Historical sources and reference material used in the preparation of this report are acknowledged and referenced at the end of each section and/or in figure captions. Reasonable effort has been made to identify, contact, acknowledge and obtain permission to use material from the relevant copyright owners.

Unless otherwise specified or agreed, copyright in this report vests in GML Heritage Pty Ltd ('GML') and in the owners of any pre-existing historic source or reference material. Aboriginal cultural information is retained by the individuals or organisations who provided the information.

Moral Rights

GML asserts its Moral Rights in this work, unless otherwise acknowledged, in accordance with the (Commonwealth) *Copyright (Moral Rights) Amendment Act 2000*. GML's moral rights include the attribution of authorship, the right not to have the work falsely attributed and the right to integrity of authorship.

Right to Use

GML grants to the client for this project (and the client's successors in title) an irrevocable royalty-free right to reproduce or use the material from this report, except where such use infringes the copyright and/or Moral Rights of GML or third parties.

Contents Page

1.0 Introduction 1
1.1 Proposed Works 2
1.2 Statutory Context 5
1.3 Objectives of this Aboriginal Cultural Heritage Assessment 5
1.4 Authors and Contributors 6
2.0 First Nations Connections and Description of the Study Area 7
2.1 The Wonnarua Aboriginal People 7
2.1.1 Post-contact History 8
2.2 Environmental Background 12
2.3 Known First Nations Objects and/or Places 12
2.4 Endnotes 16
3.0 Consultation with the Local First Nations Community 18
3.1 Introduction 18
3.2 The Process of Consultation 2012—Stockland Project 18
3.2.1 Stage 1: Notification of Project 18
3.2.2 Stage 2: Presentation of Information 21
3.2.3 Stage 3: Gathering Information 21
3.2.4 Stage 4: Review of Draft Report 26
3.3 The Process of Consultation 2021—DB20 Project 26
3.3.1 Stage 1: Notification of Project 27
3.3.2 Stage 2: Presentation of Information 28
3.3.3 Stage 3: Gathering Information 29
3.3.4 Site Visit 29
3.4 Requirements for Future First Nations Consultation 31
3.5 Endnotes 31
4.0 Summary and Analysis of Background Information 32
4.1 Summary 32
4.1.1 The Physical Setting and Landscape Description 32
4.1.2 History of Peoples Living on the Land 32
4.1.3 Material Evidence Of First Nations Land Use 34
4.1.4 Preliminary Archaeological Zoning Plan 35
4.1.5 Archaeological Field Survey—Summary of Results 37
4.1.6 Viewing locations 39
4.1.7 Archaeological Test Excavation—Summary of Results 44
4.2 2023 Site Visit with RAPs 47
4.3 Limitations to the assessment 47
5.0 First Nations Heritage Significance Assessment 48
5.1 Significance Assessment 48
5.1.1 Social or Cultural Value 49
5.1.2 Historical Value 49
5.1.3 Scientific Value 49

5.1.4 Aesthetic Value *50*
5.2 Statement of Significance 50
5.3 Endnotes 51

6.0 The Proposed Project Activity 52
6.1 The Proposed Project Activity 52
6.2 Harm to First Nations Objects and Values 55
6.3 First Nations Heritage Management Strategy 56
6.3.1 Strategy—Impact Avoidance *56*
6.3.2 Strategy—Salvage Excavation *58*
6.3.3 Strategy—Community Collection *65*
6.3.4 Strategy—Public Interpretation *65*
6.3.5 Strategy—Management of First Nations Stone Objects *65*
6.3.6 Strategy—View Locations *66*
6.4 First Nations Heritage—Recommendations and Conclusions 68

7.0 Appendices 71
Appendix A
Legislation
Appendix B
Consultation Letters and Advertisement 2012
Appendix C
Consultation Letters and Advertisement 2021
Appendix D
Archaeological Technical Report
Appendix E
Archaeological Research Design

Executive Summary

DB20 Pty Limited (DB20) have engaged GML Heritage Pty Ltd (GML) to prepare an Aboriginal cultural heritage assessment report (ACHAR) for their landholdings within Anambah Urban Release Area (AURA). This report forms part of the environmental assessment for the study area to support development applications or assessments prepared under Part 4 and Part 5 of the NSW *Environmental Planning and Assessment Act 1979* and future Aboriginal Heritage Impact Permit (AHIP) application.

It aims to:

- complete the project originally started in 2015 for Stockland Pty Ltd;
- identify, assess and report on First Nations heritage values within the study area;
- involve the First Nations community in decisions with respect to its heritage;
- determine if any First Nations cultural heritage values are associated with the study area, and if the project may harm these values; and
- establish the mechanism for conserving First Nations cultural heritage values and mitigating any harms caused by the proposed development.

This ACHAR details the results of consultation with the First Nations community under the Heritage NSW *Aboriginal cultural heritage consultation requirements for proponents 2010*, and will support development applications, assessments and applications to Heritage NSW for an AHIP under S90 of the *National Parks and Wildlife Act 1974* (NSW) (NPW Act). This ACHAR should be read in conjunction with the associated First Nations Archaeological Technical Report (ATR), which details the archaeological fieldwork and scientific assessment undertaken, and provides the impact assessment, mitigation and management recommendations for Aboriginal objects (the ATR is Appendix D to this report).

The work undertaken to inform this ACHAR has identified First Nations social/cultural, scientific and aesthetic values associated with the study area. These values are associated with a number of stone artefact sites (cultural lithics, or Aboriginal objects), and four viewing locations, where observation of the local and regional cultural landscape can be made.

Under the current proposal, one First Nations archaeological site will be conserved (noting this site/place has identified intangible values linked to local traditions); a further 28 sites will be impacted as a result of proposed urban development. Intangible aesthetic values have been identified in connection with four viewing locations, which include local and regional views of the cultural landscape.

The study area has been investigated and assessed holistically. Consultation with Heritage NSW (14 November 2023) has confirmed that a whole of DB20 land AHIP can be issued. This will be conditioned with hold points that harm can then only occur by development stage on receipt of development consent. For each development consent, Heritage NSW will consider a plan and spatial data that defines progressive active and non-active areas within the AHIP related to development consents and confirm the works under each DA are consistent with the proposal in this ACHAR. If so, a written instruction will be issued that works can proceed. Should the works differ between the DA and ACHAR/AHIP, then an AHIP variation may need to be sought.

The principles, strategies and requirements for First Nations heritage management as detailed throughout this ACHAR (including salvage excavation, public interpretation, and community collection) should be implemented as sequential DAs are issued.

Report title	Anambah First Nations Heritage Aboriginal Cultural Heritage Assessment
Author name(s)	Tim Owen, Principal and former GML staff Jodi Cameron, Senior Heritage Consultant and Talei Holm, Heritage Consultant
Author contact details	GML Heritage Level 17, 323 Castlereagh Street, Haymarket, NSW 2000 Tel: 02 9319 4811
Address of subject area	Anambah Road, Anambah NSW 2320 (Maitland LGA)
Report prepared for	DB20 Pty Limited Wes van der Gardner 365 New South Head Rd, Double Bay NSW 2028 wes@rochegroup.com.au
Date of Report	February 2024
Use of report/ confidentiality	This report can be used for purposes associated with an AHIP application. It is not confidential.
This report is not confidential except as expressly stated	Heritage NSW may place it in a database, make hard and electronic copies available to the public, and communicate the report to the public. Heritage NSW has been advised that this report is not confidential or sensitive and has no restrictions on its distribution.
Copyright owner of the report	Historical sources and reference material used in the preparation of this report are acknowledged and referenced at the end of each section and/or in figure captions. Reasonable effort has been made to identify, contact, acknowledge and obtain permission to use material from the relevant copyright owners. Unless otherwise specified or agreed, copyright in this report vests in GML Heritage Pty Ltd ('GML') and in the owners of any pre-existing historical source or reference material. Aboriginal cultural information is retained by the individuals or organisations who provided the information.
Indemnity	GML asserts its Moral Rights in this work, unless otherwise acknowledged, in accordance with the (Commonwealth) *Copyright (Moral Rights) Amendment Act 2000*. GML's moral rights include the attribution of authorship, the right not to have the work falsely attributed and the right to integrity of authorship. GML grants Heritage NSW an irrevocable royalty free right to reproduce or use the material from this report, except where such use infringes the copyright and/or Moral Rights of GML or third parties.

This page complies with the *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW*.

1.0 Introduction

GML Heritage Pty Ltd (GML) was engaged by DB20 Pty Limited (DB20) to prepare an Aboriginal cultural heritage assessment report (ACHAR) for their landholdings in Anambah (the study area), Figure 1.1 and Figure 1.2. The study area is within the wider Anambah Urban Release Area (AURA) (Figure 1.2). This report forms part of the Environmental Assessment for the study area to support development applications or environmental assessments, prepared under Part 4 or Part 5 of the *Environmental Planning and Assessment Act 1979* (NSW) and AHIP application.

The study area is located on Wonnarua Country, in the Maitland Local Government Area (LGA) south of the Hunter River. The lot and DP numbers include:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171;
- Lot 56, DP 874170; and
- Section of River Road reserve that separates Lots 178 and 56.

In 2020 DB20 purchased a number of lots in Anambah, NSW, which were previously owned by Stockland Development (Figure 1.2). Between 2012 and 2015, GML Heritage (GML) worked with several local First Nations stakeholder groups to assess First Nations cultural heritage associated with these lots. The work included archaeological pedestrian survey and archaeological test excavation. In 2015, this work was halted, and reporting was not completed. Following the purchase of the study area by Roche, DB20 Pty Limited intend to develop the land for urban uses and are preparing development masterplan to guide this process. GML has been reengaged to complete the ACHAR and recommence Aboriginal community consultation.

Given the hiatus in the project's assessment process, we consulted with Heritage NSW as to the requirements for the assessment, defining the processes that could be continued from prior work, and those which needed to restart. The outcomes included:

- Aboriginal community consultation would need to restart. All RAPs who registered in 2012 were directly contacted and asked whether they wanted to continue as a RAP in 2021 and consultation has been ongoing since that time;
- prior archaeological work, including the pedestrian survey and test excavation remained valid, and work on these aspects could be completed;
- a site familiarisation was to be undertaken so that the current context and status of the area could be understood, and values identified during the prior phase of work could be updated; and
- all prior work from both project phases should be synthesised into a single ACHAR (with Archaeological Technical Report [ATR]).

The outcome of the process is this ACHAR (with ATR) that will be used to support future Development Applications (DA), environmental assessments, and Aboriginal Heritage Impact Permits (AHIP) (under Section 90 of the *National Parks and Wildlife Act* 1974 [NPW Act]).

The purpose of this report is to identify whether the Anambah study area possesses or has the potential to possess First Nations heritage—archaeological sites, places, objects, landscapes and/or values. We have worked with local First Nations stakeholders to develop a significance assessment for the identified First Nations archaeological sites, places, objects, landscapes and other connected values. An impact assessment and management recommendations are provided to assist DB20 with their future responsibilities for the management of First Nations cultural heritage within the study area.

1.1 Proposed Works

The study area is within the Anambah locality, approximately 45km northwest of Newcastle (Figure 1.1). Currently used for animal grazing and some cropping (Figure 1.2), the study area is located near the existing residential developments at Lochinvar, Rutherford and Windella, and was rezoned as an Urban Release Area for residential and urban uses in December 2020, excluding some rural lands to the west.

The proposed residential development within the study area involves the subdivision of the existing lots into approximately 2500–2800 residential dwellings (lots, multi-dwellings, and seniors housing), along with parks, playing fields, riparian linkages, a school and a commercial/retail centre. Overall, the area has the potential to accommodate 3500–4000 dwellings.

There may be some opportunities to integrate identified First Nations cultural and heritage values, including conservation of some archaeological sites, recognition of intangible First Nations values through the layout of parks and streets, and the interpretation of First Nations connections through future design initiatives. DB20 seeks to work with the local First Nations community to identify those locations, places and values which are important and to have these recognised through the development process.

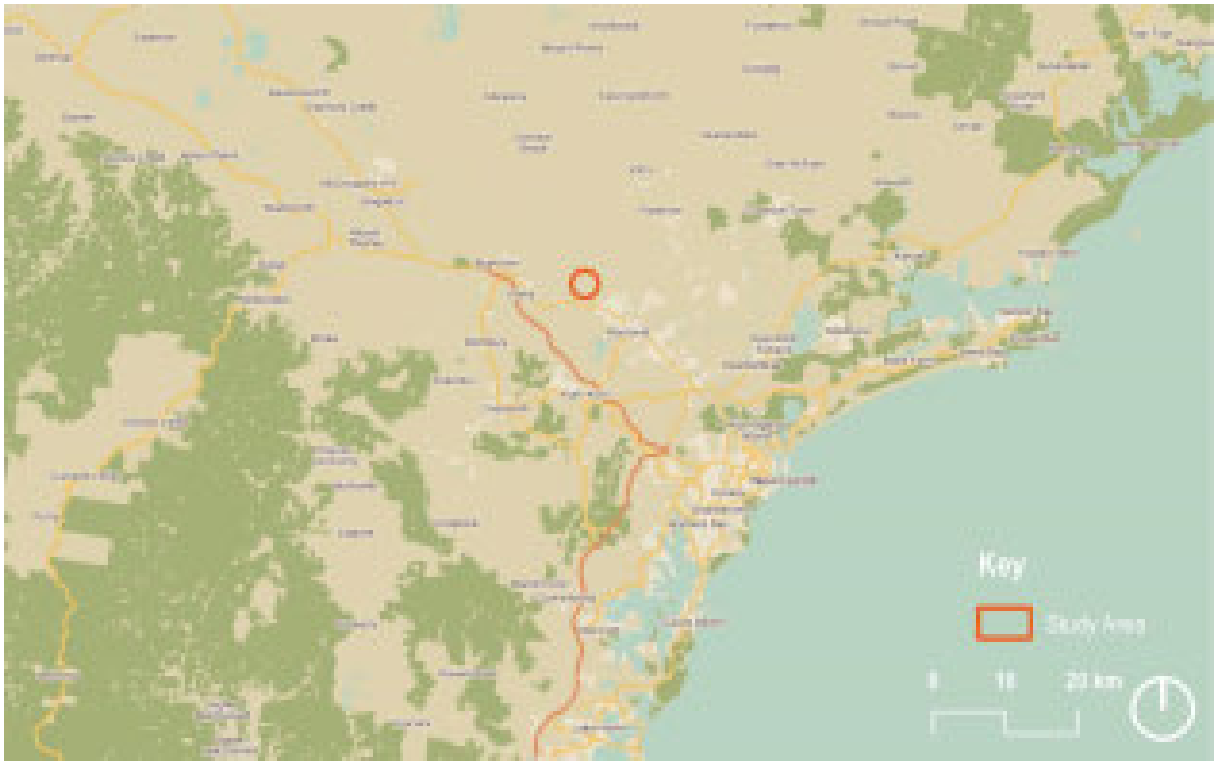


Figure 1.1 The study area's context within the Hunter region. (Source: Google, with GML additions, 2021)

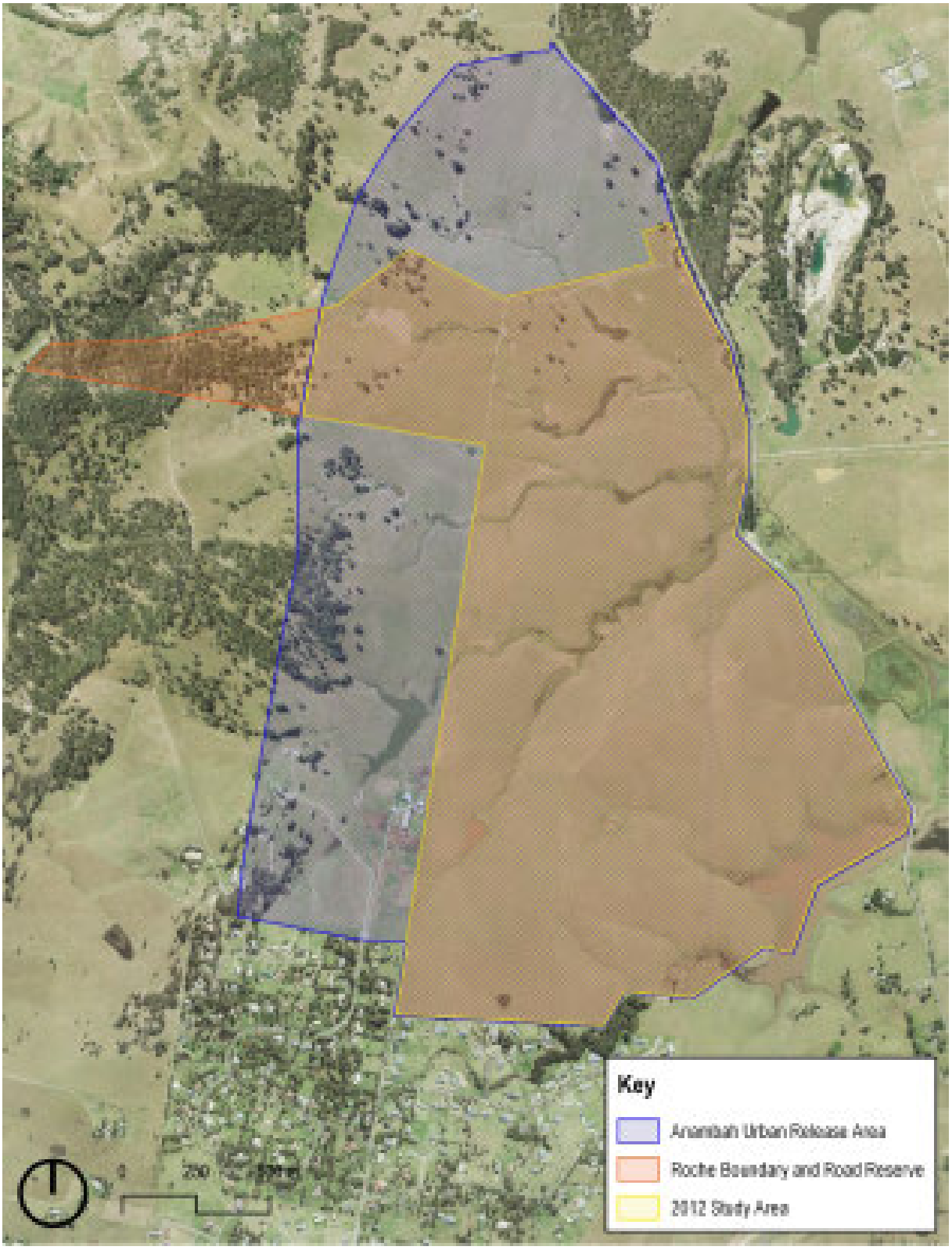


Figure 1.2 DB20 Landholding (the study area), Anambah Urban Release Area and the 2012 study area. (Source: NearMaps with GML additions, 2021)

Figure 1.3 The DB20 Landholdings (the study area) within a local context. (Source: Nearmaps with GML additions, 2021)

1.2 Statutory Context

The following statutory controls (detailed in Appendix A) are relevant to the study area and therefore this report.

- the *National Parks and Wildlife Act 1974* (NPW Act); and
- the *Environmental Planning and Assessment Act 1979* (EP&A Act);

Under Section 90 of NPW Act, the Proponent will require an AHIP should the development activities harm an identified Aboriginal object or Aboriginal place. Heritage NSW also requires the appropriate management of other First Nations heritage values if they are found to be connected a site.

This project aims to determine if harm can be avoided to any Aboriginal sites across the study area.

1.3 Objectives of this Aboriginal Cultural Heritage Assessment

The objectives of this assessment are:

- to undertake identification of First Nations community members who can speak for Country in the Anambah study area;
- to involve the local First Nations community in the cultural heritage assessment process;
- to consult with the local First Nations community and determine their opinions with respect to the project and its potential 'harm' to cultural heritage;
- to understand the range and type of heritage values and places within the study area;

- to determine whether the identified sites and places are a component of a wider landscape;
- to understand how the physical First Nations sites relates to tradition within the wider area;
- to prepare a cultural heritage values assessment for all identified aspects of First Nations cultural heritage, as identified within this report;
- to determine how the proposed project may impact the identified First Nations cultural heritage;
- to minimise impacts to First Nations cultural heritage through sensible and pragmatic site and land management, where feasibly and reasonably possible;
- to determine where impacts are unavoidable and develop a series of impact mitigation strategies that benefit First Nations cultural heritage and the proponent; and
- to provide clear recommendations for the conservation of First Nations heritage values and mitigation of any potential impacts to these values.

1.4 Authors and Contributors

This project has been undertaken by the following people. Each person's role and affiliations are detailed.

Table 1.1 Investigators and Contributors.

Person	Affiliation	Role
Tim Owen	GML	Project Director and author
Jodi Cameron	GML	Project Manager and author
Franz Reidel	GML	Excavation Director 2012/2013
Talei Holm	GML	Archaeologist and author
Laressa Berehowyj	GML	Archaeologist
Peter Woodley	GML	Archaeologist
Lyndon Patterson	GML	Archaeologist

2.0 First Nations Connections and Description of the Study Area

2.1 The Wonnarua Aboriginal People

The study area is located on the southern side of the Hunter River, northeast from Cessnock. Anambah is positioned inside the Mindaribba Local Aboriginal Land Council (MLALC) boundary, close to the traditional language border between the Wonnarua and Awabakal First Nations people.[1] Today, the boundary between these two groups has been drawn on the basis of the 1940s Norman Tindale map,[2] which suggests Anambah is located just inside the Wonnarua (Wonarua) area. We acknowledge that these boundaries may be incorrect, and reflect mapping drawn by non-Aboriginal persons nearly a century ago.

Following colonial invasion, the Newcastle to Hunter region became significant for its natural resources, including coal, timber, fresh water and rich agricultural lands. The colonial discovery of coal was followed by rapid non-Aboriginal occupation—very little was recorded regarding the original First Nations inhabitants of the region prior to 1830. By this time, the traditional lifestyle of First Nations people in the area had been greatly disrupted as a result of European occupation.[3] The following section provides an overview of the traditional lifestyle of the local First Nations inhabitants based on non-Aboriginal observations and ethnographic studies, and later works by historians such as James Wilson Miller, a Wonnarua man, and archaeologist Helen Brayshaw.

All First Nations groups in the lower Hunter had a rich and complex spiritual system, created by Baiame, 'the 'Father of All', the most important ancestor and the law-maker'.[4] The Wonnarua Nation Aboriginal Corporation (WNAC) website states:

> *According to the Wonnarua dreamtime the Hunter Valley was created by the great spirit, Baime (Byamee). Before Baime there was nothing, everything was sleeping. Baime awoke and created everything, the mountains, plains, rivers and every living thing.*[5]

Dreamtime and creation ancestors, and spirits were an integral part of life for First Nations people in this region. These ancestral beings co-existed alongside people and could influence the quality of life. Some spirits' role was to take physical form by entering a woman's womb to be born. Miller explains what this meant for relationships:

> *Surviving children became full spiritual and physical members of the tribe. Whether the child was male or female, its spiritual being and kinship relationships would already be known to the tribe … All members of the camp stood in some relation to the child. They were his kin. This was the Koori concept of the extended family … Kinship explained the physical relationship between people. As well, a system of moieties, sections and totems connected the human being to his or her spiritual ancestry.*[6]

The Wonnarua lived in groups of two to six extended family units in an allocated area where they could obtain food and resources. Depending on their location, different animals were hunted, including wallabies, emus, possums, various birds, lizards and snakes. Fish, shellfish and eels could also be obtained from rivers and lagoons. A variety of roots, fruits and nectars were also collected. Other materials were used for manufacturing implements, weaponry, clothing and ornaments, including bark, timber, plant fibres, resin, ochre, stone, bones, sinews, fat, furs and skins.[7] Wonnarua people moved according to seasonal availability of resources and interacted with each other and other neighbouring language groups at social gatherings and ceremonies.

The Wonnarua's neighbours at the time of European occupation are recorded to be the Awabakal, Darkinjung, Wiradjuri and Worimi. Trade and social and ceremonial interactions helped to strengthen the Wonnarua's relationships within their own clan and neighbouring groups. The Wonnarua traded a range of resources with their neighbours, such as stone axes, spears and possum skins, as well as ceremonial songs and dances. Movement across Wonnarua Country and into neighbouring traditional Country was facilitated by a network of travel and trade routes through the Hunter Valley.

Nineteenth-century European observers suggest fire was used by First Nations people in the region to attract game, deter Europeans, and for signalling or ceremonial purposes.[8]

First Nations landscape use within the Hunter Valley comprises a range of 'focus' points, which included significant places and landforms (associated with ancestral creation, tradition and ceremony), as well as places where food and water resources were plentiful (the rich alluvial plains adjacent to the Hunter River would have provided significant ecologically rich zones). The study area contains a number of natural features which may have provided resources for First Nations people. These features include:

- the Hunter River (near to the study area) and ephemeral streams in and surrounding the study area;
- the flat ridgeline area located in the northwest of the study area, which may have been a strategic vantage point; and
- vegetation formations in proximity to the Hunter River.

2.1.1 Post-contact History

The Convict Station 1801–1820

First contact between First Nations people and Europeans in the Maitland area occurred in the years after 1801, when the first official survey party visited the area. Led by Lieutenant James Grant, the survey party spent six weeks exploring the lower reaches of the river—from its mouth at the future site of Newcastle and upriver to Mount Ann (now renamed Mt Hudson) near the present-day town of Dalwood (upriver from the study area). The party reported a number of encounters with First Nations people on this part of the river, noting both the people and the environment they occupied.

Near Mount Ann, Grant noted a lagoon where his party shot a 'brace of ducks', and the presence of First Nations people in canoes of different sizes. He recorded several encounters with First Nations people during the expedition, describing how fires were lit in canoes so fish could be cooked while still on the water. Of the lagoon, Grant's companion, Lieutenant Colonel William Paterson, noted that it afforded food for the First Nations people in the area and that the ground around it and near the river was 'grubbed up, particularly where roots of ferns, orchids and a species of arum grow …'.[9] Gifts were exchanged with at least one individual in this part of the river, close to the study area. The man was invited on board the survey boat, an invitation which he accepted. Once on board, his companions—who remained hidden in the forest that lined the riverbanks—called to him and Grant was surprised by their numbers.[10]

In 1804, a permanent settlement was established on the coast at Newcastle, serving as a penal station for re-offending convicts tried in the colony. The convicts sent there were set to work mining coal, burning shells taken from the extensive First Nations middens that fronted the harbour for lime and cutting cedar and other valuable timbers along the river. In the years of the convict station, 1804–

1820, the timber getters were sent further upriver to access timber resources and came into increasing contact with First Nations people. Although there are few incidents reported of clashes or contacts between these parties and First Nations people, each timber gang included a detachment of soldiers to guard against escape as well as protect from attack.

First Nations people were employed as trackers to recapture convicts that absconded from the penal station. For this, they were resented by the convicts and there are records of fatal encounters between First Nations people and convicts within and around Newcastle. First Nations people were also employed as guides, assisting European explorers, such as John Howe, in his 1820 expedition to find a route between Windsor and the Upper Hunter. They also led hunting and fishing parties in the bushland surrounding the Newcastle penal station. European settlers describe entering 'trackless forests', while the local First Nations people knew the best ways to move through the region.[11]

From 1812, the first farms were established in the Maitland area along the banks of the Paterson River, approximately 11 kilometres to the east of the study area. These farms, occupied by convicts who were granted the land by Governor Macquarie as incentives for good behaviour, were the focus of the Bigge Report into the colonial administration under Governor Macquarie. As part of the enquiries in 1820, commissioner Bigge questioned the commandant at Newcastle, Major James Morisset, about European and First Nations relationships. Morisset reported that a military guard was in place near the farms to keep order and to protect the farmers from attacks. This was particularly the case around the corn harvest, when First Nations groups came into the field and took the ripening corn. However, Morisset also noted that some First Nations people assisted the settlers during the harvest, which was also documented by John Allen, a constable stationed at the farm settlement. Allen noted that except for the stealing of corn, the settlers lived on good terms with the local First Nations people.[12]

1821–1850 European Occupation

In 1821 the penal station at Newcastle was relocated further north to Port Macquarie, and the Hunter Valley was opened up for European settlement. The rush of people into the valley to take up fertile farmland put increasing pressure on the First Nations people living in the area. Yet, despite dislocation and disruption through violence and disease, First Nations people continued to live in the region. Accounts of settlers report a mix of traditional customs and adaptation to European practices.

First Nations men who had acted as guides for explorers, hunting expeditions and fishing trips, and as trackers to recapture runaway convicts, were now assisting European settlers coming into the Hunter Valley.[13] John de Marquet Blaxland, eldest son of John Blaxland—who had come overland to the Hunter Valley from Sydney in mid-1821—wrote in his journal that he headed upriver in boats with First Nations men from Wallis Plains (Maitland) on a kangaroo hunt.[14]

The study area falls inside the boundaries of a large grant made out to George Cobb in October 1822, comprising 2100 acres, which he named Anambah. Although George Cobb was granted the site, it was his brother John who lived on the property. The study area is also located within an area dedicated for use as a church and school (located immediately west of Cobb's grant). The church and school's land was set aside after 1826, when a seventh of all Crown Land was isolated for the support of the Anglican Church in NSW and the educational system under its control. Any revenue raised from the use of this land would have been used for this purpose.

The rapid influx of European settlers to the region was disruptive to the traditional life and customs of First Nations people. European farmers occupied traditional hunting, gathering and ceremonial grounds and drastically altered the landscape by clearing native vegetation and forest, fencing,

ploughing and draining swamps and lagoons. This impacted First Nations people's access to food and other resources. The displacement from traditional lands, cultural misunderstandings, mistreatment of First Nations people and biased application of European law against First Nations people eventually led to an uprising of the Wonnarua against European settlers.[15]

In 1826, the Wonnarua banded with the Wiradjuri to plan several attacks in the Hunter Valley. The Wiradjuri had led an uprising in 1824 in the Bathurst area, which was afterwards placed was under martial law.[16] The Wonnarua uprising targeted specific Europeans to receive judgement under First Nations laws.[17] Through careful observation, First Nations people learnt what was of economic importance to European settlers. They raided and torched crops and killed horses and livestock. European settlers across the Hunter demanded protection from the government but also directly retaliated against their attackers.

The newly formed mounted troops were eventually sent into the region. These troops had the advantage of being able to respond quickly to any reports of attack and more easily pursue retreating First Nations people compared to foot soldiers. The mounted police and European settlers treated the First Nations people brutally and many were killed over the next few years.[18]

One recorded massacre occurred in late August 1827 at Paterson River (17 kilometres northeast of the study area). A shepherd on EG Cory's estate killed a dog belonging to the Wonnarua. The Wonnarua retaliated by wounding the shepherd and torching the corn crop. In reprisal, the shepherd gathered a group of workers from the estate to attack the Wonnarua, killing 12 of them.[19]

The Wonnarua people were also affected by disease such as measles and syphilis. Unable to access traditional grounds, many died from starvation.[20] By 1830, the hostiles had ended and the British troops had defeated the Wonnarua.

The Wonnarua were forced to adapt to survive and many worked for European settlers. In 1830, Houston Mitchell, brother to Sir Thomas Mitchell, took up his land on the western boundary of Aberglasslyn, located to the east of the study area. In letters to his brother, Mitchell refers to First Nations people living on his land and nearby. In April 1830, he named the lagoon on his property Ýawarang, being the name two individual First Nations men told him for the place. In May he refers to the western portion of his land as Coolumbundara, again the name being informed by First Nations occupants. The following year, in April 1831, he told his brother the hilly portion of his land was called Walka and the nearby lake Potay. Mitchell notes that 'This information I distinctly received from about 50 natives who were seated at their respective fires on the prettiest part of (Walka) my land'.[21] Mitchell's revelation to his brother illustrates the cross-cultural exchange in language and place names that took place in some areas around the study area (Walka remains as an area name in Maitland). It also indicates at least some ongoing cultural practices and traditional life in the region, with First Nations groups still meeting and camping on the land around the study area up to 10 years after the European land rush and almost 30 years after the first Europeans arrived in the area.

In 1836, James Backhouse, a missionary and naturalist who was visiting the area, noted that a considerable number of First Nations people were working at Maitland for the inhabitants. First Nations workers were employed cutting timber and collecting water.[22] Also at this time, but further up the river around Scone, First Nations workers were employed on the sheep runs and pastoral estates, suggesting that First Nations people were employed across the Hunter Valley during the 1830s and 1840s by settlers and townspeople.[23]

From the 1860s, with ever-increasing pressure on land and resources, the remaining First Nations groups were mostly forced from their traditional land, moving into Maitland and other Hunter Valley towns or on to government reserves.

1850–Present Day

During the last decades of the nineteenth century, some European observers thought that First Nations people near Maitland had disappeared, but they had withdrawn to the Singleton, Gresford and Scone area. Some First Nations people continued to work and camp on European pastoral stations while others chose to avoid them to live, as much as they could, a more traditional life.

After the formation of the Aboriginal Protection Board in 1883, many First Nations people went to live on reserves and missions, such as the mission at Broughton Creek near Maitland and St Clair near Singleton. At the reserves and missions, First Nations people were provided with food rations, clothing and farming implements and encouraged to adopt European agrarian, moral and religious ideals.

At St Clair, Wonnarua, Awabakal, Worimi and Darkinjung people that would have once lived separately were merged. The First Nations families who lived on the reserve, cleared, fenced and successfully cultivated the land. They were considered excellent farmers, growing maize, vegetables and fruit as well as raising livestock. They also built their own slab huts.

Many of the First Nations men at St Clair and across the Hunter Valley continued to work for European pastoralists. They undertook a variety of jobs, such as fence building, ringbarking and clearing as well as working as shepherds and stockmen. Their contribution was vital to the success of pastoral industry and was often for very little payment.[24]

After 1904, the Aboriginal Protection Board handed the management of St Clair to the Australian Inland Mission (AIM). A church, mission hall and school were built there. The AIM missionaries allowed for First Nations people to continue aspects of traditional lifestyle alongside new European practices and AIM tried to provide a reasonable standard of living.[25] The AIM missionaries were, and still are, respected by the Wonnarua.[26]

In 1909, the *Aborigines Protection Act* was passed, which gave the Aboriginal Protection Board power to remove First Nations children and place them into training houses and apprenticeships. A home for First Nations children was established in Singleton and overseen by the AIM.[27]

Many community members departed following the appointment of TH Austin as manager of St Clair (renamed Mount Olive) in 1916. Mount Olive was closed by the Aboriginal Protection Board in the 1923, and the land was given to white former World War I servicemen.[28] Remaining residents moved to other nearby missions, such as Redbourneberry Hill in Singleton and Walhollow Station/Caroona Mission in Qurindi.[29]

In 1940, the *Aborigines Protection Act* was amended and the Aborigines Welfare Board (AWB) was created as part of a push for assimilation of First Nations people into white society. Under the amended act, First Nations children could also be removed under the *Child Welfare Act 1940* and become a ward of the AWB. These children were housed in AWB institutions or non-Aboriginal homes.

Since the 1950s, there has been a push for equality for Indigenous Australians. In 1962, the *Commonwealth Electoral Act 1918* was amended so all Indigenous Australians could enrol to vote in federal elections. In 1967, a referendum was past to count Indigenous Australians in the census and grant the Federal Government power to create laws that benefited Indigenous people. In 1969, the

AWB was abolished, and in 1972, the newly elected Whitlam Government established the Department of Aboriginal Affairs.[30] The Aboriginal Tent Embassy was established the same year in front of Parliament House, Canberra, and along with other Indigenous activists, continues to advocate for self-governance and treaty.[31]

The Wonnarau, like other First Nations groups across Australia, have been impacted by Australia's policies of assimilation and child removal. These policies have caused harm to the individual, family relationships, culture and identity, but as Laurie Perry, a Wonnarau man, has stated:

> *We understand that there was a struggle and that struggle was hard but they survived … and we're descendants of these people and we're here to tell the story, we're survivors and we haven't lost our language, our culture or who we are.*[32]

2.2 Environmental Background

Elevations within the study area are between 10–100 metres, with slopes between 0–10% and local relief generally between less than 10 metres and up to 40 metres. Drainage lines, ranging from ephemeral first order streams up to more permanent third order streams, are a common feature and are generally found at intervals of 200–1000 metres.

The study area contains a series of landforms with localised views to distant significant places in the wider locality (such as the Mount Sugarloaf Mountain), and a series of raised flats and ridgelines adjacent to lower order water courses. Given the study area possesses an erosional landform pattern containing some areas identified as aggrading landscapes, it is likely that some archaeological features are no longer in their original context or form.

As the study area is close to the Hunter River, a range of faunal and plant resources would once have been available to First Nations inhabitants. Such resources would have included small mammals, kangaroo, fish, berries, bark and other plant resources. Drainage lines within the study area flow to the east across the study area toward the Hunter River and a swamp. A number of lower order unnamed streams are present within the study area. Second order streams within the study area are fed by a number of first order ephemeral creek lines. Several of these second order streams have been dammed for agricultural purposes, with one dam of significant size located in the south of the study area.

The study area is likely to have been regularly visited by First Nations people in the past, given its proximity to a wide range of resources, including permanent freshwater, a variety of flora and fauna and excellent views of the surrounding landscape. The study area is located within a major catchment and close to a fifth order river. It is likely to have been visited and traversed during resource gathering activities and for short-term and long-term camping.

The study area has been subject to land clearing, ploughing and pastoral grazing of cattle and other livestock since European colonisation. These land use activities are likely to have moderately impacted First Nations heritage places and sites, for example, by disruption of site integrity through scattering artefacts.

2.3 Known First Nations Objects and/or Places

A detailed assessment of physical First Nations objects and places surrounding the current study area was undertaken. Reporting of these sites, objects and places is presented in the Archaeological Technical Report (ATR), attached to this ACHAR as Appendix D and summarised below.

The study area contains 28 sites and four viewing locations. Table 2.1 provides an overview of these objects, sites, places and landscapes and whether they will likely be harmed by the proposed project. Figure 2.1 maps the archaeological sites (First Nations objects) areas registered in AHIMS (study area and surrounds). AHIMS registration does not provide sufficient detail with respect to the extent of sites and values. We have therefore mapped the identified extent of First Nations archaeological site, and connected intangible values, as identified to GML through these works. This is provided in Figure 2.2. Reference should be made to Section 4.1.3 for a breakdown of the AHIMS results and section 4.1.6 relating to the viewing locations.

Table 2.1 Overview of First Nations heritage sites directly associated with the study area.

Site and PAD #	AHIMS #	Type of Harm	Degree of Harm	Consequence of Harm
PAD 1 & SAC 17	37-6-3574	Direct	Total	Total loss of value
PAD 2 & SAC 18	37-6-3575	Direct	Total	Total loss of value
PAD 3 & SAC 19	37-6-3578	Direct	Total	Total loss of value
PAD 4 & SAC 20	37-6-3579	Direct	Total	Total loss of value
PAD 5 & SAC 21	37-6-3580	Direct	Total	Total loss of value
PAD 6	None	Direct	Total	Total loss of value
PAD 7	None	Direct	Total	Total loss of value
PAD 8	None	Direct	Total	Total loss of value
PAD 9	None	Direct	Total	Total loss of value
PAD 10	None	Direct	Total	Total loss of value
PAD 11	37-6-3581	Direct	Total	Total loss of value
PAD 12 & SAC 13	37-6-3570	Direct	Total	Total loss of value
PAD 13 & SAC 23	37-6-3582	Direct	Total	Total loss of value
PAD 14 & IF 11	37-6-3558	Direct	Total	Total loss of value
PAD 15 & SAC 14	37-6-3571	Direct	Total	Total loss of value
PAD 16 & SAC 15	37-6-3572	Direct	Total	Total loss of value
PAD 17 & IF 12	37-6-3559	Direct	Total	Total loss of value
PAD 18 & IF 7	37-6-3573	Direct	Total	Total loss of value
PAD 19 & SAC 7	37-6-3564	Direct	Total	Total loss of value
PAD 20 & SAC 5	37-6-3563	Direct	Total	Total loss of value
PAD 21 & SAC 1	37-6-3560	Direct	Total	Total loss of value
PAD 22 & SAC 4	37-6-3562	Direct	Total	Total loss of value
PAD 23 & IF 8	37-6-3555	Direct	Total	Total loss of value
PAD 24 & SAC 6	37-6-3564	Direct	Total	Total loss of value

Site and PAD #	AHIMS #	Type of Harm	Degree of Harm	Consequence of Harm
PAD 25 & SAC 9	37-6-3566	Direct	Total	Total loss of value
PAD 26 & SAC 10	37-6-3567	Direct	Total	Total loss of value
PAD 27 & SAC 11	37-6-3568	Direct	Total	Total loss of value
PAD 28 & SAC 8	37-6-3565	Direct	Total	Total loss of value
IF1	37-6-3553	Direct	Total	Total loss of value
IF2	37-6-3554	Direct	Total	Total loss of value
IF9	37-6-3556	Direct	Total	Total loss of value
IF10	37-6-3557	Direct	Total	Total loss of value
SAC 2	37-6-3561	Direct	Total	Total loss of value
SAC 3	37-6-2777	None—outside area of works	None	None
All First Nations objects inside the study area in a subsurface context (except as part of 37-6-2777). (Restricted site purposely not mapped)		Direct	Total	Total loss of value

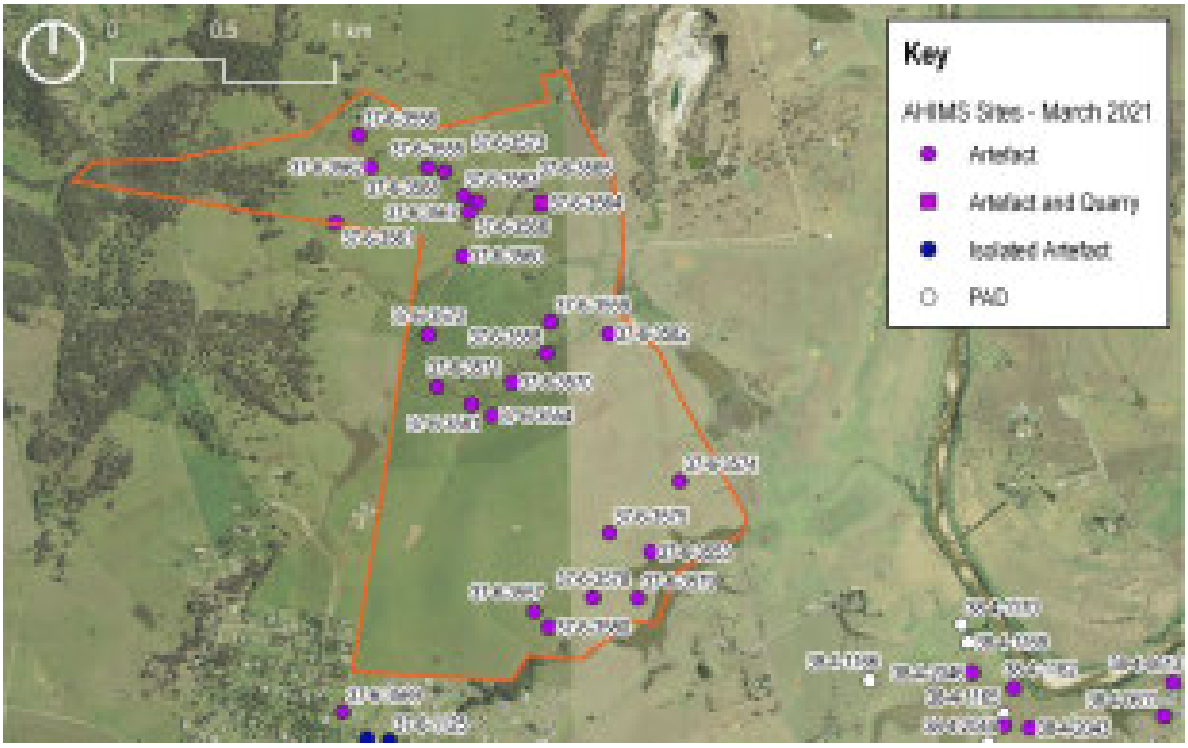


Figure 2.1 Results of the 2021 Aboriginal Heritage Information Management System (AHIMS) search. (Source: NSW LPI with GML additions, 2021)

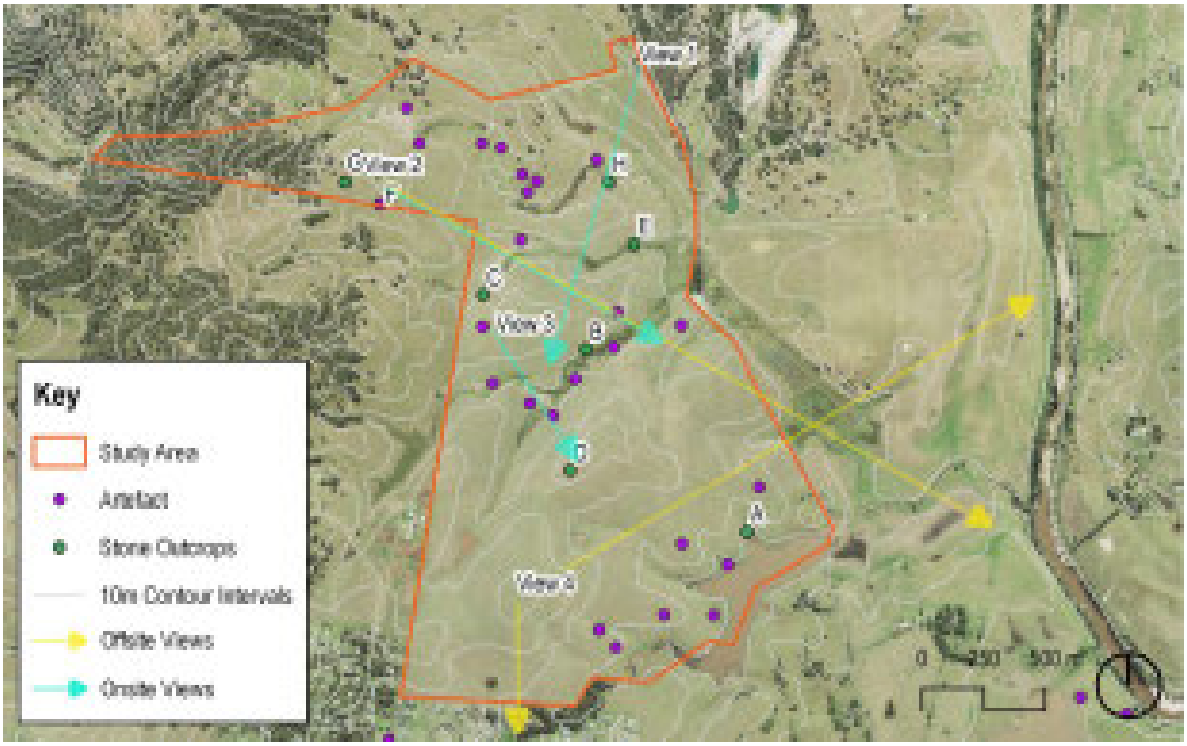


Figure 2.2 Detailed overview of First Nations heritage sites and values, in 2021, as identified under this assessment. (Source: NSW LPI with GML additions, 2021)

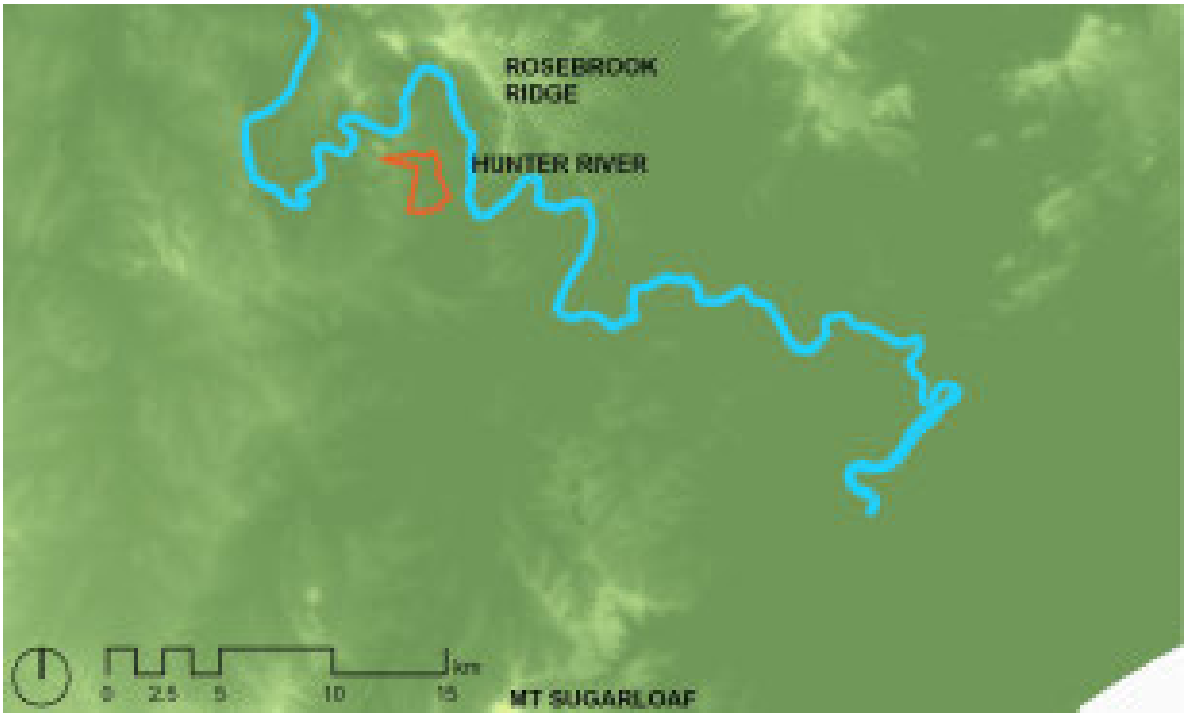


Figure 2.3 The study area with the broader landscape context. (Source: SIX Maps 2020 with GML additions, 2022)

2.4 Endnotes

1 Horton 1996. https://aiatsis.gov.au/explore/map-indigenous-australia
2 Tindale 1940. Map showing the distribution of the Aboriginal tribes of Australia. https://nla.gov.au/nla.obj-230054338/view
3 Brayshaw, H 1987, *Aborigines of the Hunter Valley: A Study of Colonial Records*, Scone & Upper Hunter Historical Society, Scone NSW, p 10.
4 Heritage NSW, 'Baiame Cave', NSW State Heritage Register, Listing no. 01942, viewed 31 March 2021, <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5061940#:~:text='According%20to%20the%20Wonnarua%20dreamtime,rivers%20and%20every%20living%20thing.&text=Everything%20was%20sleeping.>.
5 Wonnarua Nation Aboriginal Corporation, Overview, viewed 31 March 2021, <http://www.wonnarua.org.au/history.html>.
6 Miller, J, 'About the Wonnarua', p 2, viewed 31 March 2021, <http://wonnarua.org.au/images/about%20the%20wonnarua%202.pdf>.
7 Eureka Heritage, Aboriginal Cultural Heritage Preliminary Due Diligence Assessment Report, City Administration Centre, Maitland City Council, 263-281 High Street, Maitland, pp 27–30.
8 Brayshaw, H 1987, *Aborigines of the Hunter Valley: A Study of Colonial Records*, Scone & Upper Hunter Historical Society, Scone NSW; Facett, J W 1898 , "Notes on the Customs and Dialect of the Wonnah-Ruah Tribe" in *Science*, 23 August 23 1898, pp 152–154.
9 Paterson, W 'The First Exploration of the Hunter and Paterson.' *The Maitland Weekly Mercury* 31 October 1896, p 13, viewed 31 March 2021, <http://nla.gov.au/nla.news-article126328391>.
10 Grant, J 1973, *The Narrative of a Voyage of Discovery, Performed in His Majesty's Vessel The Lady Nelson, of Sixty Tons Burthen, with Sliding Keels, in the Years 1800, 1801, and 1802, to New South Wales.* Libraries Board of South Australia, Adelaide.
11 Dunn, M, 'Aboriginal Guides in the Hunter Valley, NSW' in Shellam, T & et al (eds) 2016, *Brokers and Boundaries: Colonial Exploration in Indigenous Territory*, ANU Press and Aboriginal History INC, Canberra, pp 64–65.
12 Turner, John (ed.) 1973, *Newcastle as a Convict Settlement: The Evidence before J.T. Bigge in 1819–1821*, Newcastle History Monographs No. 7, Newcastle Public Library, Newcastle.
13 Dunn, M 2016, 'Aboriginal Guides in the Hunter Valley, NSW' in Shellam T & et al (eds), *Brokers and Boundaries: Colonial Exploration in Indigenous Territory*, ANU Press and Aboriginal History INC, Canberra, p 65.
14 Blaxland, J M 1821, Journal, State Library of NSW, SAFE/C128.
15 Eureka Heritage, Aboriginal Cultural Heritage Preliminary Due Diligence Assessment Report, City Administration Centre, Maitland City Council, 263–281 High Street, Maitland, p 31.
16 Veale, S 2001, *Remembering Country: History and Memories of Towarri National Park*, NSW National Parks and Wildlife Services, p 13.
17 Nolan, R, ''We Want to Do What They Did': History at St Clair, University of Sydney, Department of History, unpublished Honours Thesis, 2012, p 17.
18 Veale, S 2001, *Remembering Country: History and Memories of Towarri National Park*, NSW National Parks and Wildlife Services, p 13.
19 University of Newcastle, Paterson River, Hunter Valley, Colonial Frontier Massacres in Australia, 1788–1930 website, 2019, viewed 1 April 2021, <https://c21ch.newcastle.edu.au/colonialmassacres/detail.php?r=625>.
20 Wilson-Miller, J 2005, 'Conflict in the Valley: the Triumph of the Wonnarua'. Australian Association For Research In Education 2005 Conference Papers, pp 5–6, viewed 1 April 2021, <http://www.aare.edu.au/05pap/wil05317.pdf>.
21 Mitchell, T L, Papers, State Library of NSW.
22 Backhouse, J 1843, *A Visit to the Australian Colonies*, London.
23 Eyre, E J, Autobiographical Narrative of Residence and Exploration in Australia 1832-1841, State Library of NSW, A1806.
24 Veale, S 2001, *Remembering Country: History and Memories of Towarri National Park*, NSW National Parks and Wildlife Services, pp 25–30.
25 Veale, S 2001, *Remembering Country: History and Memories of Towarri National Park*, NSW National Parks and Wildlife Services, pp 25–30.
26 Wilson-Miller, J, Interview, 23 August 2012, quoted in Nolan, R, ''We Want to Do What They Did': History at St Clair, University of Sydney, Department of History, unpublished Honours Thesis, 2012, p 25.
27 Veale, S 2001, *Remembering Country: History and Memories of Towarri National Park*, NSW National Parks and Wildlife Services, pp 25–30.
28 Eureka Heritage, Aboriginal Cultural Heritage Preliminary Due Diligence Assessment Report, City Administration Centre, Maitland City Council, 263–281 High Street, Maitland, p 32; Wilson-Miller, J 2005, 'Conflict in the Valley: the Triumph of the Wonnarua'. Australian Association For Research In Education 2005 Conference Papers, p 10, viewed 1 April 2021, <http://www.aare.edu.au/05pap/wil05317.pdf>.

[29] Nolan, R, ''We Want to Do What They Did': History at St Clair, University of Sydney, Department of History, unpublished Honours Thesis, 2012, p 25.

[30] Human Rights and Equal Opportunity Commission Report, *Bringing them Home: Report of the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from Their Families*, Commonwealth of Australia, 1997, Chapter 3, viewed 1 April 2021 <https://humanrights.gov.au/our-work/bringing-them-home-chapter-3#Heading30>.

[31] Australian Museum, Aboriginal Tent Embassy, viewed 2 April 2021, <https://www.nma.gov.au/defining-moments/resources/aboriginal-tent-embassy>.

[32] Perry, L, Interview, 12 July 2012, quoted in Nolan, R, ''We Want to Do What They Did': History at St Clair, University of Sydney, Department of History, unpublished Honours Thesis, 2012, p 50.

3.0 Consultation with the Local First Nations Community

3.1 Introduction

First Nations community consultation is required for any assessment of First Nations heritage in order to make a valid assessment of First Nations (heritage) 'values'; especially those First Nations memories, stories and associations between First Nations people and their traditional lands or Country. First Nations people frequently express an enduring connection to Country, a connection that transcends generations, both past and present. The connection is frequently expressed as a sense of belonging, which may manifest through physical objects or place; alternatively, it may be presented as an intangible idea, where an appreciation of an unseen quality or non-materialistic value connects a place in the landscape, tradition, observance, custom, lore belief and/or history to the person or group describing the item, event or value. The notion of intangible, social, or community values is essential to First Nations people as:

> *'The effective protection and conservation of this heritage is important in maintaining the identity, health and wellbeing of Aboriginal people'.*[1]

In order to gather social and community views and opinions with respect to First Nations heritage and identify and address First Nations heritage values, Heritage NSW requires proponents to adhere to the guideline document *Aboriginal cultural heritage consultation requirements for proponents 2010.*[2] In addition to providing a mechanism for engaging the First Nations community, the directives in the guidelines must be followed for any study that might eventually be used to support an application for an AHIP under Part 6 of the NPW Act.

GML recognises and acknowledges the continuing First Nations ownership of the traditional knowledge, (including, traditional cultural expressions, practices, innovations and intellectual property rights in the materials provided by First Nations people) which may be included in this ACHAR. We endeavour to protect the privacy, integrity and wellbeing of participants in this research.

As this ACHAR is a continuation of the process started in 2012, all parties which were registered in the 2012 project were notified of the recommencement and invited to re-register.

3.2 The Process of Consultation 2012—Stockland Project

First Nations groups were invited to register interest as a party to consultation. This included placing local press advertisement(s). Responses were then sought from the Registered Aboriginal Parties (RAPs) on the proposed assessment methodology. An opportunity to comment on the assessment reports and recommendations was provided to all RAPs.

The complete log of all communications between GML and RAPs and all letters, responses and details pertaining to the consultation undertaken for the Stockland project are provided in Appendix B.

Further details on staging are provided below.

3.2.1 Stage 1: Notification of Project

The aim of Stage 1 of consultation was to 'identify, notify and register First Nations people who hold cultural knowledge relevant to determining the cultural significance of First Nations objects and/or places in the area of the proposed project'.[3] The identification process involved:

- sending letters to select government agencies to determine relevant First Nations stakeholder groups to contact; and
- placing notices in local press, inviting First Nations people who hold relevant cultural knowledge to register in the process of community consultation.

A letter notifying all First Nations people and the Mindaribba Local Aboriginal Land Council (MLALC about the proposed project was sent to each individual and group identified through the above stages. First Nations people had a minimum of 14 days after the letter was sent or the notice published in the newspaper to register an interest in the project.

The outcome of Stage 1 was a list of First Nations people who registered to be involved in consultation. These were the Stockland project's RAPs, who were involved for the remainder of the project until it was halted in 2015. First Nations consultation with groups or persons outside of RAPs is not required.

Letters requesting contact details for First Nations people or organisations who may hold cultural knowledge and so may have been able to identify heritage issues relevant to the study area were sent via email on 11 May 2012 to:

- the Office of Environment and Heritage (OEH) (now Heritage NSW), Environment Protection and Regulation Group Region Office;
- Mindaribba Local Aboriginal Land Council (MLALC);
- Office of The Registrar, Aboriginal Lands Right Act 1983 (The Registrar);
- National Native Title Tribunal;
- Native Titles Service Corporation (NTSCORP);
- Maitland City Council; and
- the Catchment Management Authority (Hunter Local Land Service).

Responses were received from the following groups:

- the OEH;
- The Registrar;
- the NTSCORP;
- National Native Title Tribunal; and
- Maitland City Council.

Those First Nations people who were identified during this process were provided information regarding the project and invited to register an interest via letter on 21 May 2012. A notification was also placed in the *Maitland Mercury* on 21 May 2012, inviting registrations of interest by First Nations people with cultural knowledge relevant to the study area.

The Project's Registered Aboriginal Parties

Following this process, the project's RAPs were determined to be:

- Aboriginal Native Title Elders Consultants;
- Amanda Hickey;
- Cacatua Culture Consultants;
- Culturally Aware;
- D F T V Enterprises;
- DRM Cultural Management;
- Gidawaa Walang Cultural Heritage Consultancy;
- Gomeroi Namoi Traditional Owners;
- Hunter Valley Cultural Surveying;
- Kawul Cultural Services;
- Lower Hunter Aboriginal Incorporated;
- Lower Hunter Wonnarua Council Inc;
- TA Wallangan Cultural Services;
- Mindaribba Local Aboriginal Land Council (MLALC);
- Myland Cultural & Heritage Group;
- Ngarramang-Kuri Aboriginal Culture & Heritage Group;
- T & G Culture Consultants;
- Upper Hunter Wonnarua Council Inc;
- Warragil Cultural Services;
- Wattaka Wonnarua C.C. Service;
- Widescope Indigenous Group Pty Ltd;
- Wonn1 Contracting;
- Wonnarua Culture Heritage;
- Wonnarua Nation Aboriginal Corporation; and
- Yinarr Cultural Services.

A copy of the notification and the details of registered Aboriginal parties were provided to the OEH and MLALC on 5 July 2012.

3.2.2 Stage 2: Presentation of Information

A letter was sent to all RAPs informing them of the project outline, impacts, timeline and milestones. Included was a methodology for undertaking the project's assessment and a request for any information on culturally sensitive areas of local traditional knowledge relating to the study area. The RAPs were given 28 days to respond.

Each RAP group was provided with written details of the proposed project and a survey/test excavation sampling strategy by post and email on 6 June 2012. All stakeholders agreed to the proposed methodology.

Further details of the First Nations consultation undertaken for the Stockland project are provided in Appendix B.

A meeting with the RAPs was held on 8 August 2012 to present the information and the methodology. Representatives from 11 of the RAPs attended. A late registration of interest from the Gomeroi Namoi Traditional Owners was accepted at this meeting.

Feedback provided by the attendees at the meeting included:

- the landform is similar to other surrounding project areas which have had archaeology;
- a management plan should be put in place following the work;
- this project should be based on a 'good will' process—a management plan should be part of the archaeological process;
- involving all RAPs in fieldwork is considered, by the community, to provide better coverage and allow for better reporting on cultural matters; and
- those RAPs who were at meetings should be part of field work.

3.2.3 Stage 3: Gathering Information

Field Survey

The field survey for the assessment was undertaken from 20–23 September 2012. A total of 18 local First Nations community representatives participated in the survey as per Table 3.1. The field survey aimed to inspect the entirety of what were then Stockland's land holdings within the Anambah Investigation Area, where ground surface visibility existed. The survey methodology and project was discussed with the First Nations stakeholders prior to and on the day of the survey.

All participants were involved in identifying First Nations objects, recording sites and determining the potential archaeological extent of deposits. At the completion of the survey, an open discussion was held, during which the objects recorded and the archaeological potential and required test and/or salvage excavation was discussed and agreed upon by all present. The outcomes of this consultation underwrite this ACHAR.

Table 3.1 Registered Aboriginal Parties that Participated in the Field Survey and their Representatives.

Registered Aboriginal Party	Representative(s)
Cacatua Culture Consultants	Adam Sampson, Legan McCormack
Culturally Aware	Tracey Skene
D F T V Enterprises	Derrick Vale
DRM Cultural Management	Helen Faulkner
Gidawaa Walang Cultural Heritage Consultancy	Ann Hickey
Gomeroi Namoi Traditional Owners (Stephen Talbott)	Peter Whitten
Hunter Valley Cultural Surveying	Luke Hickey
Kawul Cultural Services	Kerrie Slater
Lower Hunter Wonnarua Council Inc.	Lionel McGrady
Mindaribba LALC	Mathew Yates
Myland Cultural and Heritage Group	Lennie Wright
Ngarramang-Kuri Aboriginal Culture & Heritage Group	David Ahoy
T&G Culture Consultants	Greg Griffiths
TA Wallangan Cultural Services	Tony Waugh
Warragil Cultural Services	Arika Jalomaki
Widescope Indigenous Group Pty Ltd	Steven Hickey
Wonnarua Culture Heritage	Shannon Griffiths
Wonnarua Nation Aboriginal Corporation	Maree Waugh

Test Excavation

Test Excavation for the assessment was undertaken in two stages, the first running from 22 November 2012 to 7 December 2012 and the second from 13 March 2013 to 20 March 2013. Both stages of excavation included representatives from:

- Cacatua Culture Consultants;
- Culturally Aware;
- D F T V Enterprises;
- DRM Cultural Management;
- Gidawaa Walang Cultural Heritage Consultancy;
- Gomeroi Namoi Traditional Owners;
- Hunter Valley Cultural Surveying;

- Kawul Cultural Services;
- Lower Hunter Wonnarua Council Inc.;
- Mindaribba LALC;
- Myland Cultural and Heritage Group;
- Ngarramang-Kuri Aboriginal Culture & Heritage Group;
- T&G Culture Consultants;
- Upper Hunter Wonnarua Council;
- TA Wallangan Cultural Services;
- Warragil Cultural Services;
- Widescope Indigenous Group Pty Ltd;
- Wonn1;
- Wonnarua Culture Heritage;
- Wonnarua Nation Aboriginal Corporation;
- Yinarr Cultural Services; and
- Wattaka Wonnarua C.C. Service.

A total of 55 local First Nations community representatives (Table 3.2) participated over the two seasons:

Table 3.2 List of community representatives that participated in fieldwork and their affiliations.

Name	Affiliation	Name	Affiliation
Adam Sampson	Cacatua Culture Consultants	Kayla Whitter	Gomeroi Namoi Traditional Owners
Andrew French	Ngarramang-Kuri Aboriginal Culture & Heritage Group	Kerrie Slater	Kawul Cultural Services
Ann Hickey	Gidawaa Walang Cultural Heritage Consultancy	Lacey Gananburgh	Widescope Indigenous Group Pty Ltd
Ashley Sampson	Cacatua Culture Consultants	Lateeka Eggins	Yinarr Cultural Services
Ben Smith	Lower Hunter Wonnarua Council Inc.	Linda Whitten	Gomeroi Namoi Traditional Owners
Betty Bennett	Widescope Indigenous Group Pty Ltd	Lionel McGrady	Lower Hunter Wonnarua Council Inc.
Bradley Leonard	Ngarramang-Kuri Aboriginal Culture & Heritage Group	Luke Hickey	Hunter Valley Cultural Surveying
Carly Berry	Upper Hunter Wonnarua Council	Maree Waugh	TA Wallangan Cultural Services and Wonnarua Nation Aboriginal Corporation

Name	Affiliation	Name	Affiliation
Cedric Wright	Myland Cultural and Heritage Group, T&G Culture Consultants	Norm Archibald	Yinarr Cultural Services
Christine Deven	Lower Hunter Wonnarua Council Inc.	Norm Porter	Warragil Cultural Services
Clive Suey	Myland Cultural and Heritage Group	Pete' O'Brien	Mindaribba LALC
Daniel Scott	Wonn1	Peter Whitten	Gidawaa Walang Cultural Heritage Consultancy
Dean Miller	Lower Hunter Wonnarua Council Inc.	Rebecca Lester	Wonnarua Nation Aboriginal Corporation
Dennis Tapaleao	DRM Cultural Management	Rick Slater	Kawul Cultural Services
Derrick Vale	D F T V Enterprises	Ricki-Jo Griffiths	Mindaribba LALC
Donna Swan	Culturally Aware	Rob Slater	Kawul Cultural Services
Dwayne Shaw	Wattaka Wonnarua C.C. Service	Rod Hickey	Kawul Cultural Services
Georgina Berry	Upper Hunter Wonnarua Council	Sandra Jones	Wonnarua Nation Aboriginal Corporation
Greg Slater	Warragil Cultural Services	Shannon Griffiths	Wonnarua Culture Heritage
Helen Faulkner	DRM Cultural Management	Steven Campbell	Yinarr Cultural Services
Jake Dacey	Gidawaa Walang Cultural Heritage Consultancy	Steven Hickey	Widescope Indigenous Group Pty Ltd
James Ballangarry	D F T V Enterprises	Timothy Smith	DRM Cultural Management
Jeffrey Swan	Wonnarua Nation Aboriginal Corporation	Tod Maley	Lower Hunter Wonnarua Council Inc.
Jenny Chambers	Cacatua Culture Consultants	Tony Waugh	TA Wallangan Cultural Services
Joey Griffiths	Wonnarua Culture Heritage	Trevor Archibald	Widescope Indigenous Group Pty Ltd
Joshua Griffiths	Wonnarua Culture Heritage	Troy Wilson	Myland Cultural and Heritage Group
Justin Wilson	Cacatua Culture Consultants	William Smith	Culturally Aware
Katina Vale	D F T V Enterprises		

The test excavation aimed to sample landforms for archaeological potential and target PADs identified during the survey.

During the assessment process, we discussed local First Nations heritage values, places and sites with the RAPs. This provided an understanding of the local perspective on First Nations habitation and subsistence patterns; as well as understanding of some local intangible values and connection with the cultural landscape.

Table 3.3 summarises the heritage aspects and values identified by the local First Nations community. Table 3.4 summarises how these submissions have been addressed or incorporated into this assessment.

Table 3.3 Comments Received during Consultation with Respect to Cultural Heritage Values within or associated with the Study Area.

#	RAP	Date of Submission	Format	Comment
1	Lower Hunter Wonnarua Council In	8 August 2012	Verbal	The landform is similar to other surrounding areas that have had archaeology. A management plan should be put in place following the work.
2	Culturally Aware	20 August 2012	Verbal	The bigger hills have views to Sugarloaf. Some of the hills were markers, for example, Sugarloaf and Brokenback ranges. Different people were located on bigger hilltops for visibility. In all four directions from the study area is a lot of sensitive landscape, particularly 20/25km in SW direction.
3	Hunter Valley Cultural Surveying	21 August 2012	Verbal	Recognises how Country is defined by the creeks flowing into Country.
4	Hunter Valley Cultural Surveying	22 August 2012	Verbal	Wonarua—trade route to the ocean from Paterson. Mt Olive Mission, which closed in the1900s, was located inland near Paterson and Luke's mother informed him of the mission and the trade route. Mount Sugarloaf is a ceremonial area where all mobs met. It is uncertain but there may have been/still [are] be bora grounds around the foot of the mountain. Mount Sugarloaf was used for orientation. It is a boundary marker the border with Awabakal land which runs along the Liverpool ranges. It took weeks, if not [a] month, to make the journey. When the wattle flowered, that was the time to go fishing, particularly for Taylor fish. From the Hunter River to Mount Pleasant there is a pattern of stone reduction—material quarries at the river, uphill they started turning material into cores and then there is a site on the top of the hill.
5	Widescope Indigenous Group Pty Ltd	20 August 2012	Verbal	When standing at PAD 2, Steven commented that a good time to hunt was during or following a flood as the wild game would congregate on high ridges.
6	Widescope Indigenous Group Pty Ltd	21 August 2012	Verbal	Aboriginal people would travel into this region, from the NW for certain ceremonies, such as initiation or gathering ceremonies, where boys aged 14–15 (just before manhood) would gather. The track they followed was from the Upper Hunter to a point to Elders had designated. The initiated boys would need to collect items representative of the sky, land and water —ie elders ask for fish/crab/duck; kangaroo/goanna. This showed their hunting skills were good and that they were looking to manhood. It also prove[d] that they could live off the land.
7	Widescope Indigenous Group Pty Ltd	21 August 2012	Verbal	Family groups of 12–15 people comprised clans which were of approximately 350 people. Clans gather together to form the tribe. Laws were dealt with by the head of a clan, which was usually a female.

#	RAP	Date of Submission	Format	Comment
8	Widescope Indigenous Group Pty Ltd	21 August 2012	Verbal	All the stone materials tell a story—certain clans used different materials for certain purposes. Materials tell where people came from.

Table 3.4 GML Responses to RAP Comments Made during Consultation.

#	GML's response
1	A draft Plan of Management was developed with the RAPs in 2013 for Stockland. Implementation of relevant commitments from the PoM has culminated in the development of this ACHAR.
2	This comment has informed our understanding of the study areas importance within the wider landscape and has influenced the significance assessment.
3	Incorporated into understanding of the study area within the wider landscape.
4	This comment has informed out understanding of the study areas importance within the wider landscape and has influenced the significance assessment.
5	Assisted in our understanding of resource management and economic value of the study area.
6	Informed our understanding of ceremonies within the region and the importance of the landscape.
7	This comment has informed our understanding of social structures and population size on Wonnarua and Awabakal Country.
8	This comment assisted in maintaining throughout the report that tangible and intangible cultural values are intertwined.

3.2.4 Stage 4: Review of Draft Report

The project was paused before Stage 4 of community consultation could commence. In 2021, new community consultation commenced.

3.3 The Process of Consultation 2021—DB20 Project

The consultation guidelines set out a process involving identification, registration, engagement and consultation with First Nations peoples who may hold cultural knowledge relevant to determining the significance of a First Nations object and/or place. They are included for the benefit of all First Nations groups who will be involved in consultation for the DB20 project.

To date, consultation has involved the following stages:

- informing First Nations people about the nature and scope of the proposal;
- understanding what might be present in the landscape and its cultural significance;
- determining the potential impacts and the proposed strategies to deal with them; and
- review of this report by RAPs and Roche.[4]

The complete log of all communications between GML and RAPs, and all letters, responses and details pertaining to the consultation undertaken for the DB20 project, are provided in Appendix C.

3.3.1 Stage 1: Notification of Project

The aim of Stage 1 was:

> *To identify, notify and register Aboriginal people who hold cultural knowledge relevant to determining the cultural significance of Aboriginal objects and/or places in the area of the proposed project'.* [5]

The identification process involved:

- sending letters to select government agencies to determine relevant First Nations stakeholder groups to contact; and
- placing notices in the local press to invite First Nations people who hold relevant cultural knowledge to register for the process of community consultation.

A letter notifying all First Nations people and the Mindaribba Local Aboriginal Land Council (MLALC) about the proposed project was sent to each individual and group identified through the above process. First Nations people were given a minimum of 14 days after the letter was sent or the notice was published in the newspaper to register an interest in the project.

A list of First Nations people who registered to be involved in consultation is included below. These are the RAPs for the DB20 project and will be involved for its remainder. No First Nations consultation outside of the RAPs is required by Heritage NSW.

Letters requesting contact details for First Nations people or organisations who may hold cultural knowledge and/or may identify heritage issues relevant to the study area were sent via email on 16 March 2021 to:

- Heritage NSW;
- Mindaribba Local Aboriginal Land Council (MLALC);
- the Office of The Registrar, Aboriginal Lands Right Act 1983 (The Registrar);
- the National Native Title Tribunal;
- the Native Titles Service Corporation;
- Maitland City Council; and
- the Catchment Management Authority (Hunter Local Land Service).

Responses were received from the following groups:

- Heritage NSW;
- Mindaribba LALC;
- National Native Title Tribunal; and
- Maitland City Council.

First Nations people who were identified during this process were provided information regarding the project and invited to register an interest by letter on 31 March 2021. A notification was also placed

in the *Maitland Mercury* on 2 April 2021 to invite registrations of interest by First Nations people with cultural knowledge relevant to the study area.

After a meeting with Heritage NSW, it was determined a special invitation should be sent to those RAPS involved in the 2012 project that were not on the list provided by Heritage NSW. This invitation included the ARD for review. This was sent on the 3 May 2021.

The Project's Registered First Nations Parties

In line with the outcomes of Stage 1 following Heritage NSW's guidelines,[6] the project's RAPs are:

- AGA Services;
- Anonymous RAP;
- Awabakal Traditional Owners Aboriginal Corporation;
- Cacatua Culture Consultants;
- Culturally Aware;
- Didge Ngunawal Clan;
- Jarban & Mugrebea;
- Kawul Pty Ltd. Trading as Wonn1 Sites;
- Mindaribba Local Aboriginal Land Council;
- Wallangan Cultural Services;
- Widescope Indigenous Group Pty Ltd;
- Wonnarua Elders Council;
- Wonnarua Nation Aboriginal Corporation; and
- Yarrawalk (Tocomwall).

A copy of the notification and the details of RAPs were provided to Heritage NSW and the MLALC on 30 April 2021.

3.3.2 Stage 2: Presentation of Information

The aim of Stage 2 was:

> *To provide registered Aboriginal parties with information about the scope of the proposed project and the proposed cultural heritage assessment process.*[7]

A letter was sent to all RAPs informing them of the DB20 project outline, impacts, timeline and milestones.

Stage 2 was combined with the beginning of Stage 3.

3.3.3 Stage 3: Gathering Information

The aim of Stage 3 was:

To facilitate a process whereby registered Aboriginal parties can:

(a) contribute to culturally appropriate information gathering and the research methodology

(b) provide information that will enable the cultural significance of Aboriginal objects and/or places on the proposed project area to be determined

(c) have input into the development of any cultural heritage management options.[8]

Fieldwork Methodology

A proposed methodology for undertaking field assessment and a request for any information on culturally sensitive areas of local traditional knowledge relating to the study area was included in the Stage 2 letter sent to all RAPs.

Heritage NSW outlines that 28 days must be allowed for the RAPs to respond to the project methodology.

Each group identified in Stage 1 (2021 consultation) was provided with written details of the proposed project and a site meeting strategy by post and email on 30 April 2021. Those RAPs who were involved in the earlier 2012 consultation were also invited to reregister by letter and email on 3 June 2021.

RAPs were given 28 days to respond. All stakeholders agreed to the proposed methodology.

Table 3.5 summarises the RAPs feedback to the project documentation:

Table 3.5 Registered Aboriginal Parties Feedback on the Proposed Project Methodology.

RAP	Comment	Resolution
Anonymous RAP	Approves ARD and request to attend site visit	Noted
Didge Ngunawal Clan	Request to attend site visit	Noted
Widescope Indigenous Group	Approves ARD and request to attend site visit	Noted
Yarrawalk (Tocomwall)	Approves ARD and request to attend site visit	Noted
Upper Hunter Wonnarua Council Inc	Registered for the project and requests to attend site visit	Noted

Further details of the First Nations consultation undertaken for the study area for the DB20 project are provided in Appendix C.

3.3.4 Site Visit

Due to the Covid 19 restrictions, a site visit could not be undertaken during the initial development of the ACHAR in 2021/2022. It was determined that a site visit could be facilitated following the NSW governments relaxation of COVID restrictions and as masterplanning progressed. A site inspection was facilitated as part of RAP review of the draft ACHAR in November 2023. This allowed RAPs the opportunity to read and consider the report, then visit site to confirm or question any aspect. A further

period of time was allowed following the visit to allow RAPs the opportunity to provide written or verbal comments on the report.

Table 3.6 lists the RAPs who attended the visit on 7 December 2023, Table 3.7 provides details of comments received during the inspection, and Table 3.8 details comments received post the inspection during the period for comment on the ACHAR. Apologies for not being able to attend the site inspection were received from Tracey Skene (Culturally Aware) and Mindaribba Local Aboriginal Land Council.

Table 3.6 RAPs Who Attended the inspection.

Name	Organisation
Mr Arthur Fletcher	Kawul Pty Ltd. Trading as Wonn1 Sites
Mr Paul Boyd	Didge Ngunawal Clan

Table 3.7 Comments Received during the inspection.

RAP	Comment	Resolution
Arthur Fletcher	Comment on the likely importance of lithics within the northern areas, in connection with the creek system. Wanted to view the outcrops of silcrete, as identified.	We visited these locations and saw some basic cobbles, noting the grass cover was higher than during the initial inspection.
Arthur Fletcher and Paul Boyd	A series of questions relating to cultural artefact management were posed. These are set out in the 'Anambah ACHAR Review document', issued to all RAPs on 8 December following the site inspection.	The questions on management were posed to all RAPs, and asked to be addressed in their return of comment on the ACHAR.
	The key comment was: 'Can the artefacts be returned inside the no-harm, conservation area?'	It is suggested at the northwest of this area, in a location which is not covered by existing vegetation. This location has been identified as a 'return to Country' location under the AHIP. Further comment on this proposal and the location was not received from any RAPs. We have therefore included it as a possible designated location for the reburial of cultural lithics under the AHIP.

The aim of Stage 4 is:

> *To prepare and finalise an Aboriginal cultural heritage assessment report with input from registered Aboriginal parties.*[9]

Following client review of this draft ACHAR, RAPs must be provided with a copy for review and comment. The OEH guidelines state RAPs should be allowed 28 days to provide comment on the draft report. All community comments would be appended to the report and appear in the final ACHAR.

Copies of the draft report were sent to the RAPs on 16 November 2023 for their review and feedback on the content, assessment and recommendations. Comments are due by 1 February 2024 (allowing a review period of 10 weeks, which is considered appropriate given the quantum of reporting provided) and will be incorporated into the final report.

Summary of First Nations Cultural Values Identified

A single comment on the ACHAR and management of cultural lithics was provided. This is quoted in Table 3.8, and included as management under Section 6.3.5.

Table 3.8 Registered Aboriginal Parties Comments with Respect to Cultural Heritage Values within or associated with the Study Area.

#	RAP	Comment
1	Didge Ngunawal Clan	'We believe that artefact should be returned in a 1.5m deposit in a hard case with labelled bags and CD'.

3.4 Requirements for Future First Nations Consultation

Once all comments have been received and incorporated, the ACHAR will be finalised. Copies of the final report will be sent to all RAPs, along with an AHIP submission, if required. Any future work relating to the First Nations archaeological mitigation, or any significant changes to the development, should include consultation with the RAPs.

3.5 Endnotes

1 Department of Environment, Climate Change and Water 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney.

2 Department of Environment, Climate Change and Water 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney.

3 Department of Environment, Climate Change and Water 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney, p 10.

4 List taken from Department of Environment, Climate Change and Water 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney, p 10.

5 Department of Environment, Climate Change and Water 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney, p 10.

6 Heritage NSW Guidelines for Community Consultation.

7 Department of Environment, Climate Change and Water 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney.

8 Department of Environment, Climate Change and Water 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney.

9 Department of Environment, Climate Change and Water 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney.

4.0 Summary and Analysis of Background Information

This background assessment synthesises information from the ATR (Appendix D), relevant contextual information, and input from community consultation to broadly describe the cultural landscape of the study area.

4.1 Summary

The following information is a summary of Section 2 and 3 of the ATR (Appendix D). The landscape of the study area consists predominantly of creeks banks, ridges and slopes. Across the region, stone artefact clusters and PADs are the most common site types and most sites studied are from the mid to late Holocene. Within the study area, flats, slopes and hilltops have the most potential to contain archaeological deposits.

4.1.1 The Physical Setting and Landscape Description

Roche's land holdings within Anambah comprise approximately 340 hectares, extending across a number of landforms including:

- drainage lines;
- flat land;
- dams;
- slopes; and
- ridgelines.

These landforms are identified in Figure 4.1.

4.1.2 History of Peoples Living on the Land

First Nations site locations in the region appear to be focused on the margins of swamps or creeks, or on flat ridge top landforms, often with an aspect toward the Hunter River or higher order creeks. The low intensity of research within the local area is probably due to the lack of urban development since land was established for farming. These non-urbanised areas of the Hunter Valley, which are currently increasingly being considered for residential development, provide an opportunity to understand First Nations use of the low undulating hills surrounding the Hunter River. The regional archaeological signature is characterised by mid to late Holocene evidence, the precise nature of which is not yet well understood.

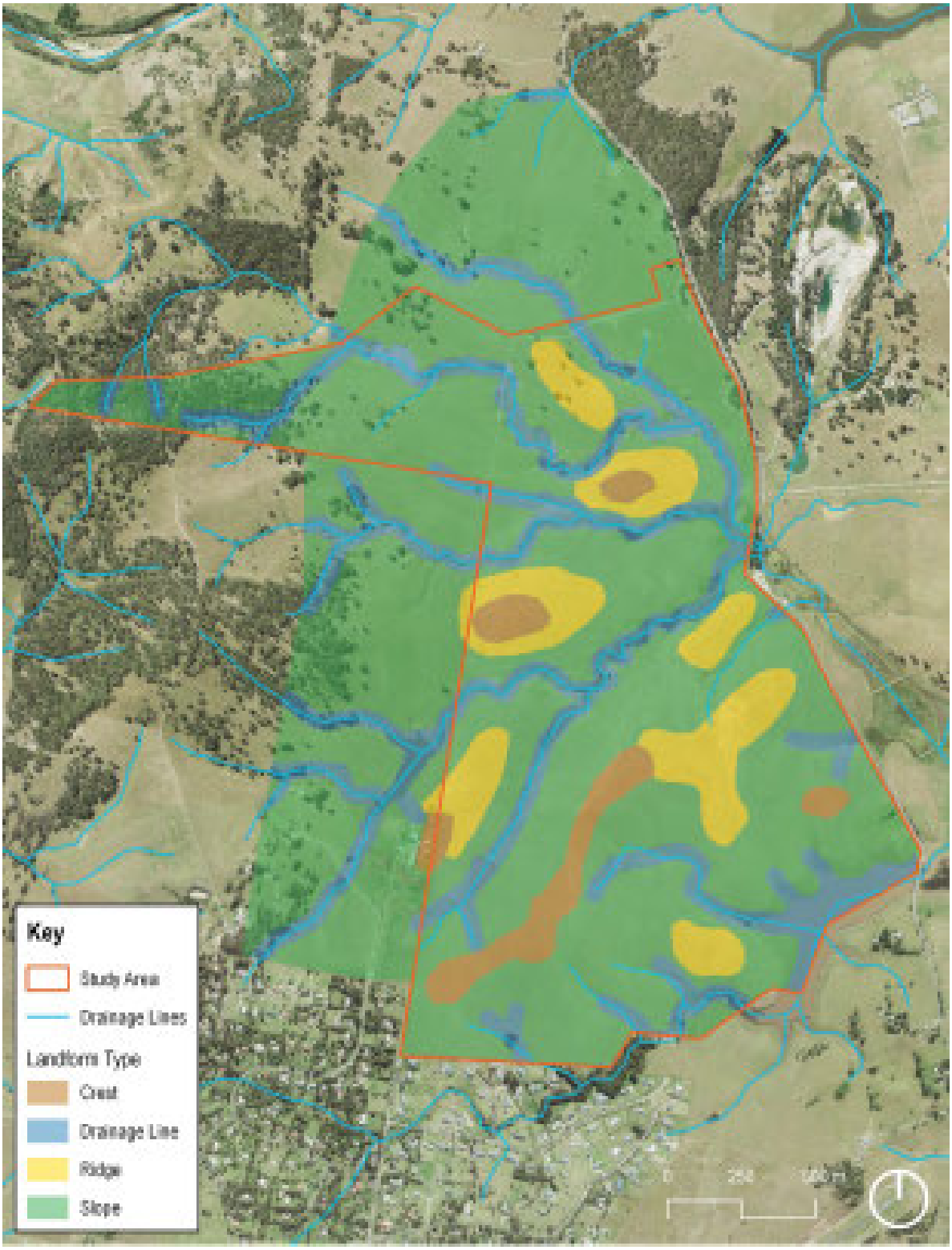


Figure 4.1 Landform features and drainage lines/depressions within the study area. (Source: NSW LPI with GML additions, 2021)

4.1.3 Material Evidence Of First Nations Land Use

Previous Archaeological Work

A number of archaeological studies have previously been undertaken within, and in the vicinity of, the study area. The findings of these reports can be synthesised as follows:

- Stone object concentrations and Potential Archaeological Deposits (PAD) are the most common First Nations site type in the region.
- Prior regional First Nations heritage investigations have mainly involved archaeological survey, with the consequential identification of numerous First Nations sites, mostly stone objects, relating to mid to late Holocene First Nations occupation and use of the landscape.
- Few First Nations sites in the region have been subject to archaeological excavation. Of these excavations, the majority have proven the presence of subsurface archaeological deposits.
- Excavated archaeological sites appear to correspond to the last 5000 years (which can be attributed to a general intensification in First Nations occupation of this area over the mid to late Holocene).
- Stone artefact assemblages are dominated by either silcrete or silicified tuff.
- Noticeably absent from the archaeological record in the region are studies that place the archaeological evidence within a framework that investigates sources of stone in connection with First Nations trade, economic and social systems.

A search of the AHIMS database was undertaken on 23 March 2021. The search identified 80 sites within and surrounding the study area—two of which have been excluded from Table 4.1 as they have since been determined to not be sites. There is a restricted site within the boundaries of the study area. This site (37-6-2777) has been left out of the AHIMS mapping.

Twenty-eight sites included in the AHIMS search as located inside the DB20 study area were identified during the 2012 survey and consequent test excavation undertaken by GML. Mapping of AHIMS sites is presented in Figure 2.1.

Table 4.1 Results of 2021 Aboriginal Heritage Information Management System (AHIMS) Search within the locality (study area and surrounding the study area).

Site Feature	Frequency
Art	1
Artefact	45
Artefact and Quarry	2
Isolated Artefact	16
Isolated Artefact and PAD	2
Modified Tree	1
PAD	10
Restricted Site	1

Site Feature	Frequency
Total	78

In land away from the NSW coast, the regional pattern of recorded First Nations site is dominated by stone artefacts. This contrasts against the record of coastal First Nations sites, which contains high numbers of midden sites, burials, as well as stone artefact sites. In this area, lithic sites can be identified on any landform, but appear to be predominantly recorded on ridge crests, in creek flats and on swamp banks.

The density of sites on ridge crests may be due to a preference for manufacturing tools and use of stone objects in locations with a clear view of the surrounding landscape. The patterning of recorded sites on alluvial flats may be due to a need to inhabit areas close to water sources.

4.1.4 Preliminary Archaeological Zoning Plan

On commencement of the assessment process, the study area was subject to archaeological predictive modelling in the form of an Archaeological Zoning Plan (AZP), which was developed and refined during the progression of the project eg with revision following pedestrian survey, and then after test excavation. Landforms considered sensitive for First Nations archaeological deposits were identified based upon an analysis of historical aerial photographs (1958, 1965 and 1993), an understanding of soil impacts caused by land use over the past 150 years, and research into patterns of First Nations occupation of this region over the past 20,000 years. Figure 4.2 depicts the preliminary AZP for the study area based on desktop assessment, which was used to inform the pedestrian survey.

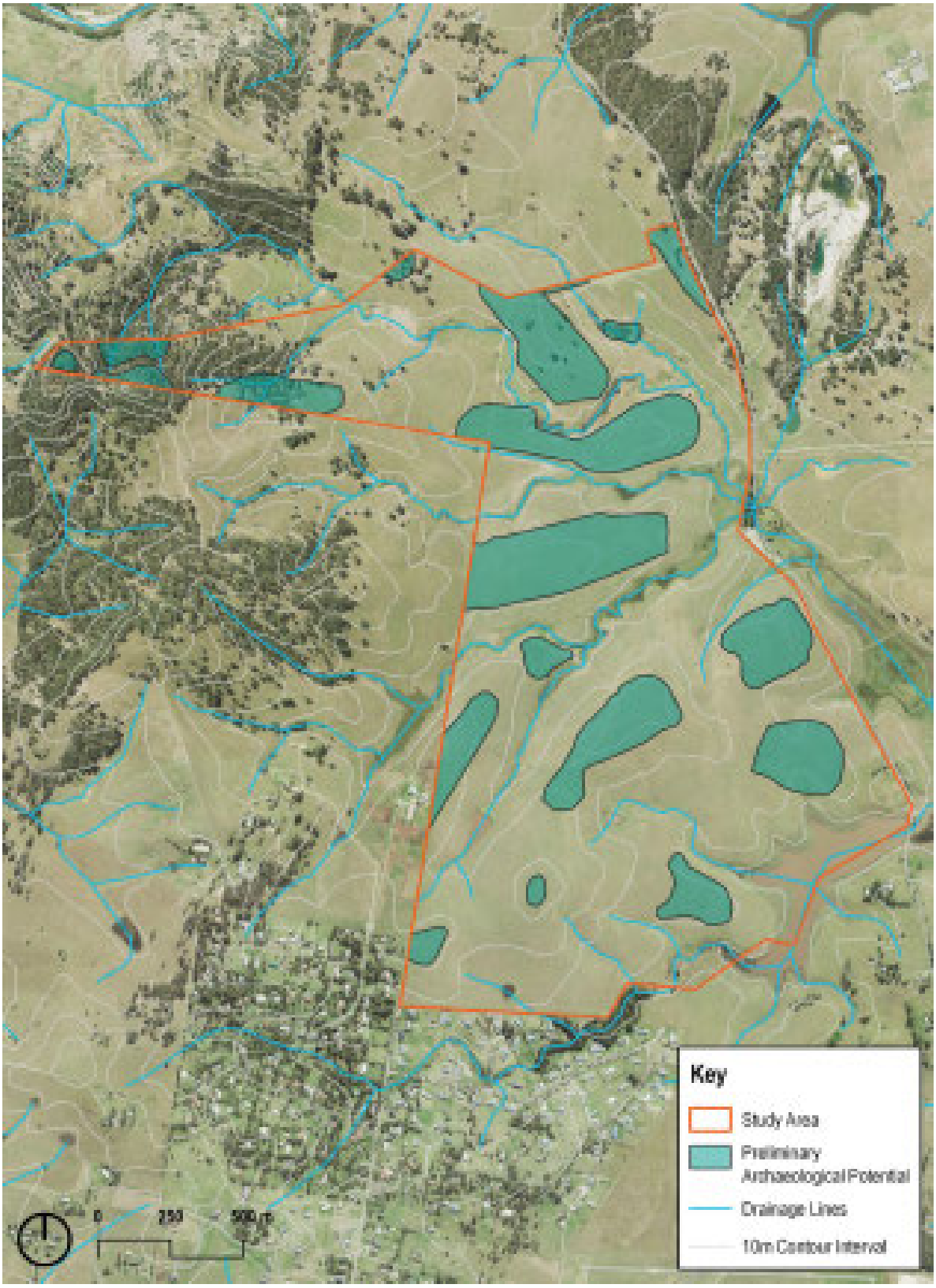


Figure 4.2 Preliminary zones of archaeological potential (developed in 2012), based on the desktop assessment. (Source: Google Earth Pro with GML additions)

4.1.5 Archaeological Field Survey—Summary of Results

In accordance with Heritage NSW recording requirements, the Stockland study area (which was limited to their land holdings within the AURA) was surveyed in 2012 using survey units, landforms and landscapes as a basis. The archaeological survey identified a total of 21 First Nations sites and 28 areas with PAD. The ATR (Appendix D) describes the full record of survey results. A summary of the sites identified in 2012, and the landform they were recorded on, can be found in Table 4.2 and Figure 4.3. Sites were listed as Isolated Finds (IF), Stone Artefact Concentration (SAC) or quarry sites.

Table 4.2 Landform Summary—2012 Sampled Areas.

Landform	Landform Area (LA) (m^2)	ECA	% Landform Effectively Surveyed (=ECA/LA *100)	Number of First Nations Sites Located in Survey	Number of Artefacts or Features Located in Survey
Open Depression	260,691	73,027	28.0		1 IF
Flat	42,642	4,272	10.0	8 PADs	2 SAC
Upper Flat	33,141	166	0.5	4 PADs	1 IF
Slope	749,581	63,194	8.4	10 PADs	10 SAC, 6 IF, 1 quarry (~217 objects)
Hilltop	36,376	1,148	3.2	6 PADs	1 IF
Ridge	66,291	331	0.5		
Saddle	9,554	48	0.5		
Total				28 PAD	1 quarry, 9 IF, 12 SAC

During the survey, four viewing locations were also identified. Some of these have outlooks towards prominent landmarks in the region, including the Hunter River and Mount Sugarloaf. GIS modelling of hill shade, when compared to location of artefacts and PADs identified during the survey, indicates that the site was used year-round. It is hypothesised that specific landforms were selected for seasonal use, where clan groups returned to the same landform ‘position’ each year for an extended period.

Eight stone outcrops were identified during the field survey. Seven of the eight outcrops did not contain workable material, one possibly did, but the pebbles were relatively small, and the last contained workable material. These outcrops included three siltstone, two sandstone, one unworked conglomerate siliceous material on a creek edge, and one small red silcrete exposure. Tangible First Nations sites observed during the field survey were all connected with the use of stone. No scarred trees or other site features were observed.

Alluvial terraces were associated with six PADs, all but one of which were within the Rothbury soil landscape. Observations during the survey demonstrated that although much of the land has experienced historical disturbance from land clearing and agricultural practices, large parts retain the potential for archaeological deposits.

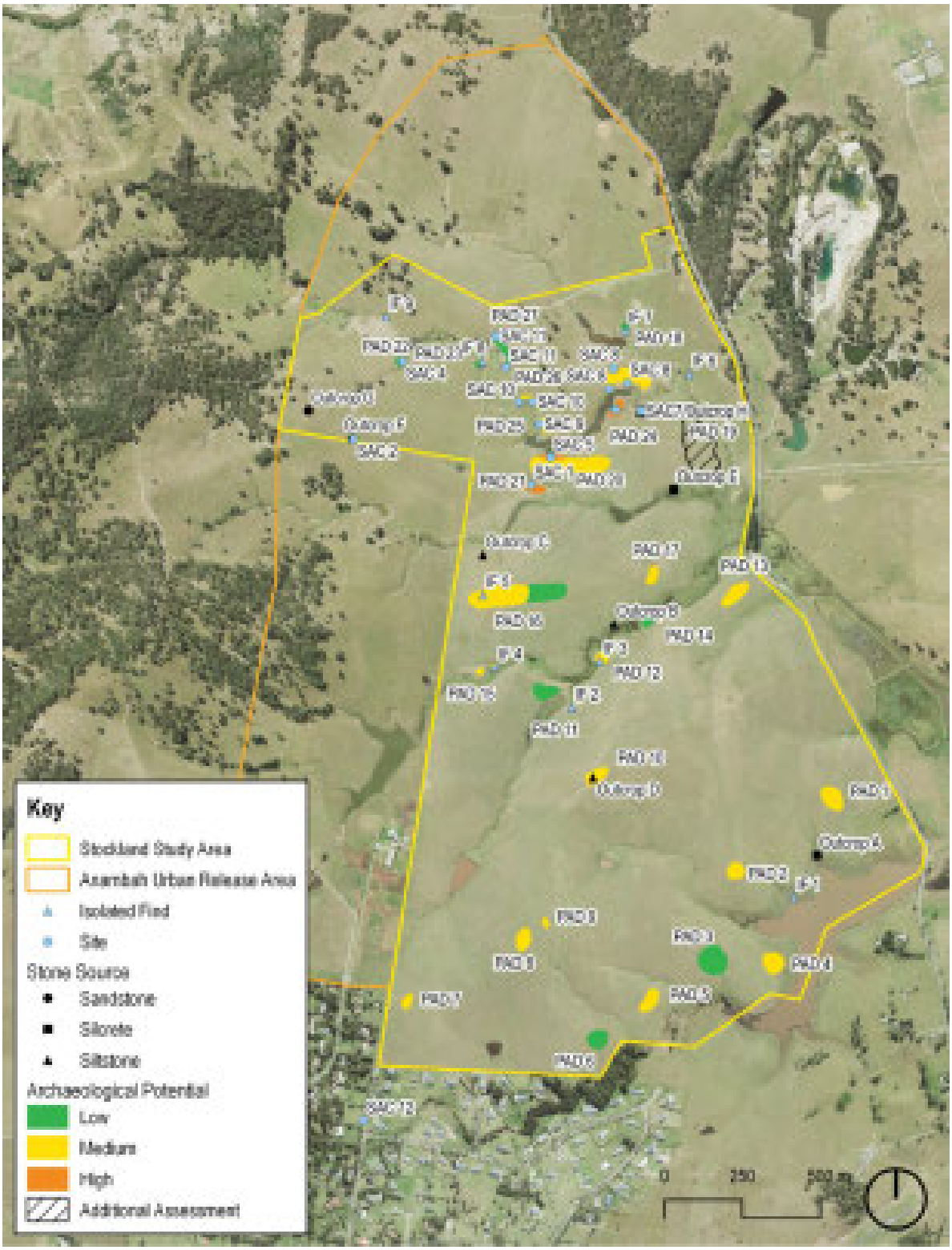


Figure 4.3 First Nations sites, PADs and sources (outcrops) of stone materials which could be used for stone artefact manufacture. Figure was produced after 2012 survey but prior to 2012 test excavation. (Source: GML 2012 over Google Earth)

4.1.6 Viewing locations

During the 2012 survey the RAPs identified four important viewing locations, the locations and directions are depicted in Figure 4.4 (a DEM, Figure 4.5) shows the high points in the region), and discussed in detail in the ATR, Section 3.4.2. From discussions held in the field, it was established that these viewing locations hold cultural significance due to the views across both the study area and the wider landscape (Table 3.4). It is noted that these viewpoints are lower by ~50m elevation compared to higher hilltops and outside the study area (up to 100–160m elevation) and further east (the Rosebrook Ridge). A summary and the views is provided here.

- Viewpoint 1 (Figure 4.6) is located in the northeast corner, with a view on to the northern three creek systems where there the greatest density of stone artefact sites were recorded. From this viewpoint, the hilltops on which viewpoints 2 and 3 are located can be seen.
- Viewpoint 2 (Figure 4.7) is positioned on the hilltop in the northwest of the study area. This is the highest hilltop of the study area (and outside the restricted site) and provides localised views into the northern third of the study area and distant views to the Hunter River.
- Viewpoint 3 (Figure 4.8) provides a vantage location from which the areas of PAD 7, PAD 8, PAD 9 and PAD 10 can be seen. Some distant views towards the Hunter River are also available from this location.
- Viewpoint 4 (Figure 4.9 and Figure 4.10) is located on the highest hill in the southwest corner of the study area. From here, views extend to the north east across low hills, the fourth order creek towards the Hunter River and to the mountains beyond, and to the south across the valley to Mount Sugarloaf.

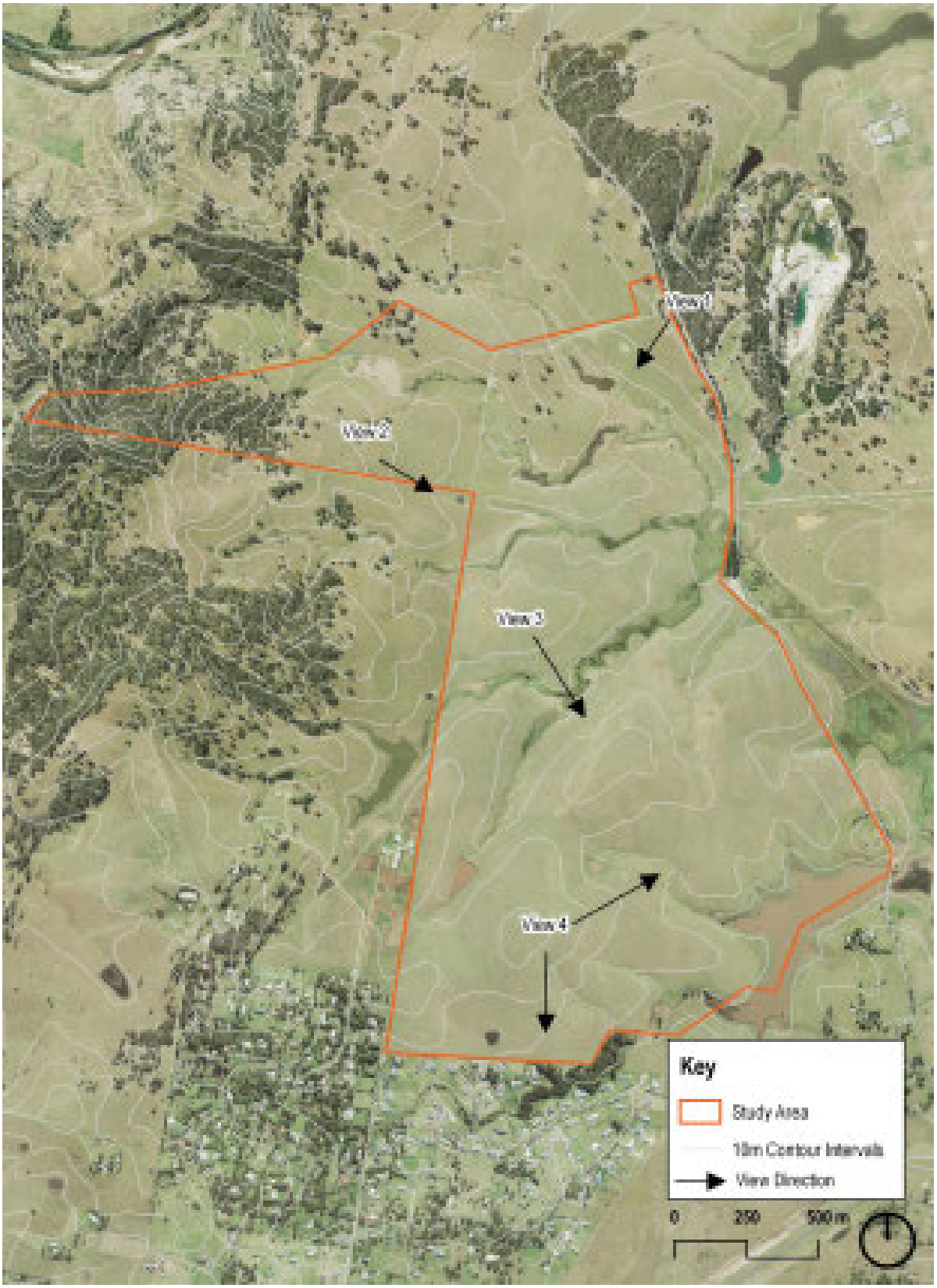


Figure 4.4 The four main viewpoints within the study area. (Source: SIX Maps, with GML additions 2021)

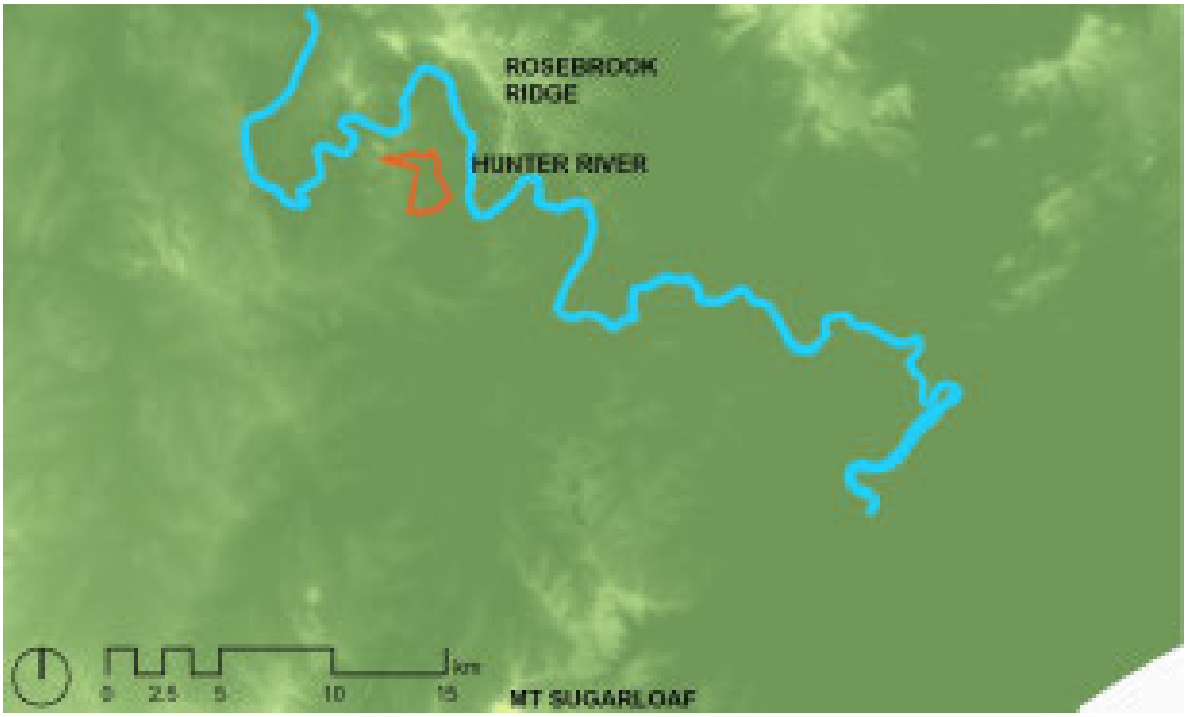


Figure 4.5 The study area with the broader landscape context with digital elevation model (dark areas as lower, lighter areas indicating higher elevation). Study area outline in orange. (Source: SIXMaps 2020 with GML additions, 2022)

Figure 4.6 Viewpoint 1, southwest. (Source: GML 2012)

Figure 4.7 Viewpoint 2, looking south east, across the study area. (Source: GML 2012)

Figure 4.8 Viewpoint 3, looking south. The hilltops which contain PAD 7, PAD 8, PAD 9 and PAD 10 can all be seen from this location (PAD 16). (Source: GML 2012)

Figure 4.9 Viewpoint 4, looking south, towards Mount Sugarloaf. (Source: GML 2012)

Figure 4.10 Viewpoint 4, looking east, across the southern third of the study area and the Hunter River, with the Rosebrook range in the distance. (Source: GML 2012)

4.1.7 Archaeological Test Excavation—Summary of Results

Two seasons of archaeological excavation were undertaken, taking a combined total of 18 days. The full results, including the roster of RAP and archaeologists present on site for both season is in the ATR (Appendix D).

A total of 318 Test Units (TU) were excavated across three soil landscapes (Branxton, Hunter, and Rothbury), with a total of 159m^2 excavated. The depth of TU varied across the site, with the mean depth being 263mm. Stratigraphy across all three soil landscapes generally followed the typical duplex sequence of an organic A1 horizon overlay a bleached A2, which abutted sharply against B horizon clay. Cropping activities across the study area were generally found to have resulted in not only the mixing of A1 and A2 soil horizons, but the acceleration of natural erosion processes (wind, water, cattle etc), resulting in the removal of all A1 soil in some cases. The central and southern thirds of the study area experienced a moderate to high level of impact due to farming activities.

Artefact analysis was carried out by Nevil Baker of Baker Archaeology. In total, 575 flaked stone artefacts and 35 shattered fragments of raw material were recovered during the test excavation. The dominant raw material across the Anambah study area is silcrete. Evidence of backed artefacts being manufactured on site is consistent with other Holocene sites across the Hunter Valley. Artefact densities were highest in the northern portion of the study area. Test excavation did not find any evidence to assist in establishing timeframes for the sites and spatial patterning. It is not possible to determine how much time, if any, passed between artefact-producing events within the study area. Full analysis of the artefacts can be found in the ATR (Appendix D).

Alluvium was identified within the study area during the archaeological survey, across three landforms: lower gully, ridgeline and upper slope. During test excavation, a buried alluvial terrace was identified in PAD 16. PAD 16 contained artefact-rich buried alluvium, which was not identified during the archaeological survey.

Table 4.3 summarises the results of the test excavation and provides the revised archaeological potential for each site, post-test excavation.

Table 4.3 Summary of archaeological sites within the study area and revised archaeological potential.

Site and PAD #	AHIMS #	Number of Surface Lithics	Number of Subsurface Lithics	Revised Archaeological Potential
PAD 1 & SAC 17	37-6-3574	0	43	Moderate
PAD 2 & SAC 18	37-6-3575	0	2	Nil–Low
PAD 3 & SAC 19	37-6-3578	0	5	Nil–Low
PAD 4 & SAC 20	37-6-3579	0	1	Nil–Low
PAD 5 & SAC 21	37-6-3580	0	2	Nil–Low
PAD 6	None	0	0	None
PAD 7	None	0	0	None
PAD 8	None	0	0	None
PAD 9	None	0	0	None
PAD 10	None	0	0	None

Site and PAD #	AHIMS #	Number of Surface Lithics	Number of Subsurface Lithics	Revised Archaeological Potential
PAD 11	37-6-3581	0	15	Nil–Low
PAD 12 & SAC 13	37-6-3570	1	5	Nil–Low
PAD 13 & SAC 23	37-6-3582	0	21	Moderate (only in specific locations around TU with high densities)
PAD 14 & IF 11	37-6-3558	1	1	Nil–Low
PAD 15 & SAC 14	37-6-3571	1	14	Nil–Low
PAD 16 & SAC 15	37-6-3572	1	34	Moderate (only in specific locations around TU with high densities)
PAD 17 & IF 12	37-6-3559	1	0	Nil–Low
PAD 18 & IF 7	37-6-3573	1	2	Nil–Low
PAD 19 & SAC 7	37-6-3564	+50	39	Additional assessment is required
PAD 20 & SAC 5	37-6-3563	+45	105	Moderate to high
PAD 21 & SAC 1	37-6-3560	14	13	High
PAD 22 & SAC 4	37-6-3562	3	—	Moderate
PAD 23 & IF 8	37-6-3555	1	—	Moderate
PAD 24 & SAC 6	37-6-3564	25	32	High
PAD 25 & SAC 9	37-6-3566	+30	22	Moderate to High
PAD 26 & SAC 10	37-6-3567	2	16	Moderate
PAD 27 & SAC 11	37-6-3568	10	137	High
PAD 28 & SAC 8	37-6-3565	+75	67	High
IF1	37-6-3553	1	—	Nil–Low
IF2	37-6-3554	1	—	Nil–Low
IF9	37-6-3556	1	—	Nil–Low
IF10	37-6-3557	1	—	Nil–Low
SAC 2	37-6-3561	2	—	Nil–Low
SAC 3	37-6-2777	1	Not tested	High
Total		+272	523	

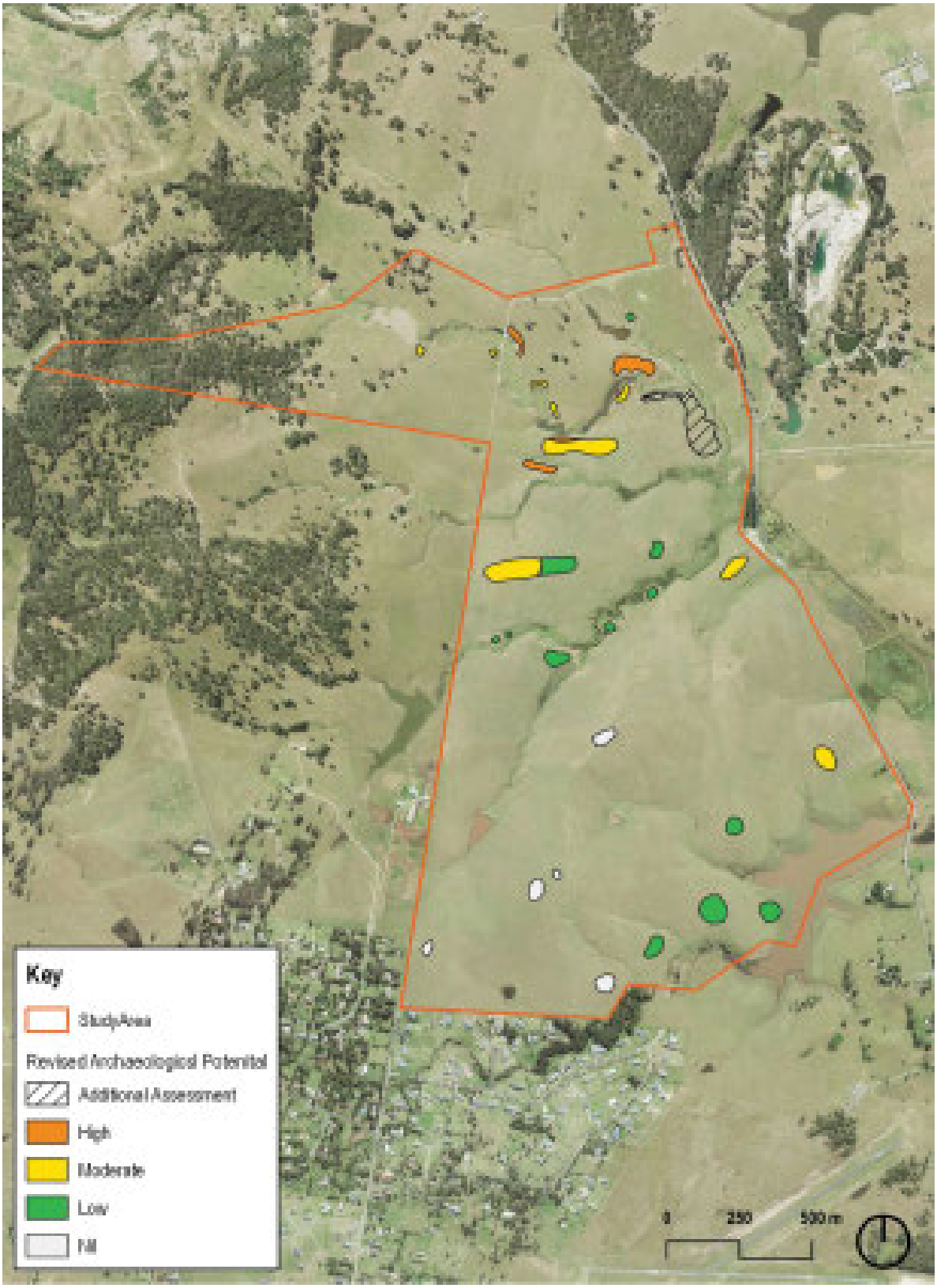


Figure 4.11 Revised archaeological potential of areas that hold PADs following the 2012 test excavation. (Source: GML 2022 over Google Earth)

4.2 2023 Site Visit with RAPs

In the middle of 2022 the NSW government reduced COVID19 restrictions, thereby allowing activities such as field survey to occur. With the updated masterplanning, we sought to provide an opportunity for the RAPs to inspect the study area. It was determined that this inspection could occur at the mid-point of the designed ACHAR review period. This inspection was held on 7 December 2023.

Heritage NSW (2010 consultation guidelines) require a minimum of 28 days for review of an ACHAR. We sought to provide this period, and also present an opportunity for RAPs to visit the study area, ask questions and provide feedback. In total a period 77 days was then provided for RAPs to present the outcomes of their reviews, and provide additional information.

The outcomes and comments are provided in full within the consultation log for this project. A summary of opinions and comments is provided in Section 3.3.4.

4.3 Limitations to the assessment

The 2012 test excavation program was not completed to the full possible extent of works with some test units remaining unexcavated, notably around PAD 19.

Under the proposals for this part of the study area, and requirements for engineering and creek management, it would not be possible for this area to be conserved through the process of development. On the basis of outcomes from the test excavation completed, and landforms associated with PAD 19 could be expected to retain an archaeological deposit which necessitates salvage excavation. Heritage management recommendations have been provided to complete the initial phase of archaeological excavation at PAD19 and consequently salvage archaeological deposits which meet a certain threshold.

5.0 First Nations Heritage Significance Assessment

The best practice guide to managing heritage places is the Burra Charter, which includes the following definition:

> *Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects. Places may have a range of values for different individuals or groups.*

An assessment of aesthetic and social/spiritual values of First Nations cultural significance can only be made by the relevant First Nations community because First Nations people are the primary source of information about their cultural heritage values. Consulting with First Nations people at an early stage of the assessment process ensures they have opportunities to fulfil their heritage obligations. First Nations people must have control of their cultural knowledge and how it is used and shared. Restriction of cultural knowledge may be an important part of the value of the cultural knowledge. Management of impacts to First Nations cultural heritage values must therefore involve the relevant First Nations people to ensure appropriate management is undertaken in accordance with the cultural heritage values.[1]

In line with the Burra Charter's four principal values (social, historical, scientific and aesthetic), and the NSW Heritage Office's publication *Assessing Heritage Significance*, four assessment criteria can be used to assess the First Nations heritage values of a study area.[2] The four criteria are:

- social value:[3] 'an item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons';
- historic value:[4] 'an item is important in the course, or patterning, of NSW's cultural or natural history (or cultural or natural history of the local area)';
- aesthetic value:[5] 'an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)'; and
- scientific value:[6] 'an item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)'.

Consultation with the RAPs, investigation into the background history of the study area and local region, the field inspection and archaeological excavations have facilitated understanding of the key social, historic and scientific values associated with the sites and objects within the study area. Following OEH 2011,[7] values are graded in accordance with a basic ranking of high, moderate or low. The ranking is based upon the research potential, representativeness, rarity and educational potential of each value. The grading is stated at the end of each value assessment below.

5.1 Significance Assessment

The restricted AHIMS site #37-6-2777 significance has not been disclosed for this report and at this stage is not able to be categorised within the below values. This site is located outside of the Anambah Urban residential area and not on residential or urban zoned land.

5.1.1 Social or Cultural Value

Discussions with RAPs (throughout the consultation process and during field survey and test excavation) indicated that the range of hills surrounding the northern portion of the study area are both socially and aesthetically significant. These hills would have been used as viewing locations, where significant local landmarks, including Mount Sugarloaf, the Hunter River and the Rosebrook Ridge could be viewed. In addition, such locations were used for observing other First Nation peoples, families, and on occasions of larger gatherings, other clan groups. Secondly, these hilltop locations were associated with 'men's business', which included stone tool manufacture and activities that potentially did not require stone resources. These uses may have included ceremonial activities, and male initiation, which were significant parts of the social and cultural life of the First Nations community. GML has been provided information on such activities and their locations, but has been formally requested to withhold this information from this report.

During the field survey, local RAPs identified that most of the hilltops and lower flats (and terraces) were significant landforms, especially following flood events. When floods came through, wild game would congregate on the high ridges, creating good opportunities for hunting. The association of the landscape with stories that have been passed from generation to generation highlights the cultural value inherent within the landscape and reflects previous First Nations land use and customs.

Stone artefact concentrations were identified as significant because of their direct connection to First Nations occupation and use of the area. The apparent patterning of objects within the landscape was of cultural importance as it provided evidence for selective landform use, which potentially related to social factors, such as First Nations Law governing where and when people could go.

The RAPs conveyed that First Nations people from far and wide were invited to Mount Sugarloaf for ceremonial activities. Camp site patterning in the landscape present in the Anambah study area, on the northerly approach to Mount Sugarloaf would have been dictated by relationship to the land and to other groups. Different clans would have inhabited the various hilltops, for purposes of visibility, while others would have been positioned on the lower flats. The landscape has significance for its reflection of First Nations social organisation and connection to Mount Sugarloaf.

RAPs identified that the stone material can assist in illustrating social structure across a landscape—particular clans used different materials for certain purposes and controlled resources within their lands. Thus, stone materials may be used to indicate where people have come from. The silcrete quarry site (SAC7/PAD19) was identified as significant as it identified a particular local clan and indicates the material they owned and used.

5.1.2 Historical Value

Historical research, archaeological investigation and ongoing consultation with First Nations stakeholders has not indicated that the study area holds any historically associations.

5.1.3 Scientific Value

The alluvial deposit identified through survey and test excavation of the study area is of high scientific significance due to its high archaeological, research and education potential and its ability to possess intact chronological sequences. The Anambah study area is also scientifically significant as a component of a wider First Nations archaeological and cultural landscape. The opportunity for the continuous investigation of such a wide, relatively intact landscape across the Hunter Valley is rare.

Further archaeological investigation of the northern portion of the study area has good potential to further inform several aspects associated with middle to late Holocene First Nations occupation in the region around the study area.

5.1.4 Aesthetic Value

The study area has values associated with four key viewing locations. These were identified during the site survey in 2012. These viewing locations are considered to have both aesthetic and social values. Some provide views of important landmarks, such as Mount Sugarloaf, the Hunter River and the Rosebrook Ridge range.

The study area meets this criterion to a high level because the hilltops have views across major landmarks of the area and are interconnected with the social values.

5.2 Statement of Significance

The study area is assessed as having high level of social value to the First Nations community. The social value is manifest through the First Nations communities' connection to the wider cultural landscape and the tangible evidence of past First Nations people's occupation in the Hunter Valley. The interconnection of social and aesthetic values within this study area means that aesthetically it is also considered to have high significance. The alluvial deposits and the study area's relationship with the wider region give it high scientific value. The study area is assessed as having low historic value. An overview of how these cultural values are manifested within the study area is presented in Table 5.1.

Table 5.1 Summary of First Nations Cultural Heritage Values within the Anambah Study Area.

Value	Manifest Through	Grade of Significance
Social	The association of the study area with important landscapes, and the role landforms played in resource management and as gathering points of multiple groups for cultural and social activities.	High
Historical	The study area is not considered to hold First Nations historic values.	Low
Scientific	Alluvial deposits have high potential for archaeological deposits that are considered to have potential to contribute additional knowledge to our understanding of past First Nations peoples.	High
Aesthetic	The viewing locations that provide local and regional appreciation of the cultural landscape.	High

5.3 Endnotes

[1] Department of Environment, Climate Change and Water 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*, Department of Environment, Climate Change and Water, p 2.

[2] NSW Heritage Office, 2001, *Assessing Heritage Significance*, NSW Heritage Office, Sydney; Office of Environment and Heritage 2011, *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, Office of Environment and Heritage, Sydney; this guide provides a background for undertaking an Aboriginal cultural heritage values assessment in accordance with the Burra Charter and NSW Heritage Office's *Assessing Heritage Significance* 2001. The approach recommended by the OEH has been adhered to for this report.

[3] NSW Heritage Office 2001, 'Criteria D' in *Assessing Heritage Significance,* NSW Heritage Office, Sydney.

[4] NSW Heritage Office 2001, 'Criteria A' in *Assessing Heritage Significance,* NSW Heritage Office, Sydney.

[5] NSW Heritage Office 2001, 'Criteria C' in *Assessing Heritage Significance,* NSW Heritage Office, Sydney.

[6] NSW Heritage Office 2001, 'Criteria E' in *Assessing Heritage Significance,* NSW Heritage Office, Sydney.

[7] Office of Environment and Heritage 2011, *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, Office of Environment and Heritage, Sydney.

6.0 The Proposed Project Activity

This section describes the proposed project activity, timing for the activity, First Nations values that may be harmed (directly or indirectly by the activity), and the objectives of the proposed activity. First Nations heritage management policy has been developed to guide and minimise impacts to First Nations heritage values.

6.1 The Proposed Project Activity

The Anambah Urban Release Area (AURA) was rezoned in December 2020 to facilitate the creation of a new residential community, consisting of residential and associated urban zones, along with larger lots around the floodplain and on the western slopes through to vegetated conservation land and rural lands beyond. Progressive development to the AURA will occur over a 15–20-year period, with potential for 3,500–4,000 dwellings over a range of lot sizes and densities, supported with a local centre, sports fields and public open spaces, new roads, riparian, drainage and stormwater, utilities and associated works including landscaping.

The DB20 study area forms part of the AURA, with potential for 2,500–2,800 dwellings across a range of lot sizes and dwelling types, containing a local centre and recreation hub, a school, and key parts of the social and community infrastructure. The western extent of the study area, that sits outside the AURA and owned by DB20, is zoned rural and is not subject to proposed works and activities for urban development. A suite of external works (for utility infrastructure and roads) to support the AURA will be required, and these will be the subject of separate assessment and reporting.

DB20 have reviewed previous masterplans for the AURA prepared by others and the local Council and have progressed a whole of site indicative masterplan (3 October 2023). This plan provides context for the preparation future development applications across the AURA and specifically the DB20 owned lands.

Future development applications will document specific detail such as subdivision lot and road patterns, the footprint of works and service alignments, to establish and progressively plan for the new community. The October 2023 masterplan, informed by the land use zoning, has been used to determine the potential impacts on First Nations heritage (Figure 6.1). The key land use identifications are environmental zones, public parks, and riparian corridors. Although not residential uses, the nature of the land means these uses require extensive earthworks. The key aspects of the masterplan include:

- Retention of the existing large water pond in the south-east;
- Retention of four main drainage lines with specific riparian rehabilitation integrated with stormwater management and public recreation that provide the framework for a connected green grid;
- Active and passive recreation network including sports field, open spaces and activity hubs;
- Local centre, medium density and small lot housing precincts;
- Discrete residential subdivision precincts separated by the drainage features and connected through a road and pedestrian network; and
- Larger lots associated with the floodplain and environmental areas.

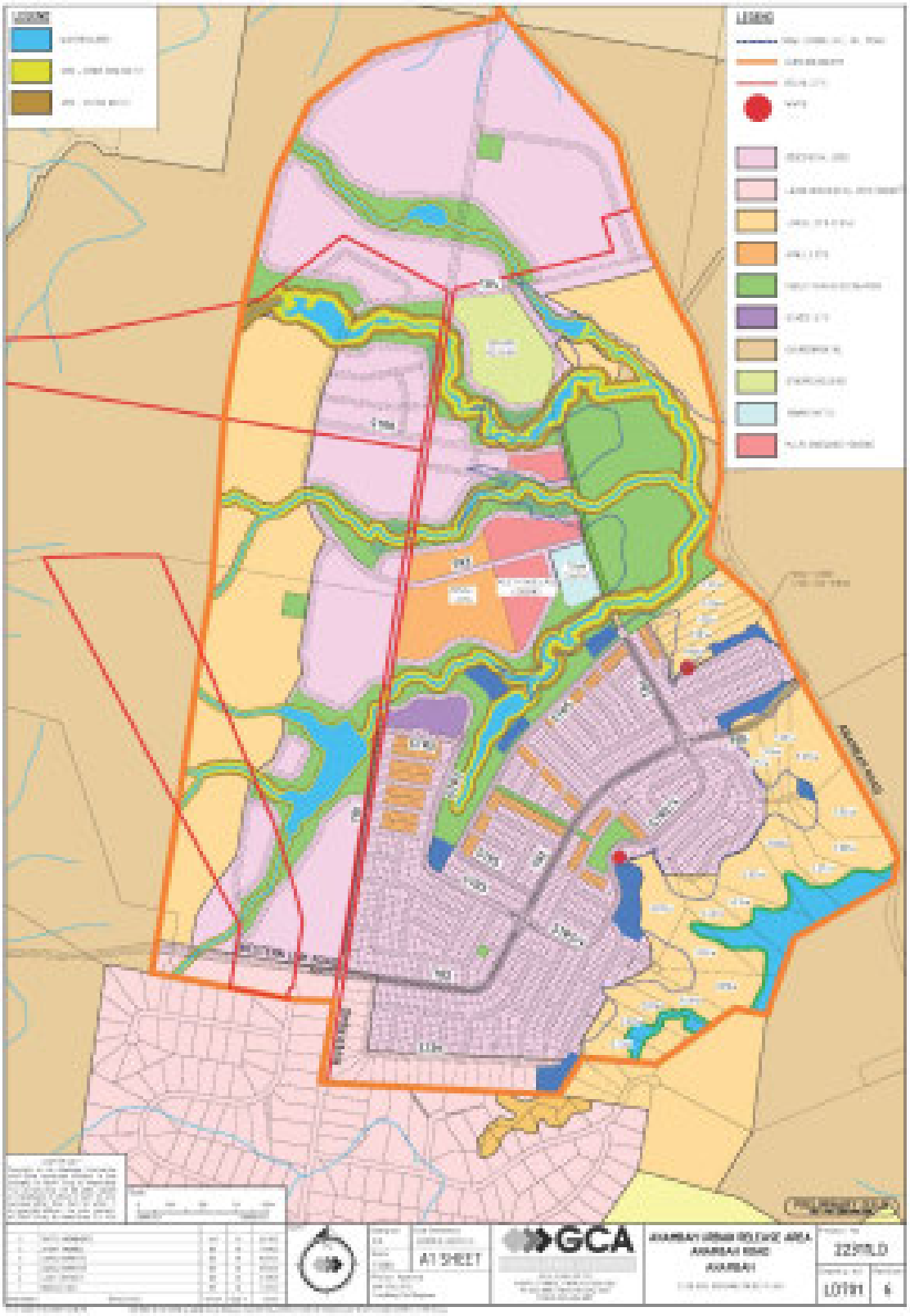


Figure 6.1 Current masterplan for the Anambah Urban Release Area. (Source: DB20 October 2023)

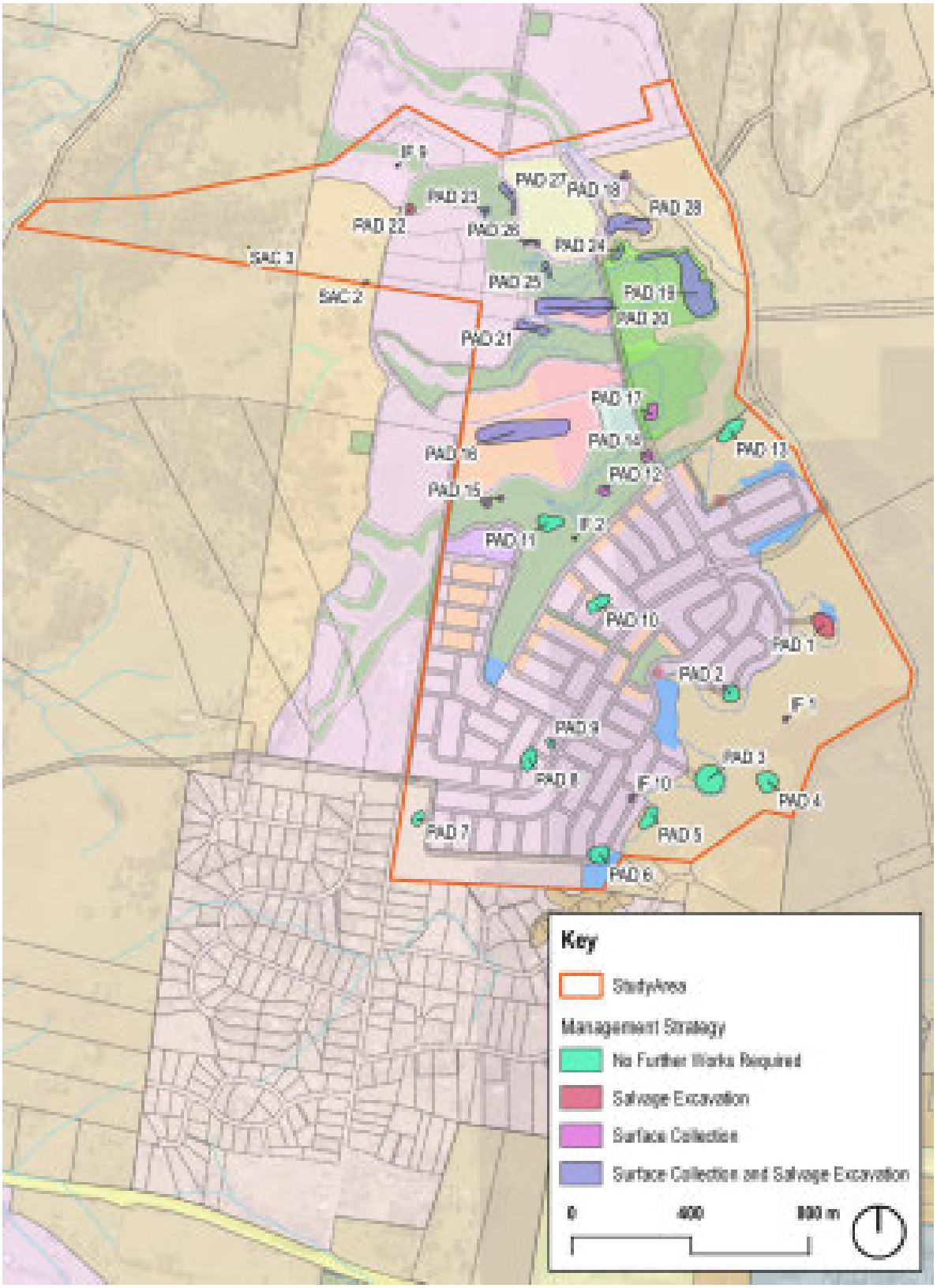


Figure 6.2 Showing the locations of physical Aboriginal heritage items, against the AURA Masterplan. (Source: DB20 October 2023, with GML additions)

Based on the current masterplan, and as anticipated by the rezoning, most identified heritage sites will be impacted by the ultimate proposed development. DB20, GML and RAPs have sought to consolidate investigations to date across the study area.

Development will be proposed and delivered under multiple development applications (and stages within those). Impact assessment provides a holistic consideration to underpin future heritage management and mitigation requirements, as suggested in the subsequent section of this report.

Heritage NSW has agreed that a single project AHIP should be issued for the whole of DB20's portion of the AURA; the extent of this AHIP is shown in Figure 6.2. Issue of a single AHIP provides all parties with certainty on the required management for ACH, negates the need for RAPs and Heritage to keep re-reviewing documentation. Development impact under the AHIP will be linked to the DA for each stage. Heritage NSW will confirm the works under each DA are consistent with the development proposal in this ACHAR. If so, a written instruction will be issued that works can proceed under the AHIP. Should the works differ between the DA and ACHAR/AHIP, then an AHIP variation may need to be sought. Once Heritage NSW confirm the DA compiles with the AHIP, actions under the AHIP for that DA area become active.

DB20 intend to have an initial development application ready for lodgement in early 2024. The extent and boundaries of that application is still under consideration, but it likely to incorporate lands in the southern l parts of the DB20 study area. Physical development for initial stages is programmed to occur after relevant approval phases.

6.2 Harm to First Nations Objects and Values

The assessment of First Nations heritage has identified items, places, sites and viewing locations in connection with the study area. An assessment of the proposed activity to determine whether these aspects will be 'harmed' either directly or indirectly is presented in Table 6.1.

Table 6.1 Aspects of First Nations Heritage and Identified Potential Harm to First Nations Heritage.

Aspect of First Nations Heritage	Type of Harm	Degree of Harm	Consequence of Harm
Stone artefact sites	Direct	Total	Total loss of value
Stone Quarries	Direct	Total	Total loss of value
Viewing Locations	Direct	Partial	Partial loss of value
Ceremony and Dreaming site	None—located within a conservation area	None	None

The various aspects of First Nations heritage hold a variety of heritage values (Table 5.1). These values may be impacted by the proposed activity. An assessment of how the values may be directly or indirectly affected by the proposal is provided in Table 6.2. We note that all values connected with 37-6-2777 will be conserved.

Table 6.2 Overview of Impacts to Values and Identified Potential Harm to First Nations Heritage.

Value	Manifest through	Degree of Harm	Consequence of Harm
Social	Viewing locations, Stone artefact sites, Stone Quarries	Partial to total	Partial to total loss of value

Value	Manifest through	Degree of Harm	Consequence of Harm
Historic	None	None	None
Scientific	Stone artefact sites, Stone Quarries	Total	Total loss of value
Aesthetic	Viewing locations and Directions	Partial	Partial loss of value

6.3 First Nations Heritage Management Strategy

Unmanaged and unmitigated the impacts resulting from the proposal on First Nations heritage are likely to result in a loss of values, and thus impact to the local First Nations community. The following management and mitigation statements are based on consideration of:

- legal requirements under the NPW Act, as amended—which states that it is illegal to harm or desecrate a First Nations object without first obtaining an AHIP from the Director-General, Heritage NSW;
- abiding by the *Code of Practice* for archaeological works connected with heritage mitigation;
- the requirements for considering Ecologically Sustainable Development (ESD) principals, and applying a cautious approach under the Burra Charter;
- consideration of intergenerational equity and its application to the project area;
- consideration of cumulative impacts to First Nations heritage and the consequences of continued loss of First Nations heritage values;
- the assessment of the First Nations cultural heritage values;
- the interests of the local First Nations community members who participated in this project; and
- the size of the project area, the extent of First Nations heritage values, and the likely impacts posed by the project proposal.

6.3.1 Strategy—Impact Avoidance

Avoidance of heritage sites represents the best heritage outcome as it means no impact to the identified heritage features. An avoidance strategy can be employed for the northwestern portion of the study area (including AHIMS site #37-6-2777) by excluding it from the future AHIP (Figure 6.2). In this area:

- no ground works are to be undertaken;
- temporary fencing and signage should be erected during development to ensure workers and machinery avoid this area; and
- passive revegetation strategies should be used for any vegetation management if required (may not be necessary).

The boundary of this area is currently shown on the Anambah Urban Release Area boundary. If future avoidance is not possible, then a site specific assessment and approach will need to be developed for the restricted site.

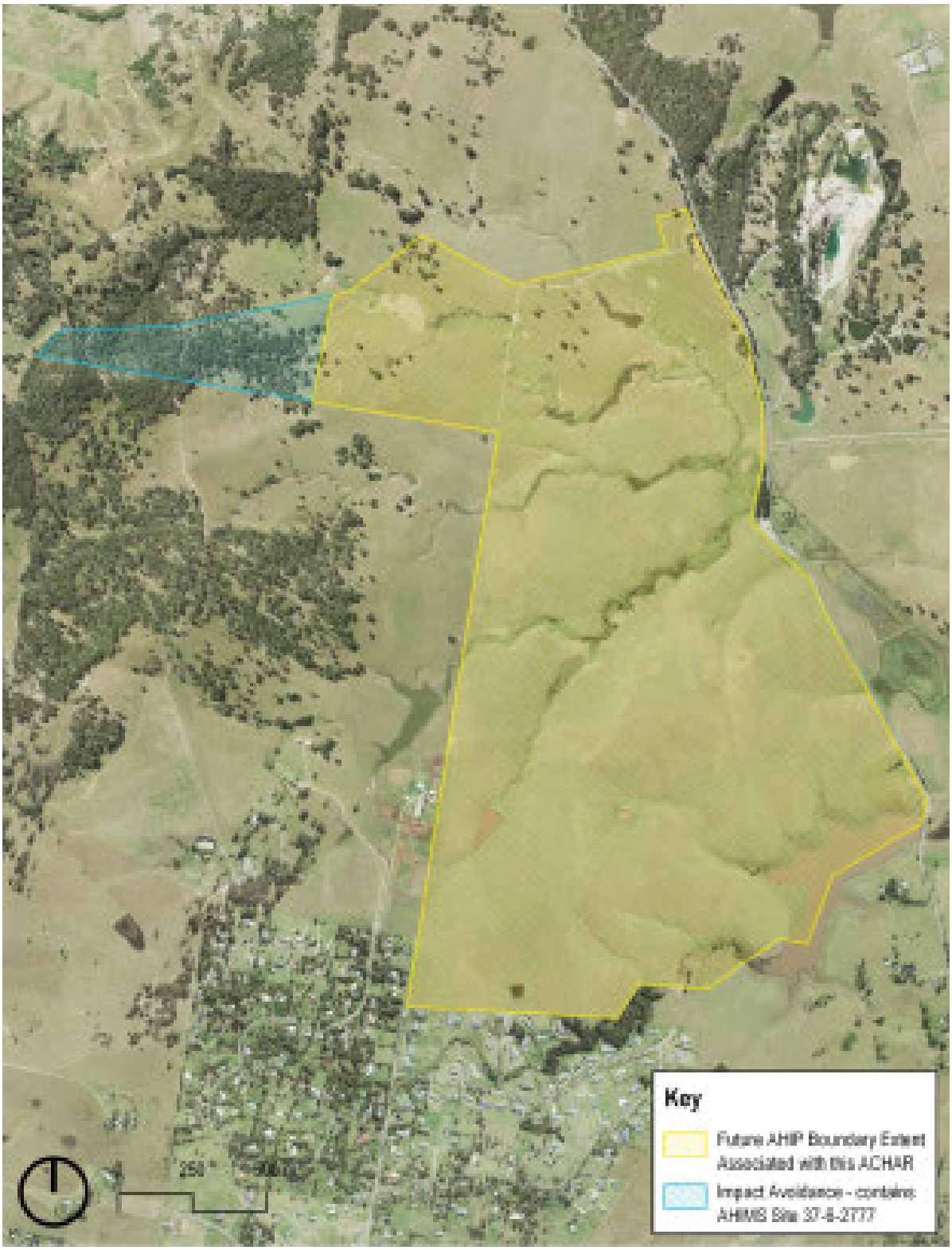


Figure 6.3 The avoidance management strategy for the western portion of the study area, outside of the proposed AHIP and outside of the AURA itself. AHIMS site #37-6-2777 is within the avoidance area. (Source: NSW LPI with GML additions, 2021)

6.3.2 Strategy—Salvage Excavation

An approved Section 90 AHIP will confirm the First Nation sites that require salvage excavation and those sites that can be managed by other strategies, such as monitoring of topsoil stripping and/or community collection of objects and public interpretation.

The assessment of the archaeological context and land impact assessment for the study area resulted in the identification of 28 test excavation areas (PADS 1–28) (refer to ATR Section 3.0 and Section 4.0). Test excavation of these locations has identified 12 areas which will require further archaeological investigation through salvage excavation, ten of which require a combined community collection and salvage excavation program (subject to the proposed works and development stages). For all future archaeological excavation undertaken under an AHIP, the extent of excavation, triggering features that necessitate further excavation and a point at which excavation should cease are defined in the ATR (Appendix D).

The extent of salvage must be tied to the objectives for the salvage. The location, reasons and nature of salvage excavation required within the study area under the AHIP are presented in this section.

Salvage Excavation Locations

To mitigate the impacts of the proposed development, salvage excavation and/or community collection should be undertaken at the sites and PADs listed in Table 6.3. Should future proposals for land use be able to conserve these locations, then archaeological work would not be required. Archaeological salvage excavation should be undertaken, within the defined areas, prior to the commencement of any earthworks in those specific locations (Figure 6.2).

Table 6.3 Identified First Nations Sites and the Extent of Required Archaeological Mitigation.

Site and PAD #	AHIMS #	Extent of Future Work Required	Figure #
PAD 1 & SAC 17	37-6-3574	Salvage excavation. Initial expansion (9m^2) around TUs 221 and 227. The remainder of the area has low potential. There could be a need for possible further expansion on the basis of the initial results.	Figure 6.6
PAD 2 & SAC 18	37-6-3575	No further works required.	Figure 6.6
PAD 3 & SAC 19	37-6-3578	No further works required.	Figure 6.6
PAD 4 & SAC 20	37-6-3579	No further works required.	Figure 6.6
PAD 5 & SAC 21	37-6-3580	No further works required.	Figure 6.6
PAD 6	None	No further works required.	Figure 6.5
PAD 7	None	No further works required.	Figure 6.5
PAD 8	None	No further works required.	Figure 6.5

Site and PAD #	AHIMS #	Extent of Future Work Required	Figure #
PAD 9	None	No further works required.	Figure 6.5
PAD 10	None	No further works required.	Figure 6.6
PAD 11	37-6-3581	No further works required.	Figure 6.4
PAD 12 & SAC 13	37-6-3570	Surface collection	Figure 6.4
PAD 13 & SAC 23	37-6-3582	No further works required.	Figure 6.4
PAD 14 & IF 11	37-6-3558	Surface collection	Figure 6.4
PAD 15 & SAC 14	37-6-3571	Surface collection	Figure 6.4
PAD 16 & SAC 15	37-6-3572	Surface collection and salvage excavation. Initial expansion (9m^2) around TUs 189 and 191 with a high density. Possible further expansion on the basis of the results.	Figure 6.4
PAD 17 & IF 12	37-6-3559	Surface collection	Figure 6.4
PAD 18 & SAC 16	37-6-3573	Surface collection	Figure 6.3
PAD 19 & SAC 7	37-6-3564	Surface collection and salvage excavation—Salvage of the unexcavated TU as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions. Up to 100m^2 to 150m^2 further salvage may be required.	Figure 6.3
PAD 20 & SAC 5	37-6-3563	Surface collection and salvage excavation—Salvage of the unexcavated TU as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions. Up to 100m^2 to 150m^2 further salvage may be required.	Figure 6.3
PAD 21 & SAC 1	37-6-3560	Surface collection and salvage excavation—Salvage of the unexcavated TU as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions. Up to 100m^2 salvage may be required.	Figure 6.3

Site and PAD #	AHIMS #	Extent of Future Work Required	Figure #
PAD 22 & SAC 4	37-6-3562	Salvage excavation—Salvage of the unexcavated TU as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions. Up to 100m^2 salvage may be required.	Figure 6.3
PAD 23 & IF 8	37-6-3555	Surface collection and salvage excavation—Salvage of the unexcavated TU as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions. Up to 100m^2 salvage may be required.	Figure 6.3
PAD 24 & SAC 6	37-6-3564	Surface collection and salvage excavation—Initial expansion (9m^2) around TU 32 with a high density. Salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 6.3
PAD 25 & SAC 9	37-6-3566	Surface collection and salvage excavation—Initial expansion (9m^2) around TU 320 with a high density.	Figure 6.3
PAD 26 & SAC 10	37-6-3567	Surface collection and salvage excavation—Initial expansion (9m^2) around TU 83 with a high density.	Figure 6.3
PAD 27 & SAC 11	37-6-3568	Surface collection and salvage excavation—Initial expansion (1m^2) around TUs 6, 7 and 304. Initial expansion (9m^2) around TUs 290, 295, 297 and 306 with a high density. Possible further expansion on the basis of the results.	Figure 6.3
PAD 28 & SAC 8	37-6-3565	Surface collection and salvage excavation—Initial expansion (1m^2) around TU 19. Initial expansion (a single 60m * 2m trench) connecting TUs 14,15,16 and 17. Possible further expansion on the basis of the results. Up to 120m^2 further salvage may be required.	Figure 6.3
IF1	37-6-3553	Surface collection	Figure 6.6
IF2	37-6-3554	Surface collection	Figure 6.4
IF9	37-6-3556	Surface collection	Figure 6.3

Site and PAD #	AHIMS #	Extent of Future Work Required	Figure #
IF10	37-6-3557	Surface collection	Figure 6.6
SAC 2	37-6-3561	Surface collection	Figure 6.3
SAC 3	37-6-2777	This site will be conserved with no impact.	Figure 6.2

Earthworks associated with the urban development outside of the archaeological mitigation areas could occur upon the acquisition of a Section 90 AHIP for those areas, once all relevant management strategies outlined in Table 6.4 are complete (where relevant to the actual location and stages of management and development over time).

Should earthworks commence adjacent to an area which has not been archaeological salvaged (in line with requirements in Table 6.3), temporary fencing must be erected, with a suitable buffer, beyond the area with archaeological potential. The buffer must allow for both potential expansion of the archaeological excavation area, and provide a safe working environment for archaeologists and RAPs. Considerations for a safe work environment must consider traffic, noise, dust and adequate space for work.

The area should be clearly designated as a no-go zone. No (non-archaeological) vehicles or machinery should enter the no go zones until the archaeological works are complete.

The ARD for salvage excavation (under an AHIP) has been developed using the results from the test excavation undertaken as part of the ATR, and the original ARD which it followed, as the basis for future archaeological research. It will build upon the questions arising from the test excavation. The ARD for salvage excavation is presented in full as Appendix K to the ATR.

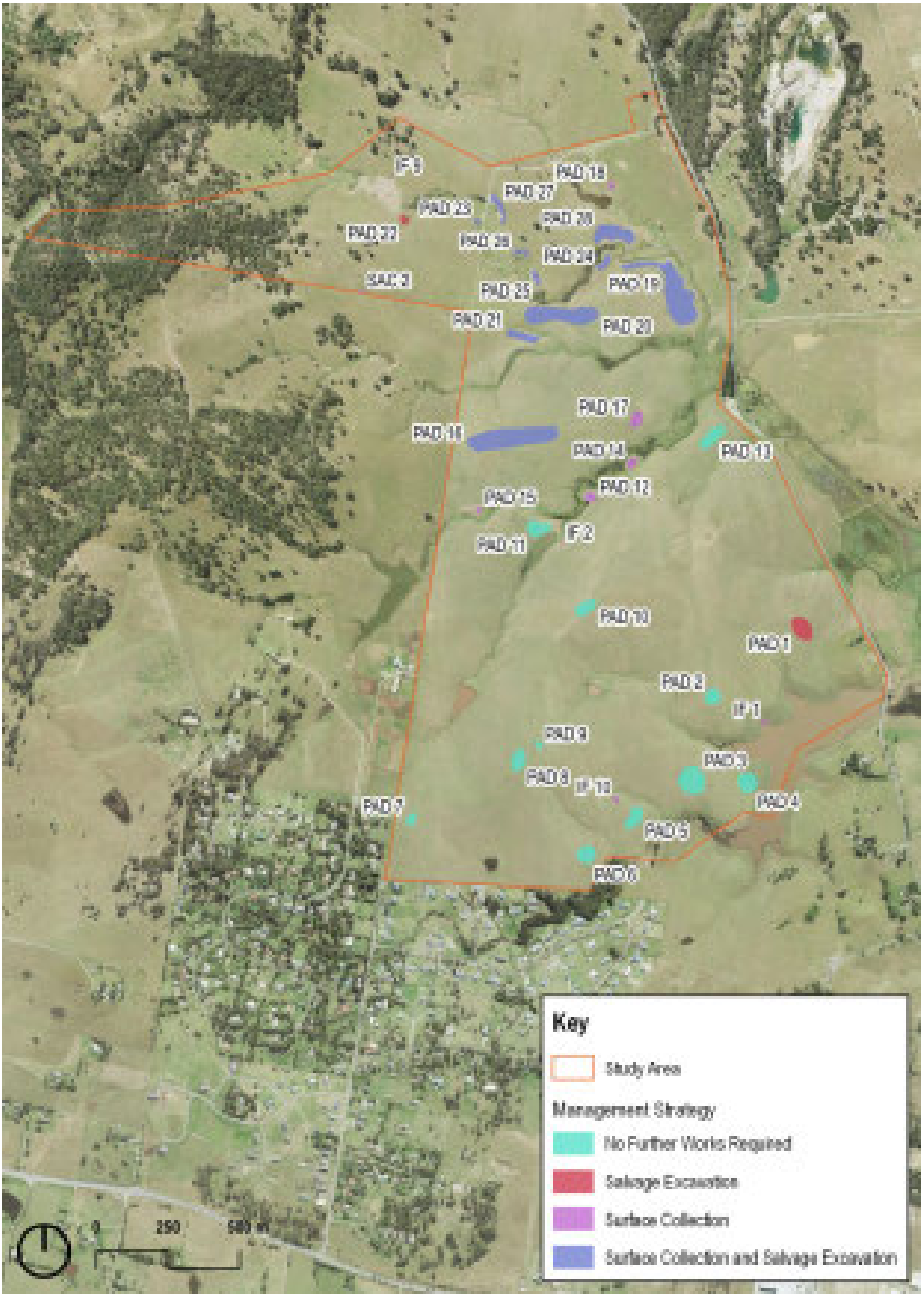


Figure 6.4 Archaeological management strategies for the study area. (Source: NSW LPI with GML additions, 2021)

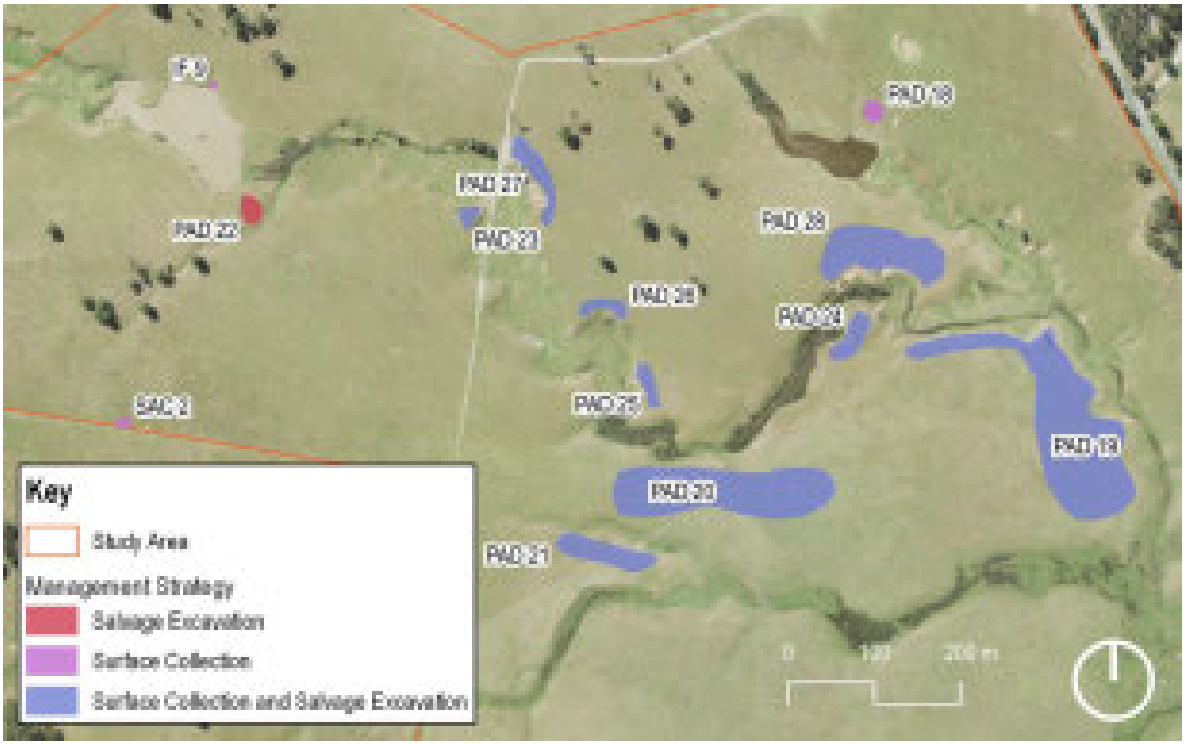


Figure 6.5 Archaeological management strategies for the northern portion of the study area. (Source: NSW LPI with GML additions, 2021)

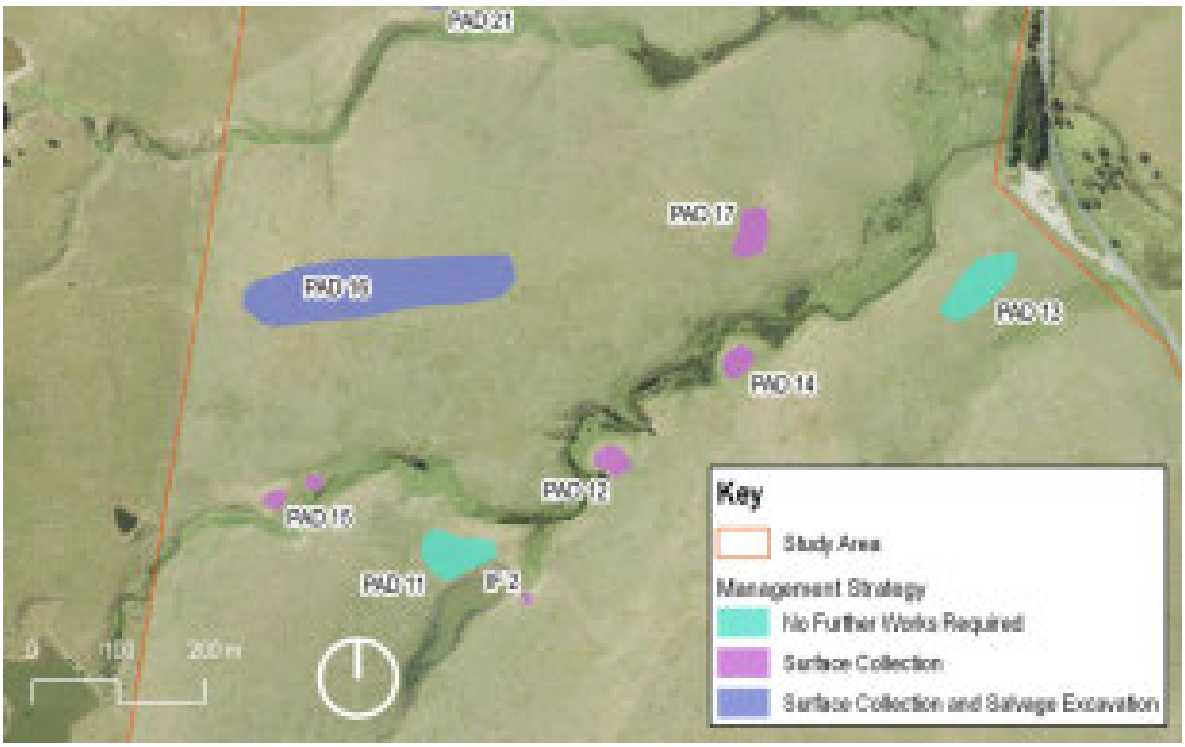


Figure 6.6 Archaeological management strategies for the middle portion of the study area. (Source: NSW LPI with GML additions, 2021)

Figure 6.7 Archaeological management strategies for the southwestern portion of the study area. (Source: NSW LPI with GML additions, 2021)

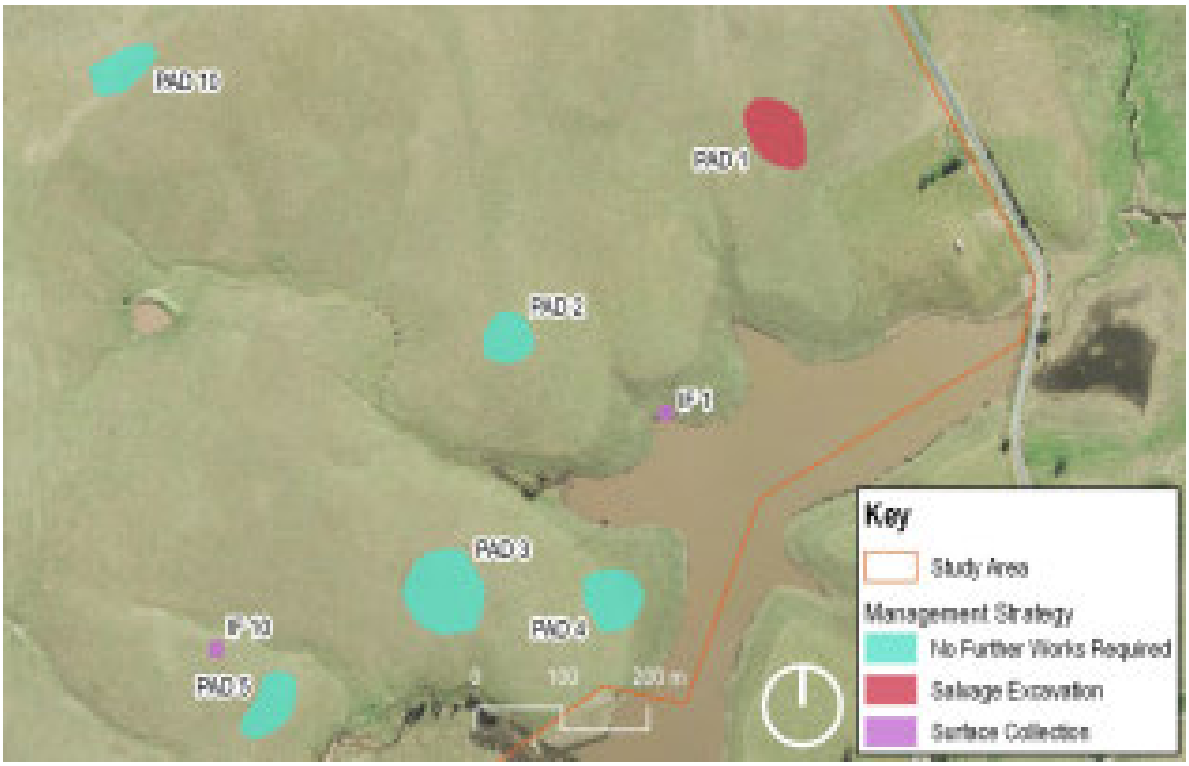


Figure 6.8 Archaeological management strategies for the southeastern study area. (Source: NSW LPI with GML additions, 2021)

6.3.3 Strategy—Community Collection

For First Nation objects that will not be conserved in situ and which do not require further archaeological excavation through the current assessment, collection is recommended. Community Collection of Isolated Finds (IF) and Stone Artefact Clusters (SAC) that are not part of archaeological sites (Table 6.3) will ensure that First Nations community values are respected and acknowledged.

Ten sites have been identified as requiring community collection, and a further twelve require a combined program of community collection and/or salvage excavations (Table 6.3 and Table 6.4). Although the areas to be subject to surface artefact collection are not expected to be of high scientific research value, intangible First Nations cultural values could be damaged during topsoil stripping.

The strategy of collection will mitigate the physical harm to significant First Nations stone objects that will be required to occur during the development process. The process of collection should involve an initial walk over prior to any earthwork occurring. Stone artefacts would be collected and stored on a site wide basis (eg all artefacts from a site ie PAD 12 & SAC 13, would be collected, recorded and stored together). Following initial collection, a grader should be used to remove the grass and topsoil from the wider site area—NB not cut to basal clay. This machine action should be undertaken through single pass transects (the machine does not drive back and forward across the stripped area). Once stripped of topsoil, a second collection should occur. Depending on the depth of soils, and whether a relatively larger number of artefacts is recovered, a second machine grading may be necessary. This can only be determined through discussed between the RAPs and archaeologists in the field.

All objects collected through the topsoil stripping and surface artefact collection should be stored with those from the salvage excavation works and subject to analysis on a site wide basis.

6.3.4 Strategy—Public Interpretation

Options for public interpretation of First Nations heritage as part of DB20s residential development should be explored. In consideration of a wider First Nations landscape, it is appropriate that public interpretation for Anambah be undertaken holistically where possible. All interpretation should be guided by an interpretation strategy, prepared in consultation with RAPs, for the study area. This should include recognition and interpretation of key heritage sites, values and connections. Future public access associated with one or more of the key viewing locations would be ideal locations for future heritage interpretation (refer to Section 6.3.6).

Possible interpretation mediums could include interpretation signage installed at appropriate places within the landscape and/or the creation of park/picnic areas that recognise First Nations cultural heritage and history of the land.

Interpretation would be an effective way to mitigate against the impact to cultural values caused by the development of parts of the wider First Nations landscape of Anambah.

6.3.5 Strategy—Management of First Nations Stone Objects

Determining the best approach to managing any First Nations stone objects that are recovered is the right and responsibility of the local First Nations community (ie the project RAPs) in consultation with the DB20 and Heritage NSW.

Some options for the management of the First Nations stone objects recovered from the study area (through test excavation, salvage excavation and community collection) could include:

- reburial within the study area and registration with AHIMS;
- negotiation with the local First Nations community for the management and care of the assemblage that would allow the assemblage to be accessed in the future by the First Nations community and/or future archaeologists for teaching and research purposes; and
- a combination of these options, ie reburial within the study area, while reserving a teaching assemblage in a keeping place for future generations.

During the field inspection, mid-point through the ACHAR review, on 7 December, a potential location for the return of cultural material was identified. It is suggested that cultural lithics be returned inside the no-harm, conservation area. A location in the northwest of this zone, in a position which is not covered by existing vegetation could be selected for artefact return. The area is shown in blue in Figure 6.3 (above); a position in the top left of the blue zone could be selected by the RAPs for reburial. This action is sought as an approved condition under the future AHIP.

6.3.6 Strategy—View Locations

The assessment has identified four view locations (Figure 4.4), which are associated with either local internal views (views 1, 2 and 3) or wider regional views (view 4) to items identified as culturally significant. The proposed master plan makes allowance for all four viewing locations, pending more detailed precinct planning over time, with a specific focus on the wider regional views at viewpoint 4.

- View 1—across a residential (environmental living) C4 zone (with minimum lot size of 5,000m2), An opportunity exists to align future streets or lot pattern to allow views down slope towards the riparian corridor.
- View 2—from a high point in residential (environmental living) C4 zoned land (with minimum lot size of 1ha), Opportunities might exist to allow views from public streets in proximity to this point in the direction of the view.
- View 3—located within the area surrounding the neighbourhood centre for smaller lot housing. Whilst views from the location may be obscured given the urban design objectives for this area, opportunities exist to allow views from perimeter roads towards the riparian corridor and by future street alignment from within the precinct towards that riparian corridor.
- View 4—this location (or in close proximity to it noting changes in levels that will arise due to civil works) has the opportunity to propose a public viewing area into the urban fabric that captures and interprets distant regional view directions and landscape features, subject to acceptance of that space by the local authority. his offers opportunities to recognise and interpret Aboriginal Cultural Heritage.

The location of these view places is identified in the overlay of the Masterplan (Figure 6.9). Where possible future design for streets and public spaces should include subtle direction markers or direction-finding devices which indicate the orientation of the view . This could be a ground inlay with a First Nations design, or simple signage which connects with the wider site interpretation plan (refer to the strategy for public interpretation).

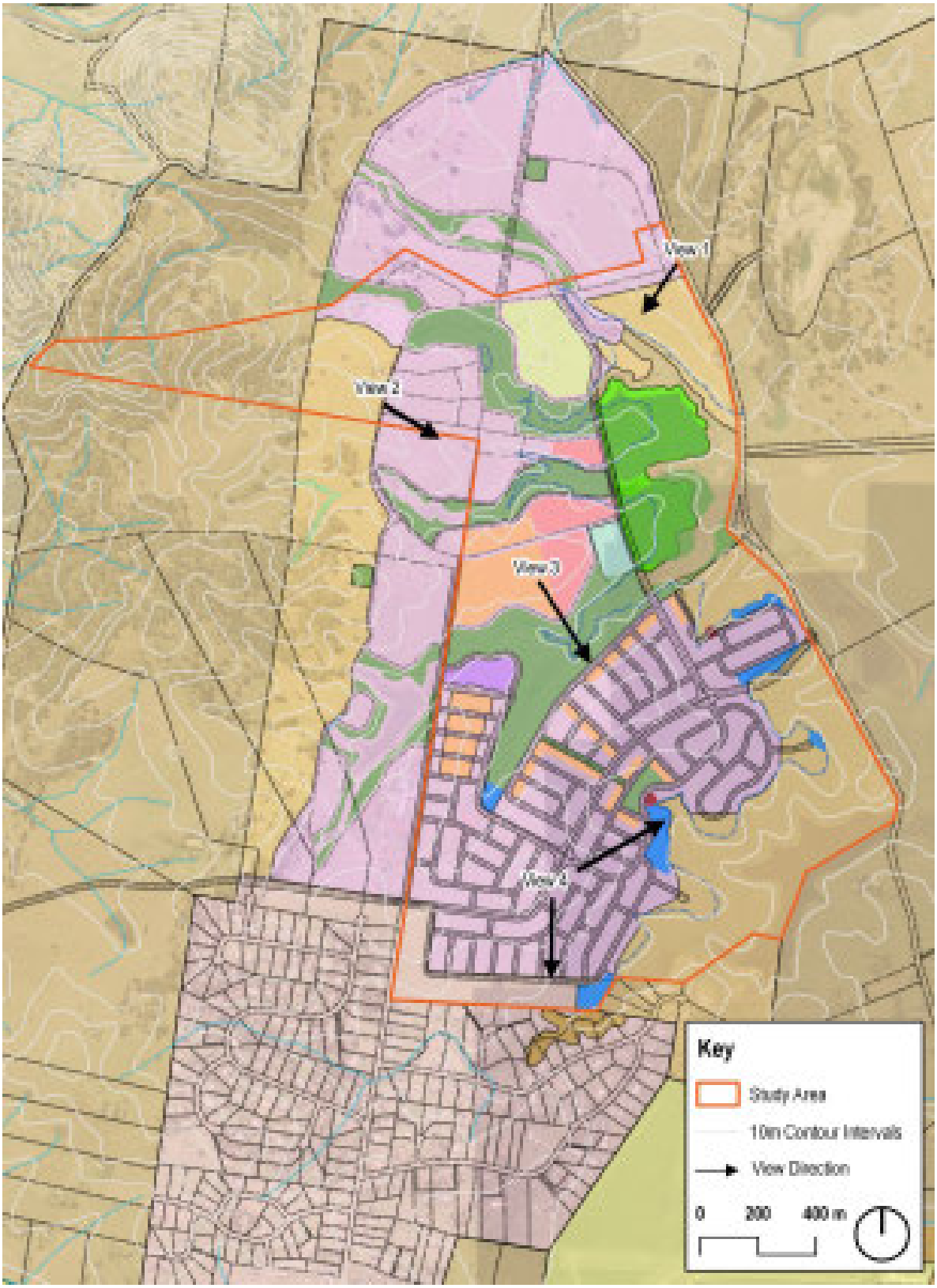


Figure 6.9 View locations overlain on the Masterplan. (Source: DB20 2023 with GML additions)

6.4 First Nations Heritage—Recommendations and Conclusions

Based upon the findings of this report and the ATR, the following heritage management recommendations are made:

- AHIMS site #37-6-2777 should be conserved without impact. No ground works should take place in this area, temporary non-intrusive fencing and signage should erected during development to ensure workers and machinery avoid this area; and passive revegetation strategies should be used for vegetation management (if required).
- A combination of salvage excavation and community collection under an AHIP is required to manage First Nations archaeological sites and objects.
- An interpretation strategy/plan should be prepared (in consultation with RAPs) for the study area. This should include recognition and interpretation of key heritage sites, values and connections. Future public spaces and streets associated with the key viewing locations would be ideal locations for future heritage interpretation.
- All First Nations objects recovered during archaeological excavations should be managed according to the preference of the project RAPs.

Table 6.2 provides a summary of management recommendation for all known First Nations sites, places, landscapes, values and areas of archaeological potential (as assessed in ATR Section 4.0).

Table 6.4 Summary of Recommendations for First Nations Heritage.

Site and PAD #	AHIMS #	Is the Site Harmed?	Is a S90 Permit Required?	Recommended Mitigation Strategy
PAD 1 & SAC 17	37-6-3574	Yes	Yes	Salvage Excavation
PAD 2 & SAC 18	37-6-3575	Yes	Yes	None
PAD 3 & SAC 19	37-6-3578	Yes	Yes	None
PAD 4 & SAC 20	37-6-3579	Yes	Yes	None
PAD 5 & SAC 21	37-6-3580	Yes	Yes	None
PAD 6	None	Yes	Yes	None
PAD 7	None	Yes	Yes	None
PAD 8	None	Yes	Yes	None
PAD 9	None	Yes	Yes	None
PAD 10	None	Yes	Yes	None
PAD 11	37-6-3581	Yes	Yes	None
PAD 12 & SAC 13	37-6-3570	Yes	Yes	Surface collection
PAD 13 & SAC 23	37-6-3582	Yes	Yes	None
PAD 14 & IF 11	37-6-3558	Yes	Yes	Surface collection

Site and PAD #	AHIMS #	Is the Site Harmed?	Is a S90 Permit Required?	Recommended Mitigation Strategy
PAD 15 & SAC 14	37-6-3571	Yes	Yes	Surface collection
PAD 16 & SAC 15	37-6-3572	Yes	Yes	Surface collection and salvage excavation
PAD 17 & IF 12	37-6-3559	Yes	Yes	Surface collection
PAD 18 & SAC 16	37-6-3573	Yes	Yes	Surface collection
PAD 19 & SAC 7	37-6-3564	Yes	Yes	Surface collection and salvage excavation
PAD 20 & SAC 5	37-6-3563	Yes	Yes	Surface collection and salvage excavation
PAD 21 & SAC 1	37-6-3560	Yes	Yes	Surface collection and salvage excavation
PAD 22 & SAC 4	37-6-3562	Yes	Yes	Salvage excavation
PAD 23 & IF 8	37-6-3555	Yes	Yes	Surface collection and salvage excavation
PAD 24 & SAC 6	37-6-3564	Yes	Yes	Surface collection and salvage excavation
PAD 25 & SAC 9	37-6-3566	Yes	Yes	Surface collection and salvage excavation
PAD 26 & SAC 10	37-6-3567	Yes	Yes	Surface collection and salvage excavation
PAD 27 & SAC 11	37-6-3568	Yes	Yes	Surface collection and salvage excavation
PAD 28 & SAC 8	37-6-3565	Yes	Yes	Surface collection and salvage excavation
IF1	37-6-3553	Yes	Yes	Surface collection
IF2	37-6-3554	Yes	Yes	Surface collection
IF9	37-6-3556	Yes	Yes	Surface collection
IF10	37-6-3557	Yes	Yes	Surface collection
SAC 2	37-6-3561	Yes	Yes	Surface collection
SAC 3	37-6-2777	No	No	Avoidance
All First Nations objects inside the study area in a subsurface context (except as part of 37-6-2777).		Yes	Yes	S90 Permit to harm

Should any previously unrecorded First Nations heritage sites or objects be uncovered during the course of development that are not covered by an existing AHIP, then work in the vicinity of the item should cease and reported to the project's archaeologist. It is likely the Aboriginal object(s) would be recorded, collected and managed with the large assemblage of cultural material. Any new Aboriginal objects should be entered into AHIMS.

It is required that copies of this report be provided to members of First Nations community who registered an interest in this project for their comment and review. All comments received from the community have been attached to this report as part of the consultation records.

This report will be forwarded to Heritage NSW for its records and to support forthcoming development applications, environmental assessments and the future AHIP application. GML has updated AHIMS to reflect the results of the 2012 test excavation.

7.0 Appendices

Appendix A

Legislation

Appendix B

Consultation Letters and Advertisement 2012

Appendix C

Consultation Letters and Advertisement 2021

Appendix D

Archaeological Technical Report

Appendix E

Archaeological Research Design

Appendix A

Legislation

Appendix A—New South Wales Legislation

National Parks and Wildlife Act 1974

Section 90 of the NPW Act provides statutory protection for all Aboriginal 'objects' consisting of any material evidence of the Indigenous occupation of New South Wales. It also enables under Section 84 the declaration of 'Aboriginal places' which are areas of cultural significance to the Aboriginal community.

Aboriginal objects and places are given automatic statutory protection in New South Wales and it is an offence to harm an Aboriginal object or declared Aboriginal Place without the Ministers consent.

The NPW Act defines an Aboriginal object as:

> *any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.*

Protection of Aboriginal objects and places applies irrespective of the level of their significance or issues of land tenure. Sites of traditional significance that do not necessarily contain material remains may be gazetted as 'Aboriginal Places' and thereby be protected under the NPW Act. Areas are only gazetted if the Minister is satisfied that enough evidence exists to demonstrate that the location was and/or is of special significance to Aboriginal culture.

A strict liability offence applies for harm to an Aboriginal object or declared Aboriginal Places. This means that even if an Aboriginal object is unwittingly harmed, a crime has been committed and prosecution can still occur. The definition of 'harm' under the NPW Act includes destroying, defacing, damaging or moving an Aboriginal object or declared Aboriginal Place. The strict liability offence of harming Aboriginal objects has a number of defences. The two defences relevant to the proposed development are the statutory defence of due diligence through complying with an adopted industry code, or compliance with the conditions of an Aboriginal Heritage Impact Permit (AHIP).

Environmental Planning and Assessment Act 1979

The EP&A Act provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items through inclusion in schedules to planning instruments such as Local Environmental Plans (LEPs) or Regional Environmental Plans (REPs). Heritage items in planning instruments can include Aboriginal objects and places, historic sites, landscapes and parks. The EP&A Act requires that appropriate measures be taken for the management of the potential archaeological resource consistent with the requirements of the NPW Act.

The study area is located within the Maitland Local Government Area (LGA), and is subject to the Maitland Local Environmental Plan (LEP) 2011. The heritage conservation objectives of the Maitland LEP 2011 are:

a) to conserve the environmental heritage of Maitland,

b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,

c) to conserve archaeological sites,

d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

Appendix B

Consultation Letters and Advertisement 2012

Aboriginal Consultation Log

Stage 1—Notification of project proposal and registration of interest

Stage 1.1—Compilation of a list of Aboriginal stakeholders

Body/Group	Contact	Date Sent	Date Reply	Comment	Reference
OEH EPRG region office	Roger Mehr	11/5/12	18/5/12	List of 52 Aboriginal stakeholder groups	Doc12/20891
Mindaribba Local Aboriginal Land Council (LALC)	Ken Riddiford	11/5/12			
The Registrar, Aboriginal Lands Right Act 1983	Tabatha Dantoine	11/5/12	16/5/12	Does not appear to have Registered Aboriginal Owners	
National Native Title Tribunal (NNTT)	Nakari Thorpe	11/5/12	17/5/12	No relevant entries in the NNTT databases	4908/12nt
Native Title Services Corporation (NTSCORP Limited)	Peter Schultz	11/5/12	29/5/12	Correspondence forwarded to interested parties	29-05-2012/2
Maitland City Council	Claire James	11/5/12	28/5/12	Identified 5 Aboriginal groups to contact	RZ10015
Catchment Management Authority (CMA)	The Manager	11/5/12			

10 days was allowed for these groups to respond.

Stage 1.2—Newspaper Advert

Newspaper	Date Sent	Date Printed
Maitland Mercury	21 May 2012	23 May 2012

14 days (i.e. until 6 June 2012) was allowed for Aboriginal people to respond to the newspaper advertisement.

Gordon Mackay Logan

Stage 1.3—List of Aboriginal groups/people from Stage 1.1 and 1.2.

Organisation/Person	Contact	Date Registered	How the name was obtained and any comments
Aboriginal Native Title Elders Consultants	Margaret Matthews	7 March 2013	OEH Stakeholder list
Aliera French Trading	Aliera French		OEH Stakeholder list
Black Creek Aboriginal Corporation	Tracey White		OEH Stakeholder list
Bullen Bullen	Lloyd Mathews		OEH Stakeholder list
Cacatua Culture Consultants	Donna & George Sampson	29 May 2012	OEH Stakeholder list
Carrawonga Consultants	Cheryl Moodie & Justin Matthews		OEH Stakeholder list
Culturally Aware	Tracey Skene & David Swan	5 June 2012	OEH Stakeholder list
D F T V Enterprises	Derrick Vale Sr	6 June 2012	OEH Stakeholder list
DRM Cultural Management	Helen Faulkner	6 June 2012	Registration directly with GML
Deslee Talbott Consultants	Deslee Matthews		OEH Stakeholder list
Gidawaa Walang & Barkuma Neighbourhood Centre Inc.	Debbie Dacey-Sullivan + Annie Hickey	28 May 2012	OEH Stakeholder list
Giwiirr Consultants	Michele Stair		OEH Stakeholder list
Hunter Traditional Owner	Paulette Ryan		OEH Stakeholder list
Hunter Valley Aboriginal Corporation	Rhonda Griffith		OEH Stakeholder list
Hunter Valley Cultural Consultants	Christine Matthews & Colleen Stair		OEH Stakeholder list
Hunter Valley Cultural Surveying	Luke Hickey	6 June 2012	OEH Stakeholder list
Hunter Valley Natural & Cultural Resources	David French		OEH Stakeholder list
Indigenous Outcomes	Robert Smith		OEH Stakeholder list
Jarban + Mugrebea	Les Atkinson		OEH Stakeholder list
Jeff Matthews	Jeff Matthews		OEH Stakeholder list

Organisation/Person	Contact	Date Registered	How the name was obtained and any comments
Kawul Cultural Services	Vicky Slater	4 June 2012	OEH Stakeholder list
Kayaway	Mark Hickey		OEH Stakeholder list
Lower Hunter Wonnarua Council Inc	Lea-Anne Ball, Uncle Tommy Miller	28 May 2012	OEH Stakeholder list; Maitland City Council
Lower Wonnaruah Tribal Consultancy Pty Ltd	Barry Anderson		OEH Stakeholder list
Mindaribba Local Aboriginal Land Council	Ken Riddiford	5 June 2012	OEH Stakeholder list; Maitland City Council
Mingga Consultants	Clifford Matthews		OEH Stakeholder list
Mooki Plains Management	Stephen Matthews		OEH Stakeholder list
Mooki Plains Management	Les Field		OEH Stakeholder list
Muswellbrook Cultural Consultants	Brian & Gay Horton		OEH Stakeholder list
Ngarramang-Kuri Aboriginal Culture & Heritage Group	Abie Wright	1 June 2012	OEH Stakeholder list
Roger Noel Matthews Consultancy	Roger Noel		OEH Stakeholder list
Scott Smith	Scott Smith		OEH Stakeholder list
St Clair Singleton Aboriginal Corporation	Cultural Heritage Officer		OEH Stakeholder list
T & G Culture Consultants	Tony Griffiths	4 June 2012	OEH Stakeholder list
Ungooroo Aboriginal Corporation	Alan Paget & Sarah Hall		OEH Stakeholder list
Ungooroo Cultural & Community Services	Rhonda Ward		OEH Stakeholder list
Upper Hunter Heritage Consultants	John, Melissa & Darrel Matthews		OEH Stakeholder list
Upper Hunter Wonnarua Council Inc	Rhoda Perry & Georgina Berry	19 November 2012	OEH Stakeholder list
Valley Culture	Larry Van Vliet & John Matthews		OEH Stakeholder list
Wanaruah Custodians	David Foot		OEH Stakeholder list
Wanaruah Local Aboriginal Land Council	Noel Downs	31 May 2012	OEH Stakeholder list (n.b.—study area not within LALC boundaries, therefore cannot be consulted)
Wattaka Wonnarua C.C. Service	Des Hickey	27 August 2012	OEH Stakeholder list
Widescope Indigenous Group Pty Ltd	Steven Hickey	1 June 2012	OEH Stakeholder list

Organisation/Person	Contact	Date Registered	How the name was obtained and any comments
Wonn1 Contracting	Arthur Fletcher	23 Nov 2012	OEH Stakeholder list
Wonnarua Culture Heritage	Gordon Griffith	4 June 2012	OEH Stakeholder list
Wonnarua Nation Aboriginal Corporation	Laurie Perry	3 June 2012	OEH Stakeholder list
Wonnaruah Elders Council	Uncle Tommy Miller		OEH Stakeholder list; Maitland City Council
Yarrawalk (A division of Tocomwall Pty Ltd)	Scott Franks		OEH Stakeholder list
Yinarr Cultural Services	Kathleen Steward	28 May 2012	OEH Stakeholder list
Awabakal Local Aboriginal Land Council			Maitland City Council (n.b.—study area not within LALC boundaries)
Worimi Local Aboriginal Land Council			Maitland City Council (nb—study area not within LALC boundaries)
Myland Cutural and Heritage Group	Warren F Schillings	29 May 2012	Registration
Warragil Cultural Services	Aaron Slater	28 May 2012	Registration
Maree/TA Wallangan Cultural Services	Maree Waugh	3 June 2012	Registration
Gomeroi Namoi Traditional Owners	Stephen Talbott	8 August 2012	GNTO approached GML for registration
Lower Hunter Aboriginal Incorporated	David Ahoy	14 March 2013	LHAI approached GML for registration

Stage 1.4—Aboriginal notification of the proposed project and an offer to be involved in the consultation

Organisation/Person	Contact	Date sent	Reference
Aboriginal Native Title Elders Consultants	Margaret Matthews	21 May 2012	12-0226
Aliera French Trading	Aliera French	21 May 2012	12-0226
Black Creek Aboriginal Corporation	Tracey White	21 May 2012	12-0226
Bullen Bullen	Lloyd Mathews	21 May 2012	12-0226
Cacatua Culture Consultants	Donna & George Sampson	21 May 2012	12-0226

Organisation/Person	Contact	Date sent	Reference
Carrawonga Consultants	Cheryl Moodie & Justin Matthews	21 May 2012	12-0226
Culturally Aware	Tracey Skene & David Swan	21 May 2012	12-0226
D F T V Enterprises	Derrick Vale Sr	21 May 2012	12-0226
Deslee Talbott Consultants	Deslee Matthews	21 May 2012	12-0226
Gidawaa Walang & Barkuma Neighbourhood Centre Inc.	Debbie Dacey-Sullivan + Annie Hickey	21 May 2012	12-0226
Giwiirr Consultants	Michele Stair	21 May 2012	12-0226
Hunter Traditional Owner	Paulette Ryan	21 May 2012	12-0226
Hunter Valley Aboriginal Corporation	Rhonda Griffith	21 May 2012	12-0226
Hunter Valley Cultural Consultants	Christine Matthews & Colleen Stair	21 May 2012	12-0226
Hunter Valley Cultural Surveying	Luke Hickey	21 May 2012	12-0226
Hunter Valley Natural & Cultural Resources	David French	21 May 2012	12-0226
Indigenous Outcomes	Robert Smith	21 May 2012	12-0226
Jarban + Mugrebea	Les Atkinson	21 May 2012	12-0226
Jeff Matthews	Jeff Matthews	21 May 2012	12-0226
Kawul Cultural Services	Vicky Slater	21 May 2012	12-0226
Kayaway	Mark Hickey	21 May 2012	12-0226
Lower Hunter Wonnarua Council Inc	Lea-Anne Ball, Uncle Tommy Miller	21 May 2012	12-0226
Lower Wonnaruah Tribal Consultancy Pty Ltd	Barry Anderson	21 May 2012	12-0226
Mindaribba Local Aboriginal Land Council	Ken Riddiford	21 May 2012	12-0226
Mingga Consultants	Clifford Matthews	21 May 2012	12-0226
Mooki Plains Management	Stephen Matthews	21 May 2012	12-0226
Mooki Plains Management	Les Field	21 May 2012	12-0226
Muswellbrook Cultural Consultants	Brian & Gay Horton	21 May 2012	12-0226
Ngarramang-Kuri Aboriginal Culture & Heritage Group	Abie Wright	21 May 2012	12-0226

Organisation/Person	Contact	Date sent	Reference
Roger Noel Matthews Consultancy	Roger Noel	21 May 2012	12-0226
Scott Smith	Scott Smith	21 May 2012	12-0226
St Clair Singleton Aboriginal Corporation	Cultural Heritage Officer	21 May 2012	12-0226
T & G Culture Consultants	Tony Griffiths	21 May 2012	12-0226
Ungooroo Aboriginal Corporation	Alan Paget & Sarah Hall	21 May 2012	12-0226
Ungooroo Cultural & Community Services	Rhonda Ward	21 May 2012	12-0226
Upper Hunter Heritage Consultants	John, Melissa & Darrel Matthews	21 May 2012	12-0226
Upper Hunter Wonnarua Council Inc	Rhoda Perry & Georgina Berry	21 May 2012	12-0226
Valley Culture	Larry Van Vliet & John Matthews	21 May 2012	12-0226
Wanaruah Custodians	David Foot	21 May 2012	12-0226
Wanaruah Local Aboriginal Land Council	Noel Downs	21 May 2012	12-0226
Wattaka Wonnarua C.C. Service	Des Hickey	21 May 2012	12-0226
Widescope Indigenous Group Pty Ltd	Steven Hickey	21 May 2012	12-0226
Wonn1 Contracting	Arthur Fletcher	21 May 2012	12-0226
Wonnarua Culture Heritage	Gordon Griffith	21 May 2012	12-0226
Wonnarua Nation Aboriginal Corporation	Laurie Perry	21 May 2012	12-0226
Wonnaruah Elders Council	Uncle Tommy Miller	21 May 2012	12-0226
Yarrawalk (A division of Tocomwall Pty Ltd)	Scott Franks	21 May 2012	12-0226
Yinarr Cultural Services	Kathleen Steward	21 May 2012	12-0226
Awabakal Local Aboriginal Land Council		21 May 2012	12-0226
Worimi Local Aboriginal Land Council		21 May 2012	12-0226
Myland Cutural and Heritage Group	Warren F Schillings	21 May 2012	12-0226
Warragil Cultural Services	Aaron Slater	21 May 2012	12-0226

Organisation/Person	Contact	Date sent	Reference
Maree/TA Wallangan Cultural Services	Maree Waugh	21 May 2012	12-0226
DRM Cultural Management	Helen Faulkner	21 May 2012	12-0226

14 days was allowed for Aboriginal people to register an interest to be consulted.

Stage 1.5—Registered Aboriginal Parties (RAP) & Contact Details

Aboriginal Organisation/Person	Contact	Date of Registration and Comments
Aboriginal Native Title Elders Consultants	Margaret Matthews 16a Mahogany Street MUSWELLBROOK NSW 2333 0417 725 956 Fax 6541 4467	7 March 2013 NB late registration—they have been kept in the loop of the project since this date. John Matthews phoned and has asked to be registered
Amanda Hickey	Ms Amanda Hickey 41 Dempsey Street EMU HEIGHTS NSW 0434480558 amandahickey@live.com.au	Late registration—they have been kept in the loop of the project since this date.
Cacatua Culture Consultants	Donna & George Sampson Unit 1b/11 Glenwood Drive THORNTON NSW 2322	29/5/12
Culturally Aware	Tracey Skene 7 Crawford Place MILLFIELD NSW 2325	5/6/12
D F T V Enterprises	Derrick Vale Sr 5 Mountbatten Close RUTHERFORD NSW 2320	6/6/12
DRM Cultural Management		6/6/12 Requested details not be passed on

Aboriginal Organisation/Person	Contact	Date of Registration and Comments
Gidawaa Walang Cultural Heritage Consultancy	Ann Hickey 76 Lang Street KURRI KURRI NSW 2327	28/5/12
Gomeroi Namoi Traditional Owners	Mr Stephen Talbott 73 Kiah Road, Gillieston Heights NSW 2321	8/8/2012 NB late registration ST is listed under the OEH list as the MLALC contact person
Hunter Valley Cultural Surveying	Luke Hickey 165 Susan St SCONE NSW 2337 hvcs@optusnet.com.au	6/6/12
Kawul Cultural Services	Rod Hickey/Vicky Slater PO Box 817 SINGLETON NSW 2330	4/6/12
Lower Hunter Aboriginal Incorporated	David Ahoy	14 March 2013 NB late registration LHAI is a 'new group' (not on the OEH list) who have requested to be registered for the project. It is noted that David Ahoy was the field survey representative for Ngarramang-Kuri Aboriginal Culture & Heritage Group.
Lower Hunter Wonnarua Council Inc	Lea-Anne Ball & Uncle Tommy Miller 51 Bowden St HEDDON GRETA NSW 2321	28/5/12
TA Wallangan Cultural Services	Maree Waugh 29 Anzac Ave CESSNOCK NSW 2325	3/6/12
Mindaribba Local Aboriginal Land Council	Stephen Brereton PO Box 401 EAST MAITLAND NSW 2323	5/6/12 29.3.16 Ken Riddiford no longer correct contact. Changed to Stephen Brereton.
Myland Cultural & Heritage Group		29/5/12 Requested details not be passed on

Aboriginal Organisation/Person	Contact	Date of Registration and Comments
Ngarramang-Kuri Aboriginal Culture & Heritage Group		1/6/12 Requested details not be passed on
T & G Culture Consultants	Tony Griffiths 19 O'Donnell Cres METFORD NSW 2323	4/6/12
Upper Hunter Wonnarua Council Inc	Rhoda Perry & Georgina Berry PO Box 184 Singleton NSW 2330	19/11/12 NB late registration Mrs Perry discussed registration and asked to be included in the project
Warragil Cultural Services	Aaron Slater PO Box 1095 SINGLETON NSW 2330	28/5/12
Wattaka Wonnarua C.C. Service	Des Hickey 4 Kennedy Street SINGLETON NSW 2330	27 August 2012 NB late registration
Widescope Indigenous Group Pty Ltd	Steven Hickey 73 Russell St EMU PLAINS NSW 2750	1/6/12
Wonn1 Contracting	Arthur Fletcher	27/11/12 NB late registration Mr Fletcher has requested to be added to the Anambah consultation list. Mail sent to him has been internally mislaid and he thus did not register.
Wonnarua Culture Heritage		4/6/12 Requested details not be passed on
Wonnarua Nation Aboriginal Corporation	Laurie Perry PO Box 3066 SINGLETON NSW 2330	3/6/12
Yinarr Cultural Services	Kathleen Steward 111 Westwood Road GUNGAL NSW 2333	28/5/12

GML provided a copy of the registered Aboriginal parties to the OEH and the LALC on the 5th July 2012.

Stage 2—Presentation of information about the proposed project

Stage 2.1 & Stage 2.2—Presentation of proposed project information & provision of the proposed assessment methodology to the RAPs

Information on the proposed project and the intended assessment methodology was provided in a short report (GML June 2012) entitled "Anambah Investigation Area Archaeological and Cultural Assessment Methodology". A copy of this report with a cover was provided to each of the RAPs.

Aboriginal Organisation/Person	Date Sent	Date Reply	Comment and details of how input has been considered	Reference
Cacatua Culture Consultants	02/06/2012			
Culturally Aware	02/06/2012			
D F T V Enterprises	02/06/2012			
DRM Cultural Management	02/06/2012			
Gidawaa Walang Cultural Heritage Consultancy	02/06/2012			
Hunter Valley Cultural Surveying	02/06/2012			
Kawul Cultural Services	02/06/2012	30/07/2012	Vicky Slater—"We agree with your Draft Report & Methodology of the above project"	Email 30 July 2012
Lower Hunter Wonnarua Council Inc	02/06/2012			
Maree/TA Wallangan Cultural Services	02/06/2012			
Mindaribba Local Aboriginal Land Council	02/06/2012	25/07/2012	Happy with methodology	Pers. Comm.
Myland Cultural & Heritage Group	02/06/2012			
Ngarramang-Kuri Aboriginal Culture & Heritage Group	02/06/2012			
T & G Culture Consultants	02/06/2012	25/07/2012	Happy with methodology	Pers. Comm.
Warragil Cultural Services	02/06/2012	30/07/2012	Aaron Slater—"We have read and are quite happy with the Methodology and approve the draft report"	Email 30 July 2012

Aboriginal Organisation/Person	Date Sent	Date Reply	Comment and details of how input has been considered	Reference
Widescope Indigenous Group Pty Ltd	02/06/2012			
Wonnarua Culture Heritage	02/06/2012			
Wonnarua Nation Aboriginal Corporation	02/06/2012			
Yinarr Cultural Services	02/06/2012			
Wattaka Wonnarua C.C. Service	27/08/2012			

Stage 2.3—Meeting regarding proposed assessment methodology with proponent and the RAPs 8/8/2012

A stakeholder meeting was held on 8 August 2012, at the Maitland Mercure, to present the project background and methodology for field survey. All RAP were invited to attend this meeting. RAPs were asked to provide any cultural knowledge relating to the study area and feedback on the assessment methodology.

Aboriginal Organisation/Person	Invitation Sent	Date of RSVP	Attendance	Comment and details of how input has been considered
Cacatua Culture Consultants	31/7/2012		8/8/2012 George Sampson	
Culturally Aware	31/7/2012	1/8/2012		
D F T V Enterprises	31/7/2012	2/8/2012	8/8/2012 Derrick Vale	
DRM Cultural Management	31/7/2012	7/8/2012	8/8/2012 Jenni Field and Helen Faulkner	
Gidawaa Walang Cultural Heritage Consultancy	31/7/2012			
Hunter Valley Cultural Surveying	31/7/2012			
Kawul Cultural Services	31/7/2012	31/7/2012		Apologies due to illness sent 8/8/2012

Aboriginal Organisation/Person	Invitation Sent	Date of RSVP	Attendance	Comment and details of how input has been considered
Lower Hunter Wonnarua Council Inc	31/7/2012	7/8/2012	8/8/2012 Dean Miller and Tom Miller	The landform is similar to other surrounding project areas which have had archaeology. A management plan should be put in place following the work.
Maree/TA Wallangan Cultural Services	31/7/2012			
Mindaribba Local Aboriginal Land Council	31/7/2012	31/7/2012	8/8/2012 Ken Riddiford	
Myland Cultural & Heritage Group	31/7/2012		8/8/2012 Warren Schillings	
Ngarramang-Kuri Aboriginal Culture & Heritage Group	31/7/2012			
T & G Culture Consultants	31/7/2012	6/8/2012	8/8/2012 Greg Griffiths	This project should be based on a good will process. Management plan should be part of the archaeological process.
Warragil Cultural Services	31/7/2012			
Widescope Indigenous Group Pty Ltd	31/7/2012		8/8/2012 Steven Hickey	
Wonnarua Culture Heritage	31/7/2012	6/8/2012	8/8/2012 Shannon Griffiths + 1	
Wonnarua Nation Aboriginal Corporation	31/7/2012	1/8/2012	8/8/2012 Maree Waugh	
Yinarr Cultural Services	31/7/2012			

Aboriginal Organisation/Person	Invitation Sent	Date of RSVP	Attendance	Comment and details of how input has been considered
Gomeroi Namoi Traditional Owners	Registered on 8/8/2012	N/A	8/8/2012 Stephen Talbott	Agreed with management plan initiative and provided more information regarding a management plan being cooperation and creating a win win for both proponent and community. He also noted that there are grants for such community projects as tree planting. I one is not out on site for the duration of works, that person cannot report as well. IF everyone is on site, it provides better coverage and better RAP reporting/ assessment. Those who are at meetings should be part of field work.

Stage 2.4—Field Survey or opportunity for RAP to visit the proposed project site

The field survey was undertaken from 20 August to 23 August 2012. All RAPs were invited to participate in the field survey on all days of the survey. In addition to archaeological survey, the survey methodology included discussion between male and female GML staff (with anthropological training) and the RAPs on cultural and intangible aspects of Aboriginal heritage across the region. Relevant comments received during the survey, which are not confidential, are included in the log below.

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Cacatua Culture Consultants	Adam Sampson	14/8/2012 Email	20/8/2012	
			22/8/2012	
			23/8/2012	
	Legan McCormack		21/8/2012	
Culturally Aware	Tracey Skene	14/8/2012 Email	20/8/2012	The bigger hills have views to Sugarloaf. Some of the hills were markers, for example Sugarloaf and Brokenback ranges. Different people were located on bigger hilltops for visibility. In all four directions from the study area is a lot of sensitive landscape, particularly 20/25km in SW direction.
			21/8/2012	
			22/8/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
			23/8/2012	
D F T V Enterprises	Derrick Vale	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
DRM Cultural Management	Helen Faulkner	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Gidawaa Walang Cultural Heritage Consultancy	Ann Hickey	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Gomeroi Namoi Traditional Owners	Peter Whitten	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Hunter Valley Cultural Surveying	Luke Hickey	14/8/2012	20/8/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
			21/8/2012	Recognises how Country is defined by the creeks flowing into Country.
			22/8/2012	Wonarua—trade route to the ocean from Paterson. Mt Olive mission, which closed in the1900s, was located inland near Paterson and Luke's mother informed him of the mission and the trade route. Mount Sugarloaf is a ceremonial area where all mobs met. It is uncertain but there may have been/ still be bora grounds around the foot of the mountain. Mount Sugarloaf was used for orientation. It is a boundary marker the border with Awakabal land which runs along the Liverpool ranges. It took weeks, if not month, to make the journey. When the wattle flowered, that was the time to go fishing, particularly for Taylor fish. From the Hunter River to Mount Pleasant there is a pattern of stone reduction—material quarries at the river, uphill they started turning material into cores and then there is a site on the top of the hill.
			23/8/2012	
Kawul Cultural Services	Kerrie Slater	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Lower Hunter Wonnarua Council Inc.	Lionel McGrady	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Mindaribba LALC	Mathew Yates	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Myland Cultural and Heritage Group	Lennie Wright	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Ngarramang-Kuri Aboriginal Culture & Heritage Group	David Ahoy	14/8/2012 Email	21/8/2012	
			22/8/2012	
			23/8/2012	
T&G Culture Consultants	Greg Griffiths	14/8/2012 Fax	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
TA Wallangan Cultural Services	Tony Waugh	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Warragil Cultural Services	Arika Jalomaki		23/8/2012	
		14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Widescope Indigenous Group Pty Ltd	Steven Hickey	14/8/2012 Email	20/8/2012	When standing at PAD 2 Steven commented that a good time to hunt was during or following a flood as the wild game would congregate on high ridges.
			21/8/2012	Aboriginal people would travel into this region, from the NW—for certain ceremonies, such as initiation—gathering ceremonies, where boys aged 14-15 (just before manhood) would gather. The track they followed was from the Upper Hunter to a point to elders had designated. The initiated boys would need to collect items representative of the sky, land and water—ie elders ask for fish/ crab/duck—kangaroo/goanna. This showed their hunting skills were good and that they were looking to manhood. It also prove that they could live off the land. Family groups of 12–15 people comprised clans which were of approximately 350 people. Clans gather together to form the tribe. Laws were dealt with by the head of a clan, which was usually a female. All the stone materials tell a story—certain clans used different materials for certain purposes. Materials tell where people came from.
			22/8/2012	
			23/8/2012	
Wonnarua Culture Heritage	Shannon Griffiths	14/8/2012 Email/ Fax	20/8/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
			21/8/2012	
			22/8/2012	
			23/8/2012	
Wonnarua Nation Aboriginal Corporation	Maree Waugh	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Yinarr Cultural Services		14/8/2012 Email		
Wattaka Wonnarua C.C. Service		14/8/2012 Email		

Stage 2.5—Meeting to present the findings of field survey and the proposed ARD for test excavation 24 September 2012

A stakeholder meeting was held on 24 September 2012, at the Maitland Mercure, to present the results of the survey, the methodology for archaeological test excavation and the intention of Stockland to provide a 'Rezoning Report' for RAP review and comment. All RAP were invited to attend this meeting. An open session was held where RAPs could provide any comments, views and opinions on the field survey, the forthcoming report and test excavation methodology.

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Cacatua Culture Consultants	George Sampson	13/9/2012 Email	24/9/2012	
Culturally Aware	Tracey Skene	13/9/2012 Email	24/9/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
DFTV Enterprises	Derrick Vale	13/9/2012 Email	24/9/2012	
DRM Cultural Management	Apology	13/9/2012 Email		
Gidawaa Walang Cultural Heritage Consultancy	Apology	13/9/2012 Email		
Gomeroi Namoi Traditional Owners	Stephen Talbott	13/9/2012 Email	24/9/2012	Commented extensively on the results of the survey, the process for AHIP application and the forthcoming test excavation. Discussed the processes for 'conservation' of Aboriginal sites following test excavation.
Hunter Valley Cultural Surveying	Did not attend	13/9/2012 Email		
Kawul Cultural Services	Vicky Slater	13/9/2012 Email	24/9/2012	
Lower Hunter Wonnarua Council Inc.	Tom Miller	13/9/2012 Email	24/9/2012	
Mindaribba LALC	Did not attend	13/9/2012 Email		
Myland Cultural and Heritage Group	Warren Schillings	13/9/2012 Email	24/9/2012	
Ngarramang-Kuri Aboriginal Culture and Heritage Group	Did not attend	13/9/2012 Email		
T&G Culture Consultants	Tod Maley	13/9/2012 Fax	24/9/2012	
TA Wallangan Cultural Services	Tony Waugh	13/9/2012 Email	24/9/2012	
Warragil Cultural Services	Did not attend	13/9/2012 Email		
Wattaka Wonnarua C.C. Service	Des Hickey	13/9/2012 Email	24/9/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Widescope Indigenous Group Pty Ltd	Steven Hickey	13/9/2012 Email	24/9/2012	
Wonnarua Culture Heritage	Gordon Griffiths	13/9/2012 Email	24/9/2012	
Wonnarua Nation Aboriginal Corporation	Maree Waugh	13/9/2012 Email	24/9/2012	
Yinarr Cultural Services	Steven Campbell	13/9/2012 Email	24/9/2012	

Stage 2.6—Provision of the Draft Rezoning Report (GML 2012)

On 5 October 2012 all RAP were provided with a copy of the Anambah rezoning report (either by You Send It email or Registered Post), which included the results of the field survey and the archaeological research design for test excavation. RAP were specifically requested to comment on the ARD and provide any comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area. RAPs were allowed 28 days to provide written and/or verbal comment—2 November 2012.

Aboriginal Organisation/Person	Date Sent & Received	Date Downloaded	GML Follow Up	Comments	Date Reply	Comments
Cacatua Culture Consultants	5-10-12	21-10-12	9-10-12 Phone Call	Message left on answering service asking Cacatua to download report.		No comments were received by 15 November
Culturally Aware	5-10-12	5-10-12		Report already downloaded prior to phone calls on 9.10.12—no follow up in relation to download required		No comments were received by 15 November
D F T V Enterprises	5-10-12	9-10-12	9-10-12 Phone Call	Message left on answering service asking DFTV to download report.		No comments were received by 15 November

Aboriginal Organisation/Person	Date Sent & Received	Date Downloaded	GML Follow Up	Comments	Date Reply	Comments
DRM Cultural Management	5-10-12	9-10-12		Report already downloaded prior to phone calls on 9.10.12—no follow up in relation to download required		No comments were received by 15 November
Gidawaa Walang Cultural Heritage Consultancy	5-10-12	8-10-12		Report already downloaded prior to phone calls on 9.10.12—no follow up in relation to download required		No comments were received by 15 November
Gomeroi Namoi Traditional Owners	5-10-12			No phone number supplied so no phone call made to request they download the report.		No comments were received by 15 November
Hunter Valley Cultural Surveying	5-10-12		9-10-12 Phone Call	Landline disconnected/ unavailable. Ph no. 0423930690 unanswered and no room for messages, ph no. 0402446223 not Luke Hickey's.		No comments were received by 15 November
Kawul Cultural Services	5-10-12	15-10-12	9-10-12 Phone Call	Vicky did receive the email and has downloaded the report and started to read it.		No comments were received by 15 November
Lower Hunter Wonnarua Council Inc	5-10-12		9-10-12 Phone Call	No answer and no message service.		No comments were received by 15 November
Maree/TA Wallangan Cultural Services	5-10-12	9-10-12	9-10-12 Phone Call	No answer—message left asking Maree to download the report.		No comments were received by 15 November

Aboriginal Organisation/Person	Date Sent & Received	Date Downloaded	GML Follow Up	Comments	Date Reply	Comments
Mindaribba Local Aboriginal Land Council	5-10-12	8-10-12		Report already downloaded prior to phone calls on 9.10.12—no follow up in relation to download required		No comments were received by 15 November
Myland Cultural & Heritage Group	5-10-12		9-10-12 Phone Call	DC spoke to Warren—he thinks he received email and will try and download the report this afternoon.		No comments were received by 15 November
Ngarramang-Kuri Aboriginal Culture & Heritage Group	5-10-12		9-10-12 Phone Call	Abie didn't think he had received email. DC checked email with him and sent the report again. DC asked that he call to confirm he received the email and downloaded the report/ if he hasn't in a day or so.		No comments were received by 15 November
T & G Culture Consultants	5-10-12	Sent by registered post.	The registered post provided version of the report was not collected and returned to GML (30-10-12). As a consequence the report was hand delivered by GML to Gordon Griffiths (to be provided to T&G) on 7-11-12.	The report sent by registered post, as T&G have not supplied an email address.		No comments were received by 15 November

Aboriginal Organisation/Person	Date Sent & Received	Date Downloaded	GML Follow Up	Comments	Date Reply	Comments
Warragil Cultural Services	5-10-12	Sent by registered post but unclaimed—returned to GML 18/10/12	9-10-12 Phone Call	No answer and message service not available.		No comments were received by 15 November
Wattaka Wonnarua C.C. Service	5-10-12		9-10-12 Phone Call	Des has received email and will download the report and look at it tonight.		No comments were received by 15 November
Widescope Indigenous Group Pty Ltd	5-10-12	14-10-12	9-10-12 Phone Call	Call couldn't be connected (ph number on RAP log 0416643226)		No comments were received by 15 November
Wonn1 Contracting	26-11-12			Report sent digitally to Suzie Worth (as requested by AF)		
Wonnarua Culture Heritage	5-10-12		9-10-12 Phone Call	Yes he received the email and will download the report tomorrow.		No comments were received by 15 November
Wonnarua Nation Aboriginal Corporation	5-10-12		9-10-12 Phone Call	No answer, phone message left asking that they download the report.		No comments were received by 15 November
Yinarr Cultural Services	5-10-12 5-11-12	9-10-12	2-11 Kathie Kinchela requested a second digital copy of the report. This was provided on 5/11/12.	Report already downloaded prior to phone calls on 9/10/12—no follow up in relation to download required		No comments were received by 15 November

Stage 2.7—Invitation to Test Excavation Under the Code of Practice—Season 1 (Nov–Dec 2012)

All RAP were offered the opportunity to be involved in the archaeological test excavation at Anambah. No comments were received from the RAPs with respect to the commencement of the fieldwork, other than acknowledgements of the invitation and confirmation of attendance.

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Cacatua Culture Consultants	23/10/2012		Date	Representative	Total Hours Worked
			22-11-12	Justin Wilson	7.75
			23-11-12	Justin Wilson	4.75
			26-11-12	Justin Wilson	7
			27-11-12	Ashley Sampson	7
Culturally Aware	23/10/2012 Email sent 30 Oct. 12		Date	Representative	Total Hours Worked
			22-11-12	Donna Swan	7.75
			23-11-12	Joshua Swan	7.75
			26-11-12	Donna Swan	7
			27-11-12	Donna Swan	7.5
			28-11-12	Donna Swan	7.5
			29-11-12	Donna Swan	7
D F T V Enterprises	23/10/2012		Date	Representative	Total Hours Worked
			22-11-12	Katina Vale	7.75
			23-11-12	James Ballangarry	7.75
			26-11-12	Katina Vale	7
			27-11-12	Katina Vale	7.5
			28-11-12	Derrick Vale	7
			29-11-12	Derrick Vale	7

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
DRM Cultural Management	23/10/2012		Date	Representative	Total Hours Worked
			22-11-12	Dennis Tapaleao	7.75
			23-11-12	Dennis Tapaleao	7.75
			26-11-12	Dennis Tapaleao	7
			27-11-12	Dennis Tapaleao	7.5
			28-11-12	Dennis Tapaleao	7.5
			29-11-12	Dennis Tapaleao	7
Gidawaa Walang Cultural Heritage Consultancy	23/10/2012		Date	Representative	Total Hours Worked
			3-12-12	Peter Whitten	7
			4-12-12	Ann Hickey	7.5
			5-12-12	Ann Hickey	7.5
			6-12-12	Ann Hickey	7.5
			7-12-12	Ann Hickey	5.5
Gomeroi Namoi Traditional Owners	23/10/2012		Date	Representative	Total Hours Worked
			30-11-12	Linda Whitten	6.5
			3-12-12	Linda Whitten	8
			4-12-12	Linda Whitten	7.5
			5-12-12	Linda Whitten	7.5
			6-12-12	Linda Whitten	7.5
			7-12-12	Linda Whitten	5.5

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Hunter Valley Cultural Surveying	23/10/2012		Date	Representative	Total Hours Worked
			3-12-12	Rod Hickey	8
			4-12-12	Rod Hickey	7.5
			5-12-12	Rod Hickey	7.5
			6-12-12	Rod Hickey	7.5
			7-12-12	Rod Hickey	5.5
			30-11-12	Luke Hickey	6.5
Kawul Cultural Services	23/10/2012	Vicky Slater confirmed attendance (email 2 November)	Date	Representative	Total Hours Worked
			22-11-12	Rick Slater	7.75
			23-11-12	Rick Slater	7.75
			26-11-12	Rick Slater	7.5
			27-11-12	Rob Slater	7.5
			28-11-12	Rob Slater	7.5
			29-11-12	Rob Slater	7
Lower Hunter Wonnarua Council Inc.	23/10/2012		Date	Representative	Total Hours Worked
			3-12-12	Tod Maley	8
			4-12-12	Tod Maley	7.5
			5-12-12	Tod Maley	7.5
			6-12-12	Tod Maley	7.5
			7-12-12	Dean Miller	1

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Mindaribba LALC	23/10/2012		Date	Representative	Total Hours Worked
			22-11-12	Ricki-Jo Griffiths	7.75
			23-11-12	Ricki-Jo Griffiths	7.50
			26-11-12	Ricki-Jo Griffiths	7
			27-11-12	Ricki-Jo Griffiths	7.5
			28-11-12	Ricki-Jo Griffiths	7
			29-11-12	Ricki-Jo Griffiths	7
Myland Cultural and Heritage Group	23/10/2012		Date	Representative	Total Hours Worked
			22-11-12	Clive Suey	7.75
			23-11-12	Cedric Wright	7.75
			26-11-12	Cedric Wright	7
			27-11-12	Clive Suey	7.5
			28-11-12	Troy Wilson	7.5
			29-11-12	Clive Suey	7
Ngarramang-Kuri Aboriginal Culture & Heritage Group	23/10/2012		Date	Representative	Total Hours Worked
			30-11-12	Andrew French	6.5
			3-12-12	Bradley Leonard	6.5
			4-12-12	Bradley Leonard	7.5
			5-12-12	Bradley Leonard	7.5
			6-12-12	Bradley Leonard	7.5
			7-12-12	Bradley Leonard	5.5

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
T&G Culture Consultants	23/10/2012		Date	Representative	Total Hours Worked
			30-11-12	Cedric Wright	6.5
			3-12-12	Cedric Wright	8
			4-12-12	Cedric Wright	7.5
			5-12-12	Cedric Wright	7.5
			6-12-12	Cedric Wright	7.5
			7-12-12	Cedric Wright	5.5
TA Wallangan Cultural Services	23/10/2012		Date	Representative	Total Hours Worked
			30-11-12	Maree Waugh	6.5
			3-12-12	Tony Waugh	8
			4-12-12	Tony Waugh	7.5
			5-12-12	Maree Waugh	7.5
			6-12-12	Tony Waugh	7.5
			7-12-12	Maree Waugh	5.5
Warragil Cultural Services	23/10/2012	Letter returned to GML 5/12/12—unclaimed from PO.	Date	Representative	Total Hours Worked
			22-11-12	Norm Porter	7.75
			23-11-12	Norm Porter	7.75
			26-11-12	Norm Porter	7.5
			27-11-12	Norm Porter	7.5
			28-11-12	Norm Porter	7.5
			29-11-12	Norm Porter	7

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Widescope Indigenous Group Pty Ltd	23/10/2012		Date	Representative	Total Hours Worked
			22-11-12	Steven Hickey	7.75
			23-11-12	Betty Bennett	7.75
			26-11-12	Betty Bennett	7
			27-11-12	Betty Bennett	7.5
			28-11-12	Betty Bennett	7.5
			29-11-12	Betty Bennett	7
Wonnarua Culture Heritage	23/10/2012		Date	Representative	Total Hours Worked
			30-11-12	Joey Griffiths	6.5
			3-12-12	Joey Griffiths	8
			4-12-12	Joey Griffiths	7.5
			5-12-12	Joshua Griffiths	7.5
			6-12-12	Joshua Griffiths	7.5
			7-12-12	Joey Griffiths	5.5
Wonnarua Nation Aboriginal Corporation	23/10/2012	Laurie Perry confirmed attendance (email 2 November)	Date	Representative	Total Hours Worked
			22-11-12	Jeffrey Swan	7.75
			23-11-12	Jeffrey Swan	7.75
			26-11-12	Maree Waugh	7
			27-11-12	Maree Waugh	7.5
			28-11-12	Maree Waugh	7.5
			29-11-12	Jeffrey Swan	7

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Yinarr Cultural Services	23/10/2012		Date	Representative	Total Hours Worked
			5-12-12	Steven Campbell	5.5
			6-12-12	Steven Campbell	7.5
			7-12-12	Steven Campbell	5.5
Wattaka Wonnarua C.C. Service	23/10/2012		Date	Representative	Total Hours Worked
			22-11-12	Dwayne Shaw	7.75
			23-11-12	Dwayne Shaw	7.75
			26-11-12	Dwayne Shaw	7
			27-11-12	Dwayne Shaw	1.5
			28-11-12	Dwayne Shaw	7.5
			29-11-12	Dwayne Shaw	7

An email was sent on the 11/1/2013 to the RAPs to keep them advised of possible dates and time periods for the second season of the Test Excavation.

Stage 2.8—PoM and Season 2 Test Excavation Start-up Meeting Invitation and Attendance

Registered Aboriginal Party	Invitation Sent	Representative	Attendance	Comments
Cacatua Culture Consultants	4/2/2013	Tegan McCormack, George Sampson	27/2/2013	
Culturally Aware	4/2/2013	Tracey Skene	27/2/2013	RSVP email received and acknowledged 8/2/2013.
D F T V Enterprises	4/2/2013	James Ballangarry	27/2/2013	
DRM Cultural Management	4/2/2013	Helen Faulkner	27/2/2013	RSVP email received and acknowledged 18/2/2013. The email noted that two people would attend the meeting, one in a voluntary capacity.

Golder Master Logo

Registered Aboriginal Party	Invitation Sent	Representative	Attendance	Comments
Gidawaa Walang Cultural Heritage Consultancy	4/2/2013	Jake Dacey	27/2/2013	RSVP email received and acknowledged 18/2/2013.
Gomeroi Namoi Traditional Owners	4/2/2013	Stephen Talbott	27/2/2013	
Hunter Valley Cultural Surveying	4/2/2013	Luke Hickey	27/2/2013	
Kawul Cultural Services	4/2/2013	Vicky Slater	27/2/2013	RSVP email received and acknowledged 7/2/2013.
Lower Hunter Wonnarua Council Inc.	4/2/2013	Dean Miller, Tom Miller	27/2/2013	
Kauwul TA Wonn1	4/2/2013	Arthur Fletcher	27/2/2013	
Mindaribba LALC	4/2/2013	Ken Riddiford	27/2/2013	
Myland Cultural and Heritage Group	4/2/2013	Warren Schillings	27/2/2013	
Ngarramang-Kuri Aboriginal Culture & Heritage Group	4/2/2013			
T&G Culture Consultants	4/2/2013	Lennie Wright	27/2/2013	
Upper Hunter Wonnarua Council	4/2/2013	Georgina Berry	27/2/2013	
TA Wallangan Cultural Services	4/2/2013	Maree Waugh	27/2/2013	RSVP email received and acknowledged 11/2/2013.
Warragil Cultural Services	4/2/2013	Kaye Slater	27/2/2013	RSVP email received and acknowledged 7/2/2013.
Widescope Indigenous Group Pty Ltd	4/2/2013	Steven Hickey	27/2/2013	RSVP email received and acknowledged 9/2/2013.
Wonnarua Culture Heritage	4/2/2013	Gordon Griffith	27/2/2013	
Wonnarua Nation Aboriginal Corporation	4/2/2013	Rebecca Lester	27/2/2013	RSVP email received and acknowledged 12/2/2013.
Yinarr Cultural Services	4/2/2013	Norm Archibald, Kathie Kinchela	27/2/2013	
Wattaka Wonnarua C.C. Service	4/2/2013	Des Hickey	27/2/2013	RSVP email received and acknowledged 6/2/2013.

Note that the POM workshop was a collaborative effort, but for individual comments or input, refer to Meeting Notes, Meeting Powerpoint Presentation and Audio Recordings.

Stage 2.9—Test Excavation Fieldwork Invitation and Participation—Season 2

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Cacatua Culture Consultants	8/2/2013		Date	Name	Hours Worked
			13.3.13	Jenny Chambers	7.75
			14.3.13	Jenny Chambers	7.75
			19.3.13	Justin Wilson	7.5
			20.3.13	Adam Sampson	6.75
			18.3.13	Adam Sampson	7.75
Culturally Aware	8/2/2013	Culturally Aware provided new insurance details by email 11/3/2014.	Date	Name	Hours Worked
			18.3.13	William Smith	7.75
			13.3.13	William Smith	5.75
			14.3.13	William Smith	7.75
			15.3.13	William Smith	7.75
			19.3.13	William Smith	7.5
			20.3.13	William Smith	6.75
D F T V Enterprises	8/2/2013	DFTV provided new insurance details by email 11/3/2014. DFTV provided a cultural report discussing the cultural importance of the test excavation work and the area to him, via email on the 5.4.13.	Date	Name	Hours Worked
			13.3.13	Katina Vale	7.75
			18.3.13	Derrick Vale	7.75
			14.3.13	Katina Vale	7.75
			15.3.13	Katina Vale	7.25
			19.3.13	Katina Vale	7.5
			20.3.13	Katina Vale	6.75

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
DRM Cultural Management	8/2/2013	In email on 17 April 2013, Helen (DRM) stated that she would prefer to provide feedback at the conclusion of the project rather than at the end of this phase of excavation.	Date	Name	Hours Worked
			13.3.13	Hellen Faulkner	7.75
			14.3.13	Hellen Faulkner	7.75
			15.3.13	Timothy Smith	7.75
			18.3.13	Timothy Smith	7.75
			19.3.13	Timothy Smith	7.75
			20.3.13	Tim Smith	6.75
Gidawaa Walang Cultural Heritage Consultancy	8/2/2013		Date	Name	Hours Worked
			13.3.13	Jake Dacey	7.75
			14.3.13	Jake Dacey	7.75
			15.3.13	Jake Dacey	7.25
			18.3.13	Jake Dacey	7.75
			19.3.13	Jake Dacey	7.5
			20.3.13	Jake Dacey	6.75
Gomeroi Namoi Traditional Owners	8/2/2013	Phone conversation with Tim Owen on 21/3/13: Steve Talbott was concerned that he didn't know the numbers of artefacts that were retrieved during the testing, that not all the mapped proposed test units were excavated and wanted to make sure the artefacts were being stored in the correct location. Tim explained excavation covered all landforms and dug as many test pits as was possible under the circumstances in six days. The artefacts are in storage at the LALC as per the POM agreement. Artefact analysis is yet to occur.	Date	Name	Hours Worked
			18.3.13	Linda Whitten	7.75
			13.3.13	Kayla Whitter	7.75
			14.3.13	Kayla Whitter	7.75
			15.3.13	Kayla Whitter	7.25
			19.3.13	Linda Whitten	7.5
			20.3.13	Linda Whitten	6.75

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Hunter Valley Cultural Surveying	8/2/2013		Date	Name	Hours Worked
			13.3.13	Luke Hickey	7.75
			14.3.13	Luke Hickey	7.75
			15.3.13	Luke Hickey	7.25
			18.3.13	Luke Hickey	7.75
			19.3.13	Luke Hickey	7.5
			20.3.13	Luke Hickey	6.75
Kawul Cultural Services	8/2/2013	Vicky Slater provided useful feedback on the excavation and her post-excavation report via phone—refer to filenote 26/3/13. This was followed up by a formal cultural report submitted by email on the 26/3/2013.	Date	Name	Hours Worked
			13.3.13	Kerrie Slater	7.75
			14.3.13	Kerrie Slater	7.75
			15.3.13	Rod Hickey	7.75
			18.3.13	Rod Hickey	7.75
			19.3.13	Rod Hickey	7.5
			20.3.13	Rod Hickey	6.75
Lower Hunter Wonnarua Council Inc.	8/2/2013		Date	Name	Hours Worked
			15.3.13	Christine Deven	6.75
			19.3.13	Lionel McGrady	7.25
			20.3.13	Ben Smith	6.75
			20.3.13	Lionel McGrady	6.5

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Mindaribba LALC	8/2/2013		Date	Name	Hours Worked
			14.3.13	Peter O'Brien	7.75
			15.3.13	Peter O'Brien	7.75
			19.3.13	Peter O'Brien	6.25
			20.3.13	Peter O'Brien	6.75
			13.3.13	Peter O'Brien	7.75
			18.3.13	Peter O'Brien	5
Myland Cultural and Heritage Group	8/2/2013		Date	Name	Hours Worked
			18.3.13	Clive Suey	7.75
			13.3.13	Clive Suey	7.75
			14.3.13	Clive Suey	7.75
			19.3.13	Clive Suey	7.75
			20.3.13	Clive Suey	6.75
			15.3.13	Clive Suey	7.75
Ngarramang-Kuri Aboriginal Culture & Heritage Group	8/2/2013				
T&G Culture Consultants	8/2/2013		Date	Name	Hours Worked
			13.3.13	Cedric Wright	7.75
			14.3.13	Cedric Wright	7.5
			15.3.13	Cedric Wright	7.5
			18.3.13	Cedric Wright	7.75
			19.3.13	Cedric Wright	7.5
			20.3.13	Cedric Wright	6.75

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Upper Hunter Wonnarua Council	8/2/2013, 13/3/2013.		Date	Name	Hours Worked
			13.3.13	Carly Berry	7.75
			14.3.13	Carly Berry	7.75
			15.3.13	Carly Berry	7.25
			18.3.13	Georgina Berry	7.75
			19.3.13	Georgina Berry	7.5
			20.3.13	Georgina Berry	6.75
TA Wallangan Cultural Services	8/2/2013		Date	Name	Hours Worked
			13.3.13	Maree Waugh	7.75
			14.3.13	Maree Waugh	7.75
			15.3.13	Tony Waugh	7.75
			18.3.13	Tony Waugh	7.75
			19.3.13	Tony Waugh	7.75
			20.3.13	Tony Waugh	6.75
Warragil Cultural Services	8/2/2013	Email from Warragil 11/3/2013 to confirm receipt of invitation, meeting location and time details and attendance. Provided post-excavation cultural report via email 26.3.13.	Date	Name	Hours Worked
			13.3.13	Greg Slater	7.75
			14.3.13	Greg Slater	7.75
			18.3.13	Greg Slater	7.75
			19.3.13	Greg Slater	7.5
			20.3.13	Greg Slater	6.75

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Widescope Indigenous Group Pty Ltd	8/2/2013		Date	Name	Hours Worked
			15.3.13	Trevor Archibald	7.75
			18.3.13	Lacey Gananburgh	7.75
			19.3.13	Lacey Gananburgh	7.5
			20.3.13	Lacey Gananburgh	6.75
			13.3.13	Steven Hickey	7.75
			14.3.13	Steven Hickey	7.75
Wonn1	8/2/2013		Date	Name	Hours Worked
			13.3.13	Daniel Scott	3.25
Wonnarua Culture Heritage	8/2/2013	Provided post-excavation feedback report via phone 27.3.2013—see filenote.	Date	Name	Hours Worked
			13.3.13	Shannon Griffiths	7.75
			18.3.13	Shannon Griffiths	7.75
			19.3.13	Shannon Griffiths	7.75
			14.3.13	Shannon Griffiths	7.75
			15.3.13	Shannon Griffiths	7.75
			20.3.13	Shannon Griffiths	6.75
Wonnarua Nation Aboriginal Corporation	8/2/2013		Date	Name	Hours Worked
			13.3.13	Sandra Jones	7.75
			15.3.13	Sandra Jones	7.75
			18.3.13	Sandra Jones	7.75
			19.3.13	Sandra Jones	7.75
			14.3.13	Sandra Jones	7.75
			20.3.13	Sandra Jones	6.75
			20.3.13	Rebecca Lester	6.75

Registered Aboriginal Party	Invitation Sent	Comments	Attendance		
Yinarr Cultural Services	8/2/2013		Date	Name	Hours Worked
			13.3.13	Norm Archibald	7.75
			14.3.13	Norm Archibald	7.75
			15.3.13	Norm Archibald	7.75
			18.3.13	Norm Archibald	7.5 - volunteer
			19.3.13	Norm Archibald	7.5
			20.3.13	Lateeka Eggins	6.75
Wattaka Wonnarua C.C. Service	8/2/2013		Date	Name	Hours Worked
			13.3.13	Dwayne Shaw	7.75
			14.3.13	Dwayne Shaw	7.75
			15.3.13	Dwayne Shaw	7.75
			18.3.13	Dwayne Shaw	7.75
			19.3.13	Dwayne Shaw	7.5
			20.3.13	Dwayne Shaw	6.75
Aboriginal Native Title Elders Consultants	8/2/2013				

Correspondence was sent to all RAPs on 11/3/2013 to confirm the place, date and time for meeting at the commencement of Test Excavation, 13/3/2013.

All RAPs for the Anambah Aboriginal Assessment project were invited by letter on 6 February 2013 to attend a Plan of Management workshop on 27 February 2013. Of the 24 parties registered for the project, 24 people representing 21 RAPs attended the workshop as detailed in Table 2.1 of the Draft Plan of Management document, June 2013.

Stage 2.10—Formal Project Update Correspondence June 2014

Registered Aboriginal Party	Letter Sent	Response (if any)
Cacatua Culture Consultants	23/6/14 Express Post	

Registered Aboriginal Party	Letter Sent	Response (if any)
Culturally Aware	23/6/14 Express Post	
D F T V Enterprises	23/6/14 Express Post	
DRM Cultural Management	23/6/14 Express Post	
Gidawaa Walang Cultural Heritage Consultancy	23/6/14 Express Post	
Gomeroi Namoi Traditional Owners	23/6/14 Express Post	
Hunter Valley Cultural Surveying	23/6/14 Express Post	
Kawul Cultural Services	23/6/14 Express Post	
Lower Hunter Wonnarua Council Inc.	23/6/14 Express Post	
Mindaribba LALC	23/6/14 Express Post	
Myland Cultural and Heritage Group	23/6/14 Express Post	
Upper Hunter Wonnarua Council	23/6/14 Express Post	
Ngarramang-Kuri Aboriginal Culture & Heritage Group	23/6/14 Express Post	
T&G Culture Consultants	23/6/14 Express Post	
TA Wallangan Cultural Services	23/6/14 Express Post	
Warragil Cultural Services	23/6/14 Express Post	
Widescope Indigenous Group Pty Ltd	23/6/14 Express Post	
Wonnarua Culture Heritage	23/6/14 Express Post	
Wonnarua Nation Aboriginal Corporation	23/6/14 Express Post	
Wonn 1 Contracting	23/6/14 Express Post	
Yinarr Cultural Services	23/6/14 Express Post	
Wattaka Wonnarua C.C. Service	23/6/14 Express Post	
Amanda Hickey	23/6/14 Express Post	
Aboriginal Native Title Elders Consultants	23/6/14 Express Post	

Stage 2.11—Formal Project Update Correspondence May 2015

Registered Aboriginal Party	Letter Sent	Response (if any)
Cacatua Culture Consultants	22/5/2015 By Email	
Culturally Aware	22/5/2015 By Email	
D F T V Enterprises	22/5/2015 By Email	
DRM Cultural Management	22/5/2015 By Email	
Gidawaa Walang Cultural Heritage Consultancy	22/5/2015 By Email	
Gomeroi Namoi Traditional Owners	22/5/2015 By Email	
Hunter Valley Cultural Surveying	22/5/2015 By Email	
Kawul Cultural Services	22/5/2015 By Email	
Lower Hunter Wonnarua Council Inc.	22/5/2015 By Email	
Mindaribba LALC	22/5/2015 By Email	
Myland Cultural and Heritage Group	22/5/2015 By Email	
Upper Hunter Wonnarua Council	22/5/2015 by Mail	
Ngarramang-Kuri Aboriginal Culture & Heritage Group	22/5/2015 By Email	
T&G Culture Consultants	22/5/2015 by Mail	
TA Wallangan Cultural Services	22/5/2015 By Email	
Warragil Cultural Services	22/5/2015 By Email	
Widescope Indigenous Group Pty Ltd	22/5/2015 By Email	
Wonnarua Culture Heritage	22/5/2015 by Mail	Email bounced and so letter was mailed.
Wonnarua Nation Aboriginal Corporation	22/5/2015 By Email	
Wonn 1 Contracting	22/5/2015 By Email	

Registered Aboriginal Party	Letter Sent	Response (if any)
Yinarr Cultural Services	22/5/2015 by Mail	
Wattaka Wonnarua C.C. Service	22/5/2015 By Email	
Amanda Hickey	22/5/2015 By Email	
Aboriginal Native Title Elders Consultants	22/5/2015 by Mail	

Stage 2.12—Formal Project Update Correspondence March 2016

Registered Aboriginal Party	Letter Sent	Response (if any)
Cacatua Culture Consultants	24/3/16 By Email	cacatua@resetdsl.net.au email was not recognised
Culturally Aware	24/3/16 By Email 30/3/16 By Email	25.3.16 advised of new email address tracey@marrung-pa.com.au and new mobile number 30/3/16 resent project update information to new email address
D F T V Enterprises	24/3/16 By Email	
DRM Cultural Management	24/3/16 By Email	
Gidawaa Walang Cultural Heritage Consultancy	24/3/16 By Email	
Gomeroi Namoi Traditional Owners	24/3/16 By Email	
Hunter Valley Cultural Surveying	24/3/16 By Email 29/3/16 By Mail	hvcs@optusnet.com.au bounced back so mailed instead
Kawul Cultural Services	24/3/16 By Email	24.3.16 New email address for Vicki Slater provided by Aaron Slater of Warragal Cultural Services vicki.slater@hotmail.com 29.3.16 Update resent to Vicki's new email address
Lower Hunter Wonnarua Council Inc.	24/3/16 By Email	
Mindaribba LALC	24/3/16 By Email	29.3.16 Ms Leanne Ball no longer working for MLALC, Tara Dever (Acting CEO) advises to address all correspondence to Mr Stephen Brereton. Email address still correct.
Myland Cultural and Heritage Group	24/3/16 By Email	
Upper Hunter Wonnarua Council	24/3/16 By Email	

Registered Aboriginal Party	Letter Sent	Response (if any)
Ngarramang-Kuri Aboriginal Culture & Heritage Group	24/3/16 By Email	
T&G Culture Consultants	29/3/16 by Mail	
TA Wallangan Cultural Services	24/3/16 By Email	
Warragil Cultural Services	24/3/16 By Email	
Widescope Indigenous Group Pty Ltd	24/3/16 By Email	
Wonnarua Culture Heritage	24/3/16 By Email	
Wonnarua Nation Aboriginal Corporation	24/3/16 By Email	wonnarua@bigpond.com.au not recognised
Wonn 1 Contracting	24/3/16 By Email	
Yinarr Cultural Services	24/3/16 By Email	
Wattaka Wonnarua C.C. Service	24/3/16 By Email	
Amanda Hickey	24/3/16 By Email	
Aboriginal Native Title Elders Consultants	29/3/16 by Mail	06.04.16 Letter returned to sender, no longer at this address

Godden Mackay Logan
Heritage Consultants

11 May 2012

Hunter-Central Rivers Catchment Management Authority
The Manager
Private Bag 2010
PATERSON NSW 2421

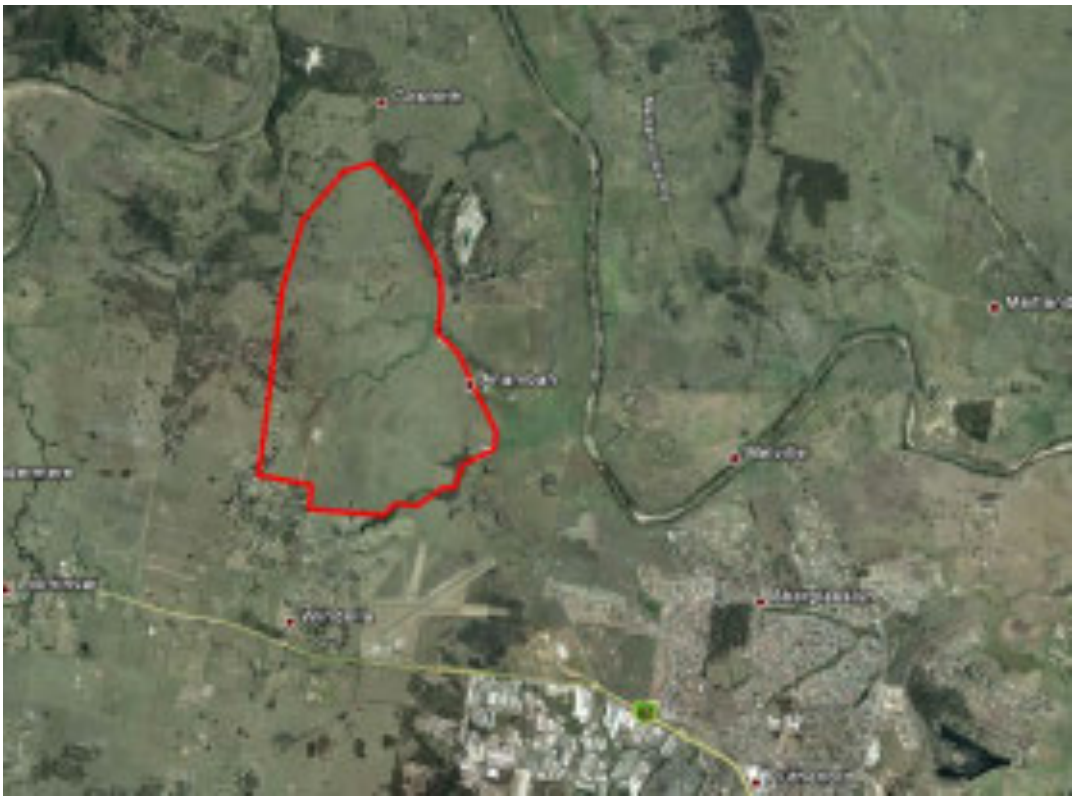
Our Ref: 12-0226CMAc1

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area.

Dear Sir/Madam

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362

www.gml.com.au
heritage@gml.com.au

assist in the preparation of an application for an AHIP if necessary, and will assist the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Would you please provide in writing (a letter, fax or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

Godden Mackay Logan
Heritage Consultants

11 May 2012

Ms Claire James
Maitland City Council
Heritage Office
PO Box 220
MAITLAND NSW 2320

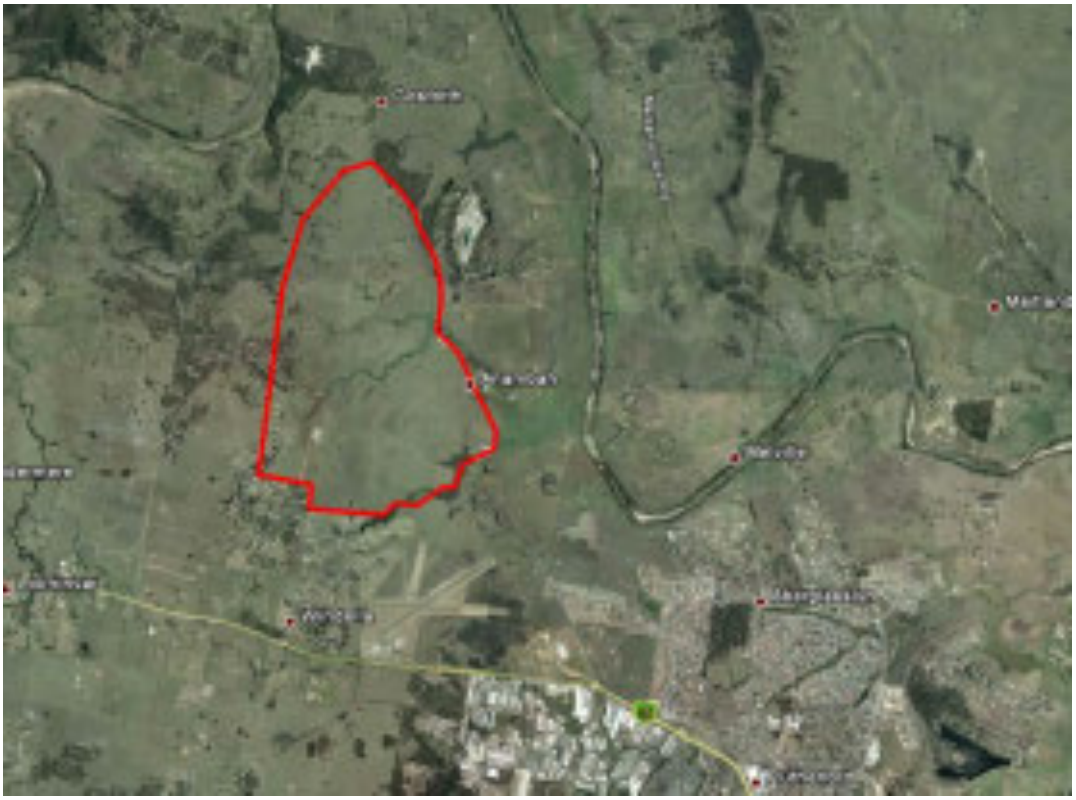
Our Ref: 12-0226MCCc1

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area.

Dear Claire

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362

www.gml.com.au
heritage@gml.com.au

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Would you please provide in writing (a letter, fax or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

Godden Mackay Logan
Heritage Consultants

11 May 2012

Mr Ken Riddiford
Chief Executive Officer
Mindaribba LALC
PO Box 401
EAST MAITLAND NSW 2323

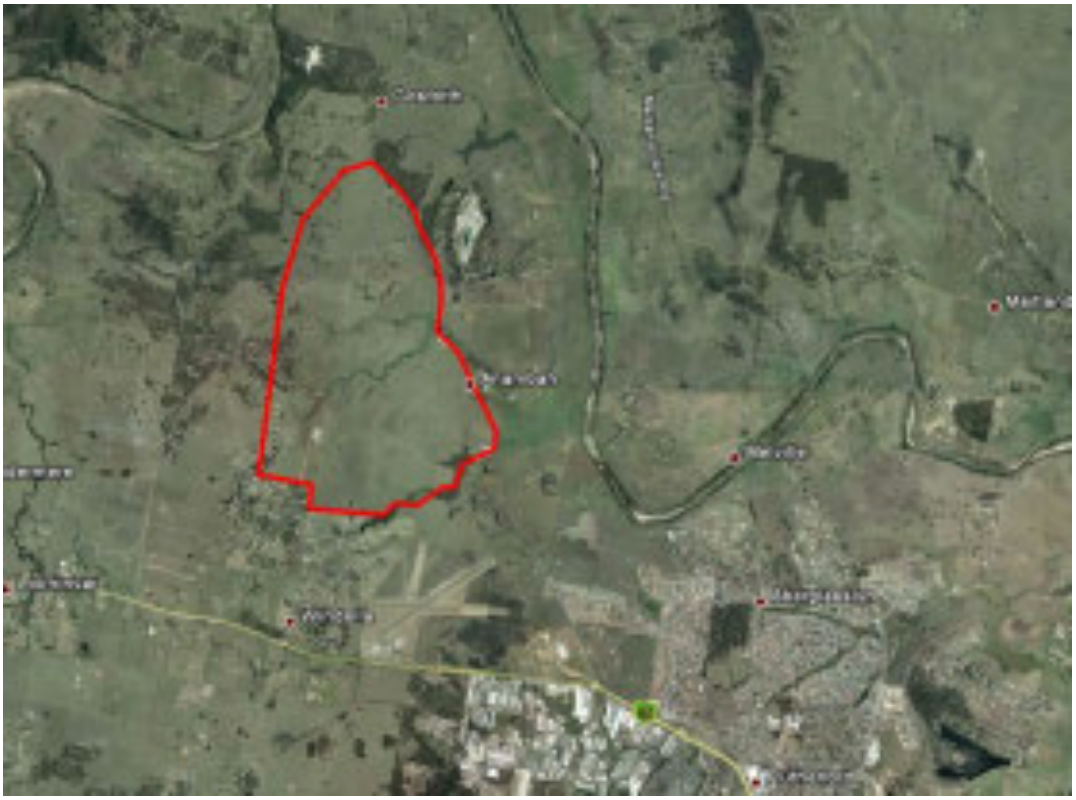
Our Ref: 12-0226MLALCc1

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area.

Dear Ken

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362

www.gml.com.au
heritage@gml.com.au

assist in the preparation of an application for an AHIP if necessary, and will assist the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Would you please provide in writing (a letter, fax or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

Godden Mackay Logan
Heritage Consultants

11 May 2012

Ms Nakari Thorpe
National Native Title Tribunal
New South Wales and Australian Capital Territory Registry
GPO Box 9973
SYDNEY NSW 2001

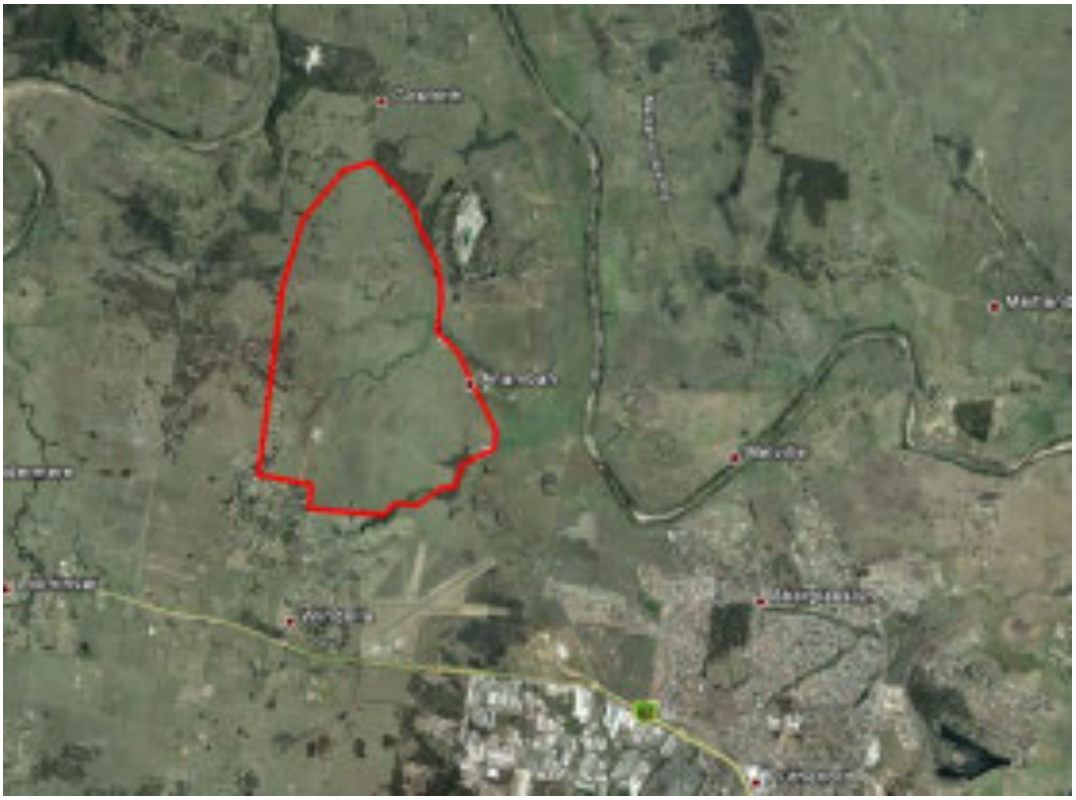
Our Ref: 12-0226NNTTc1

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area.

Dear Nakari

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362

www.gml.com.au
heritage@gml.com.au

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Would you please provide in writing (a letter, fax or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

11 May 2012

Native Title Services Corporation (NTSCORP Limited)
Mr Peter Schultz
PO BOX 2105
STRAWBERRY HILLS NSW 2012

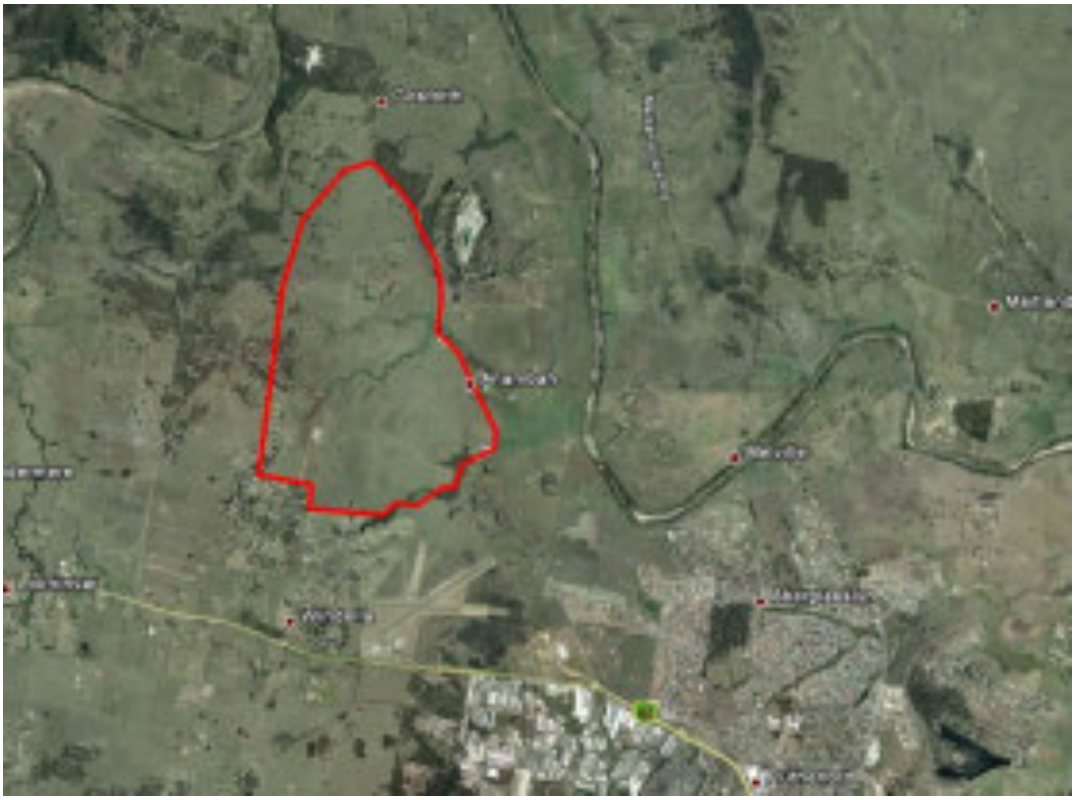
Our Ref: 12-0226NTSCORPc1

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area.

Dear Peter

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

assist in the preparation of an application for an AHIP if necessary, and will assist the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Would you please provide in writing (a letter, fax or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

11 May 2012

Mr Roger Mehr
Regional Archaeologist
Office of Environment and Heritage
PO BOX 494
ARMIDALE NSW 2350

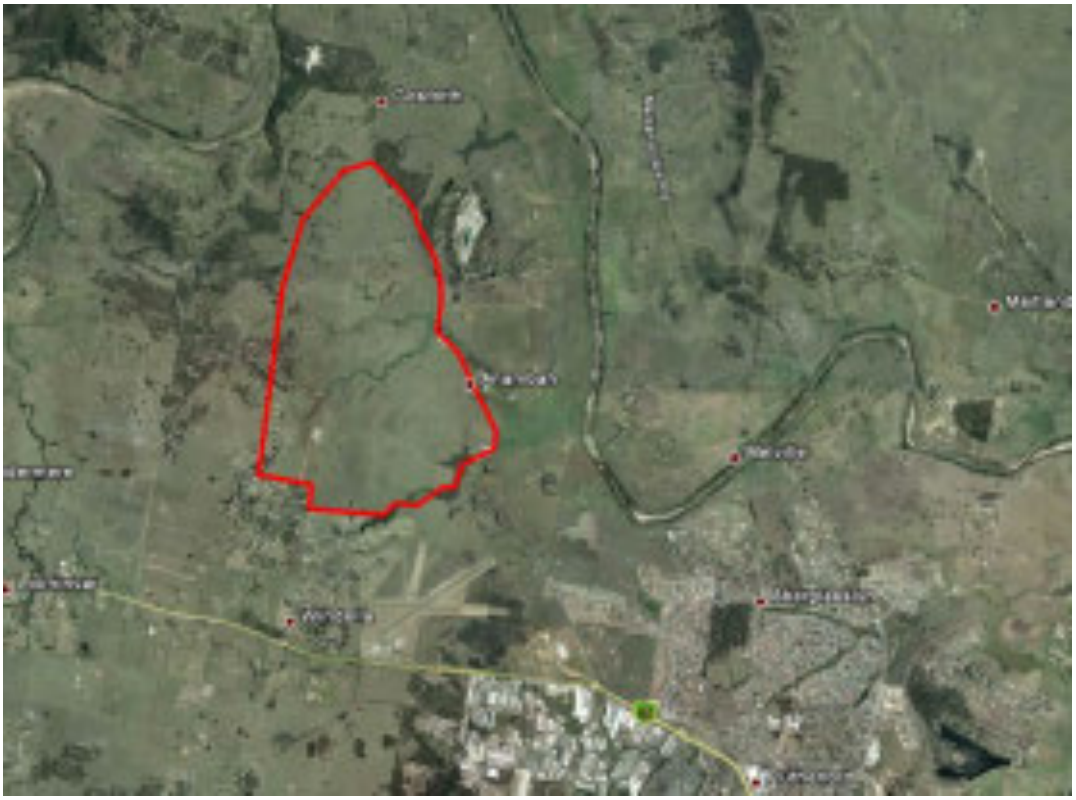
Our Ref: 12-0226OEHc1

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area.

Dear Roger

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362

www.gml.com.au
heritage@gml.com.au

assist in the preparation of an application for an AHIP if necessary, and will assist the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Would you please provide in writing (a letter, fax or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

11 May 2012

Office of the Registrar, Aboriginal Lands Right Act 1983
Tabatha Dantoine
Administrative Officer
PO Box 112
GLEBE NSW 2037

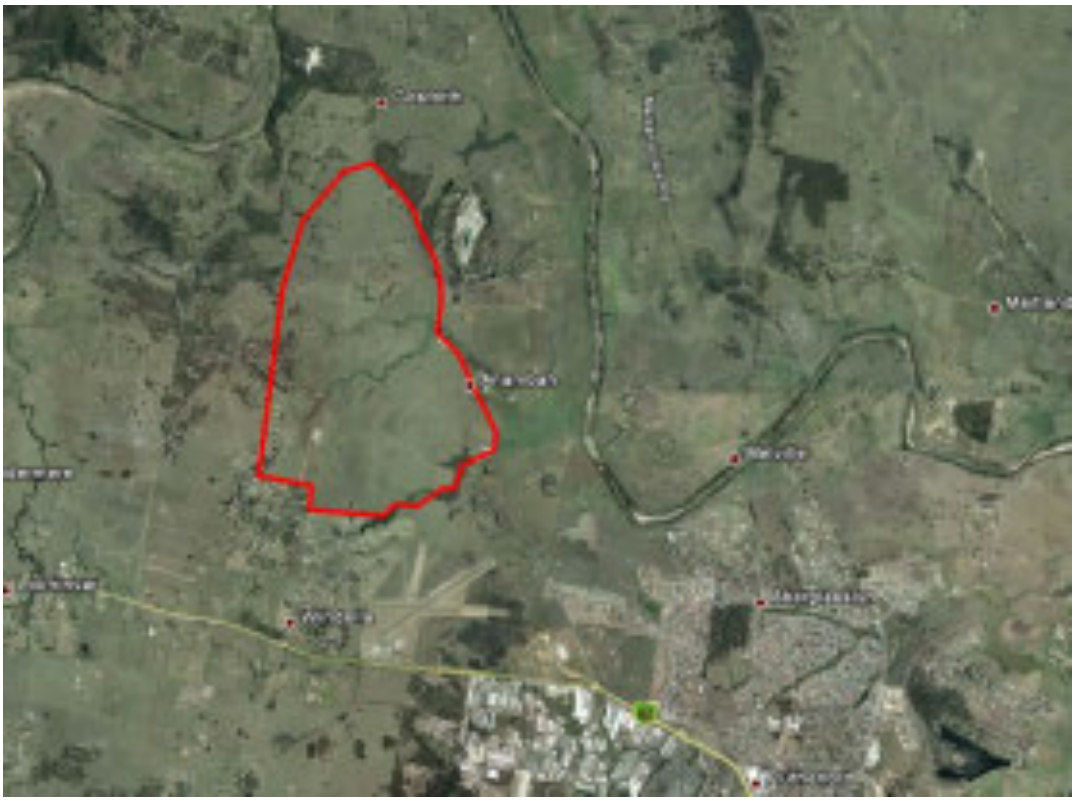
Our Ref: 12-0226ORALRAc1

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area.

Dear Tabatha

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362

www.gml.com.au
heritage@gml.com.au

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Would you please provide in writing (a letter, fax or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

MAITLAND CITY COUNCIL

Our Ref. RZ1 2015 (8/7/285)

Your Ref.

Phone Enquiries 49 [illegible]
Clare James

20 May 2012

26 MAY 2012

Jenni Lennox
GML Heritage Consultants
78 George Street
REDFERN NSW 2016

Dear Jenni,

RE: REGISTRATION OF ABORIGINAL STAKEHOLDER GROUPS, ANAMBAH INVESTIGATION AREA

Thank you for your enquiry regarding Aboriginal Interest Groups for the Anambah Investigation Area.

The following contacts are recommended:

- Mindaribba Local Aboriginal Land Council (49 348 611) Ken Riddiford CEO ceo@mindaribbaalc.org
- Lower Hunter Wonaruah Council (49346100)
- Awabakal Local Aboriginal Land Council (4965 1532)
- Wonnii Local Aboriginal Land Council (4965 1500)
- Wonnarua Elders Council Inc (secretary: 0402 146 193)

Should you require any further information, please contact the undersigned at clarej@maitland.nsw.gov.au.

Yours faithfully

CLARE JAMES
HERITAGE OFFICER

Ph: (02) 4934 9700 Fax: (02) 4933 2205 [illegible] Maitland [illegible] www.maitland.nsw.gov.au
All correspondence should be addressed to: General Manager, P.O. Box 220 Maitland NSW 2320
Administration Building, 285-287 High Street Maitland NSW 2320

National Native Title Tribunal

South-East & Central Registry –Sydney Office
Level 25, 25 Bligh Street
Sydney NSW 2000
GPO Box 9973
Sydney NSW 2001
Telephone (02) 9227 4000
Facsimile (02) 9227 4030

17 May 2012

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern NSW 2016

Our Reference: 4908/12nt
Your Reference: 12-0226NNTTc1

Dear Ms Lennox

Native Title Search Results of Anambah within Maitland City Council Local Government Area

Thank you for your search request received on 14 May 2012 in relation to the above area.

Search Results
The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

Register Type	NNTT Reference Numbers
Schedule of Applications (unregistered claimant applications)	Nil.
Register of Native Title Claims	Nil.
National Native Title Register	Nil.
Register of Indigenous Land Use Agreements	Nil.
Notified Indigenous Land Use Agreements	Nil.

At the time this search was carried out, there were **no relevant entries** in the above databases.

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

Tribunal accepts no liability for reliance placed on enclosed information
The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to

the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact me on the number below or on the free call number 1800 640 501.

Yours sincerely

Nakari Thorpe
Senior Case Management Assistant
Telephone: (02) 9227 4004
Facsimile: (02) 9227 4030
Email: Nakari.thorpe@nntt.gov.au

Searching the NNTT Registers in New South Wales

Search service
On request the National Native Title Tribunal will search its public registers for you. A search may assist you in finding out whether any native title applications (claims), determinations or agreements exist over a particular area of land or water.

In New South Wales native title cannot exist on privately owned land including family homes or farms.

What information can a search provide?
A search can confirm whether any applications, agreements or determinations are registered in a local government area. Relevant information, including register extracts and application summaries, will be provided.

In NSW because we cannot search the registers in relation to individual parcels of land we search by local government area.

Most native title applications do not identify each parcel of land claimed. They have an external boundary and then identify the areas not claimed within the boundary by reference to types of land tenure e.g., freehold, agricultural leasehold, public works.

What if the search shows no current applications?
If there is no application covering the local government area this only indicates that at the time of the search either the Federal Court had not received any claims in relation to the local government area or the Tribunal had not yet been notified of any new native title claims.

It does not mean that native title does not exist in the area.

Native title may exist over an area of land or waters whether or not a claim for native title has been made.

Where the information is found
The information you are seeking is held in three registers and on an applications database.

National Native Title Register
The National Native Title Register contains determinations of native title by the High Court, Federal Court and other courts.

Register of Native Title Claims
The Register of Native Title Claims contains applications for native title that have passed a registration test.

Registered claims attract rights, including the right to negotiate about some types of proposed developments.

Register of Indigenous Land Use Agreements
The Register of Indigenous Land Use Agreements contains agreements made with people who hold or assert native title in an area.

The register identifies development activities that have been agreed by the parties.

Application summaries
An application summary contains a description of the location, content and status of a native title claim.

This information may be different to the information on the Register of Native Title Claims, e.g., because an amendment has not yet been tested.

How do you request a search?

A search request form is available on the Tribunal's web site at:
http://www.nntt.gov.au/registers/search.html
Mail, fax or email your request to the
Tribunal's Sydney registry, identifying the local government area/s you want searched.

Email: SydneySearch@nntt.gov.au
Fax: (02) 9227 4030
Address: GPO Box 9973, Sydney NSW 2001
Phone: (02) 9227 4000

29 - 5 - 2012

ref. OEH : 29 -05-2012/2

Jonni Lennox
Consultant
Godden Mackay Logan Pty Ltd
78 George Street
REDFERN NSW 2016

Dear Ms Lennox

Aboriginal Cultural Heritage Assessment

proposed subdivision and residential development – Anambah

I refer to your letter of **11 May 2012** regarding the above matter.

We acknowledge that section 4.1.2 of the Office of Environment & Heritage's *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* requires you to contact us in order to compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining the cultural significance of Aboriginal objects and/or places. However, we advise that NTSCORP's privacy guidelines restrict us from providing proponents with contact details of traditional owners who may have such an interest or hold such knowledge.

Please be advised that, in response to your notification, we will forward your correspondence to any individuals, groups and organisations whom NTSCORP is aware assert traditional interests within or hold cultural knowledge about the relevant area. Recipients of our correspondence will be invited to register their interest in the project directly with you as soon as possible.

Please be aware that NTSCORP cannot make a guarantee or undertaking that the recipients of our correspondence represent the entirety of traditional owners for the relevant area.

Yours faithfully,

Peter Schultz
Senior Consultant – Land & Notifications
NTSCORP Limited

Office of Environment & Heritage

Your reference: [illegible]
Our reference: [illegible]
Contact: [illegible]
Date: [illegible] May 2012

Jenny Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Dear Ms Lennox

RE: Request for Aboriginal Stakeholder Groups for Anambah Investigation Area

I refer to your correspondence, dated 19 April 2012, to the Office of Environment and Heritage (OEH) for your project located within Maitland LGA and described as 'McKeachies Run Extension'.

Please find attached a list of known Aboriginal parties that OEH considers is likely to have an interest in your development. Please note this is not necessarily an exhaustive list of all interested Aboriginal parties.

- Please ensure the project documents the full consultation process in the Aboriginal Heritage Impact Permit application and include copies of all correspondence sent or received from all relevant stakeholders (including Aboriginal stakeholders and the agencies listed in section 4.1.2). Omission of these records in the final application may result in OEH considering that the consultation process is inadequate if the evidence provided to OEH does not demonstrate that the consultation process has been fair, equitable and transparent. Please note that this may result in delays in approval or a rejection of the application.

- OEH considers evidence of reasonable efforts to contact relevant parties would include, but not be limited to, multiple forms of communication; faxes (with confirmation slips demonstrating successful transmission), an e-mail log, registered post details, copies of letters and a phone call log.

- Please note Appendix A of the 2010 Consultation Requirements contains a map illustrating the regions of OEH to contact according to which local government area your project falls within. Full details of the consultation requirements and the relevant Fact Sheets can be located on our website at http://www.environment.nsw.gov.au/licenceforacultural.htm.

- If you encounter any changes to the contact details of interested Aboriginal parties, or become aware of additional parties, we encourage you to forward this information to OEH so we can update our records.

Locked Bag 914, Coffs Harbour NSW 2450
Regional Office, Level 2, 49 Market Street
Coffs Harbour NSW
Tel (02) 6651 5946 Fax (02) 6651 6187
ABN 30 841 387 271
www.environment.nsw.gov.au

- Consultation must be fair, equitable and transparent. If the Aboriginal parties express concern or are opposed to parts or your entire project, OEH will require evidence that the concerns have been addressed in the proposal or clear and appropriate explanation of why this has not occurred. In the event that concerns of the Aboriginal parties are not incorporated into the proposal OEH will advocate as to whether an AHIP is appropriate or not.

If you have any further questions regarding this matter, please contact Roger Mehr, Office of Environment and Heritage Archaeologist, on (02) 6773 7015.

Yours sincerely

ROGER MEHR
Archaeologist
Conservation & Regulations, North East
Office of Environment and Heritage

Attachment 1: Known Aboriginal Groups

Company	Name	Address	City	State	Post code	Phone No.	Fax No.	Mobile	Email
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]

OFFICE OF THE REGISTRAR
ABORIGINAL LAND RIGHTS ACT 1983 (NSW)

Jenni Lennox
OML Heritage Consultants
78 George Street
Redfern NSW 2016

15 May 2012

Dear Jenni

Re: Request - Search for Registered Aboriginal Owners

I refer to your letter dated 11th May 2012 regarding Aboriginal Cultural Heritage Assessment within Anembah in NSW.

I have searched the Register of Aboriginal Owners and the project area described does not appear to have Registered Aboriginal Owners pursuant to Division 3 of the *Aboriginal Land Rights Act* 1983 (NSW).

I note that you are in contact with the Wonarua Local Aboriginal Land Council. They may also be able to assist you in identifying other Aboriginal stakeholders for this project.

Yours sincerely

Tacatha Dantaine
Administration Officer
Office of the Registrar, *Aboriginal Land Rights Act* (1983)

Aboriginal registration for Community Consultation – Anambah Investigation Area.

On behalf of Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the National Parks and Wildlife Act 1974.

The subject land is located at Anambah as shown in the map below.

Stockland have engaged GML to assess the Aboriginal cultural and scientific values relevant to the land and determine an appropriate course of action to mitigate adverse effects to Aboriginal cultural heritage.

The purpose of community consultation with Aboriginal people is to assist Stockland in the preparation of an application for an AHIP and to assist the Director General of OEH in his or her consideration and determination of the application.

GML invite local Aboriginal people who hold cultural heritage knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the area of Anambah to register an interest in a process of community consultation regarding the proposed activity.

All registrations of interest should be received by GML no later than the 6 June 2012. Written registration should be marked 'Anambah' and sent to:

Jenni Lennox, GML Heritage Consultants, 78 George Street, Redfern NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au)
or faxed to GML at 02 9319 4383.

21 May 2012

Ms Margaret Matthews
Aboriginal Native Title Elders Consultants
16a Mahogany St
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Aliera French
Aliera French Trading
12 Haydon Street
MUSWELLBROOK NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms French

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Tracey White
Black Creek Aboriginal Corporation
PO Box 168
Kurri Kurri NSW 2327

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms White

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Lloyd Mathews
Bullen Bullen
16B Mahogany Avenue
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Mathews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Donna & George Sampson
Cacatua Culture Consultants
Unit 1b/11 Glenwood Drive
THORNTON NSW 2322

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr and Mrs Sampson

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Cheryl Moodie & Mr Justin Matthews
Carrawonga Consultants
11 Coolibah Close
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Moodie & Mr Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Tracey Skene & Mr David Swan
Culturally Aware
7 Crawford Place
Millfield NSW 2325

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Skene & Mr Swan

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Deslee Matthews
Deslee Talbott Consultants
Unit 2/19 South Street
Gunnedah NSW 2380

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Derrick Vale Sr
D F T V Enterprises
11/97 Brooke Street
MUSWELLBROOK NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Vale

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Debbie Dacey-Sullivan & Ms Annie Hickey
Gidawaa Walang & Barkuma Neighbourhood Centre Inc.
76 Lang Street
Kurri Kurri NSW 2327

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Dacey-Sullivan & Ms Hickey

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Michele Stair
Giwiirr Consultants
8 Fitzgerald Avenue
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Stair

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr David French
Hunter Valley Natural & Cultural Resources
Flat1/72-11Tindale St
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr French

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Paulette Ryan
Hunter Traditional Owner
14 Barton Avenue
Singleton Heights NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Ryan

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Rhonda Griffith
Hunter Valley Aboriginal Corporation
PO Box 579
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Griffith

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Luke Hickey
Hunter Valley Cultural Surveying
165 Susan St
Scone NSW 2337

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Hickey

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Christine Matthews & Ms Colleen Stair
Hunter Valley Cultural Consultants
40 Humphries Street
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Matthews & Ms Stair

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Robert Smith
Indigenous Outcomes
33 Clift St
Heddon Greta NSW 2321

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Smith

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Les Atkinson
Jarban + Mugrebea
11 Nelson Street
Cessnock NSW 2325

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Atkinson

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Jeff Matthews
Jeff Matthews
6 Eucalypt Ave
MUSWELLBROOK NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Vicky Slater
Kawul Cultural Services
PO Box 817
SINGLETON NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Slater

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Mark Hickey
Kayaway
6/20-22 Government Road Thornton
Thorton NSW 2322

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Hickey

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Lea-Anne Ball
Lower Hunter Wonnarua Council Inc
51 Bowden Street
Heddon Greta NSW 2321

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Ball

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Barry Anderson
Lower Wonnaruah Tribal Consultancy Pty Ltd
156 The Inlet Road
Bulga NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Anderson

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Steve Talbot
Mindaribba Local Aboriginal Land Council
PO Box 401
East Maitland NSW 2323

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Talbot

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Clifford Matthews
Mingga Consultants
11 Coolibah Close
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Les Field
Mooki Plains Management
4 Hinton Drive
GUNNEDAH NSW 2380

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Field

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Stephen Matthews
Mooki Plains Management
28 Herbert Street
GUNNEDAH NSW 2380

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Brian & Gay Horton
Muswellbrook Cultural Consultants
10 Scott Street
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr and Mrs Horton

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Abie Wright
Ngarramang-Kuri Aboriginal Culture & Heritage Group
21 Bancroft St
Glendale NSW 2285

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Abie

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

National Native Title Tribunal

South-East & Central Registry –Sydney Office
Level 25, 25 Bligh Street
Sydney NSW 2000
GPO Box 9973
Sydney NSW 2001
Telephone (02) 9227 4000
Facsimile (02) 9227 4030

17 May 2012

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern NSW 2016

Our Reference: 4908/12nt
Your Reference: 12-0226NNTTc1

Dear Ms Lennox

Native Title Search Results of Anambah within Maitland City Council Local Government Area

Thank you for your search request received on 14 May 2012 in relation to the above area.

Search Results
The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

Register Type	NNTT Reference Numbers
Schedule of Applications (unregistered claimant applications)	Nil.
Register of Native Title Claims	Nil.
National Native Title Register	Nil.
Register of Indigenous Land Use Agreements	Nil.
Notified Indigenous Land Use Agreements	Nil.

At the time this search was carried out, there were **no relevant entries** in the above databases.

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

Tribunal accepts no liability for reliance placed on enclosed information
The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to

the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact me on the number below or on the free call number 1800 640 501.

Yours sincerely

Nakari Thorpe
Senior Case Management Assistant
Telephone: (02) 9227 4004
Facsimile: (02) 9227 4030
Email: Nakari.thorpe@nntt.gov.au

Searching the NNTT Registers in New South Wales

Search service
On request the National Native Title Tribunal will search its public registers for you. A search may assist you in finding out whether any native title applications (claims), determinations or agreements exist over a particular area of land or water.

In New South Wales native title cannot exist on privately owned land including family homes or farms.

What information can a search provide?
A search can confirm whether any applications, agreements or determinations are registered in a local government area. Relevant information, including register extracts and application summaries, will be provided.

In NSW because we cannot search the registers in relation to individual parcels of land we search by local government area.

Most native title applications do not identify each parcel of land claimed. They have an external boundary and then identify the areas not claimed within the boundary by reference to types of land tenure e.g., freehold, agricultural leasehold, public works.

What if the search shows no current applications?
If there is no application covering the local government area this only indicates that at the time of the search either the Federal Court had not received any claims in relation to the local government area or the Tribunal had not yet been notified of any new native title claims.

It does not mean that native title does not exist in the area.

Native title may exist over an area of land or waters whether or not a claim for native title has been made.

Where the information is found
The information you are seeking is held in three registers and on an applications database.

National Native Title Register
The National Native Title Register contains determinations of native title by the High Court, Federal Court and other courts.

Register of Native Title Claims
The Register of Native Title Claims contains applications for native title that have passed a registration test.

Registered claims attract rights, including the right to negotiate about some types of proposed developments.

Register of Indigenous Land Use Agreements
The Register of Indigenous Land Use Agreements contains agreements made with people who hold or assert native title in an area.

The register identifies development activities that have been agreed by the parties.

Application summaries
An application summary contains a description of the location, content and status of a native title claim.

This information may be different to the information on the Register of Native Title Claims, e.g., because an amendment has not yet been tested.

How do you request a search?

A search request form is available on the Tribunal's web site at:
http://www.nntt.gov.au/registers/search.html
Mail, fax or email your request to the
Tribunal's Sydney registry, identifying the local government area/s you want searched.

Email: SydneySearch@nntt.gov.au
Fax: (02) 9227 4030
Address: GPO Box 9973, Sydney NSW 2001
Phone: (02) 9227 4000

21 May 2012

Mr Roger Noel
Roger Noel Matthews Consultancy
15 Parkinson Avenue
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Noel

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Scott Smith
Scott Smith
Unit 4, 122 Upper St
TAMWORTH NSW 2340

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Smith

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Cultural Heritage Officer
St Clair Singleton Aboriginal Corporation
PO Box 710
Singleton NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Cultural Heritage Officer

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Margaret Matthews
Aboriginal Native Title Elders Consultants
16a Mahogany St
Muswellbrook NSW 2333

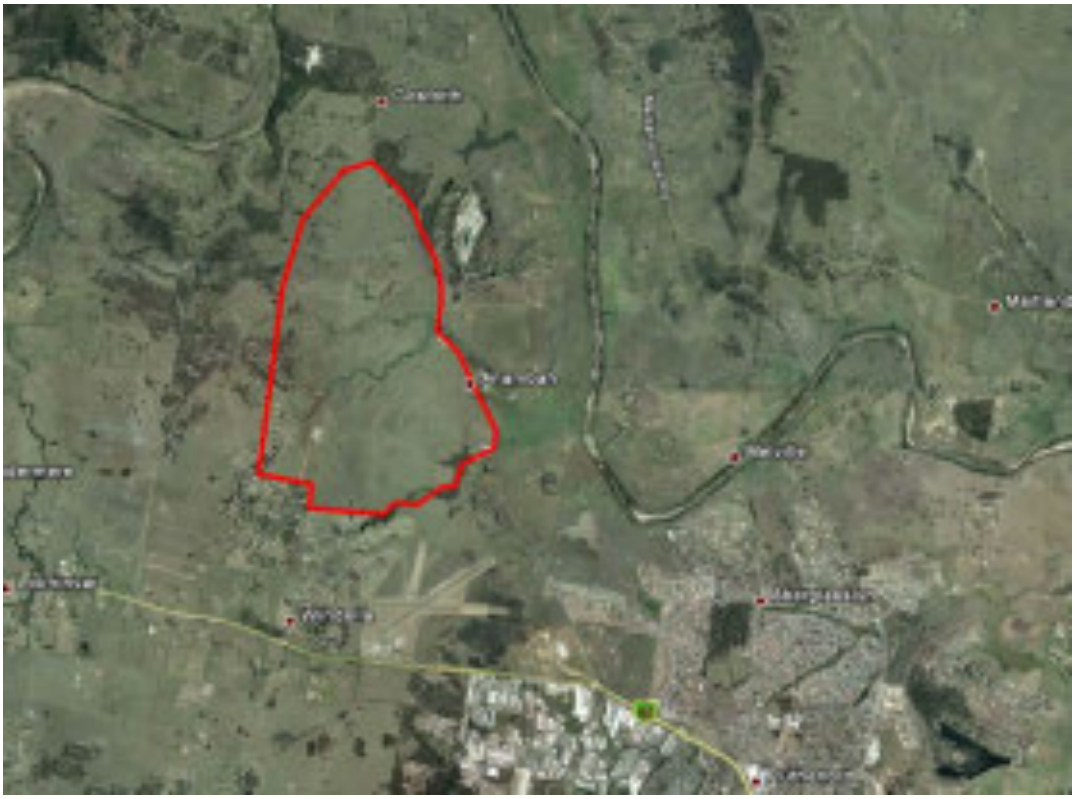
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362

www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Aliera French
Aliera French Trading
12 Haydon Street
MUSWELLBROOK NSW 2333

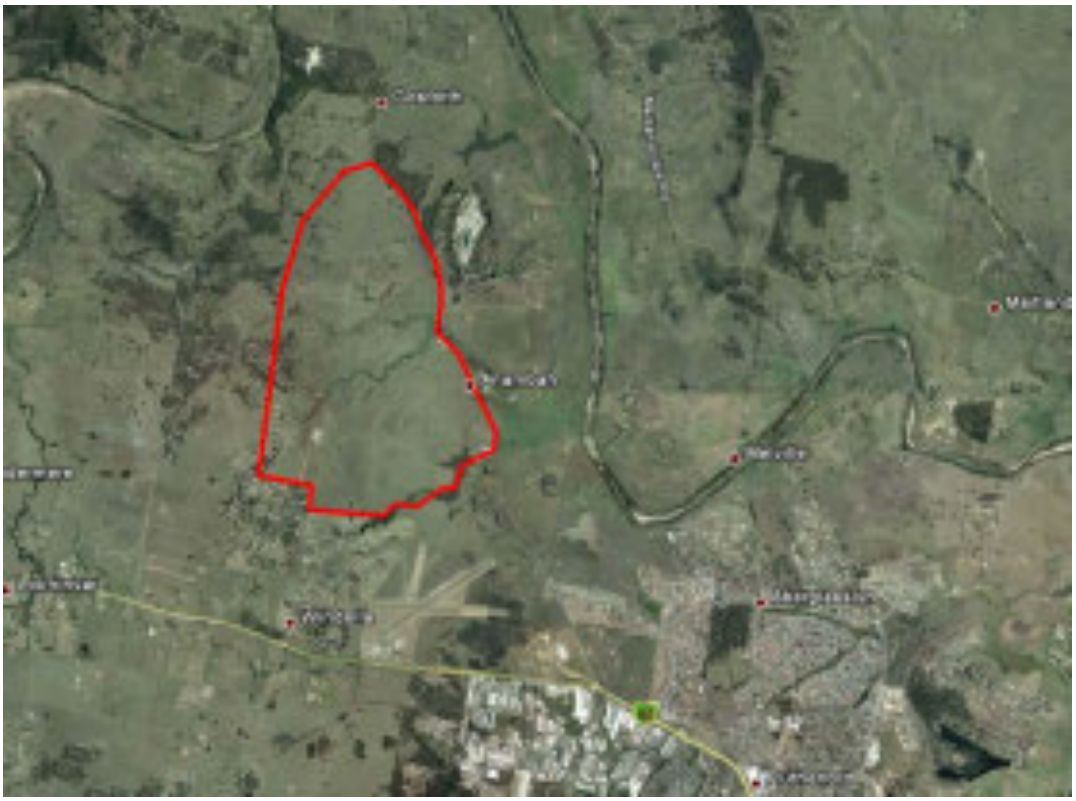
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms French

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Tracey White
Black Creek Aboriginal Corporation
PO Box 168
Kurri Kurri NSW 2327

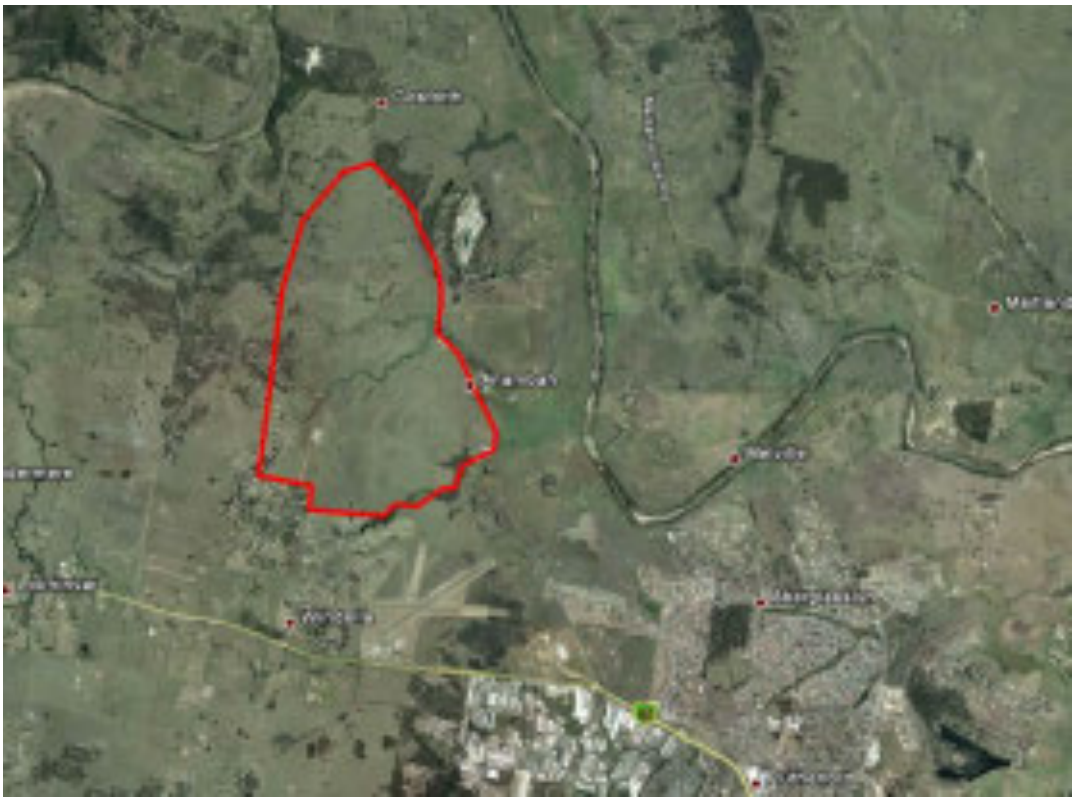
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms White

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Lloyd Mathews
Bullen Bullen
16B Mahogany Avenue
Muswellbrook NSW 2333

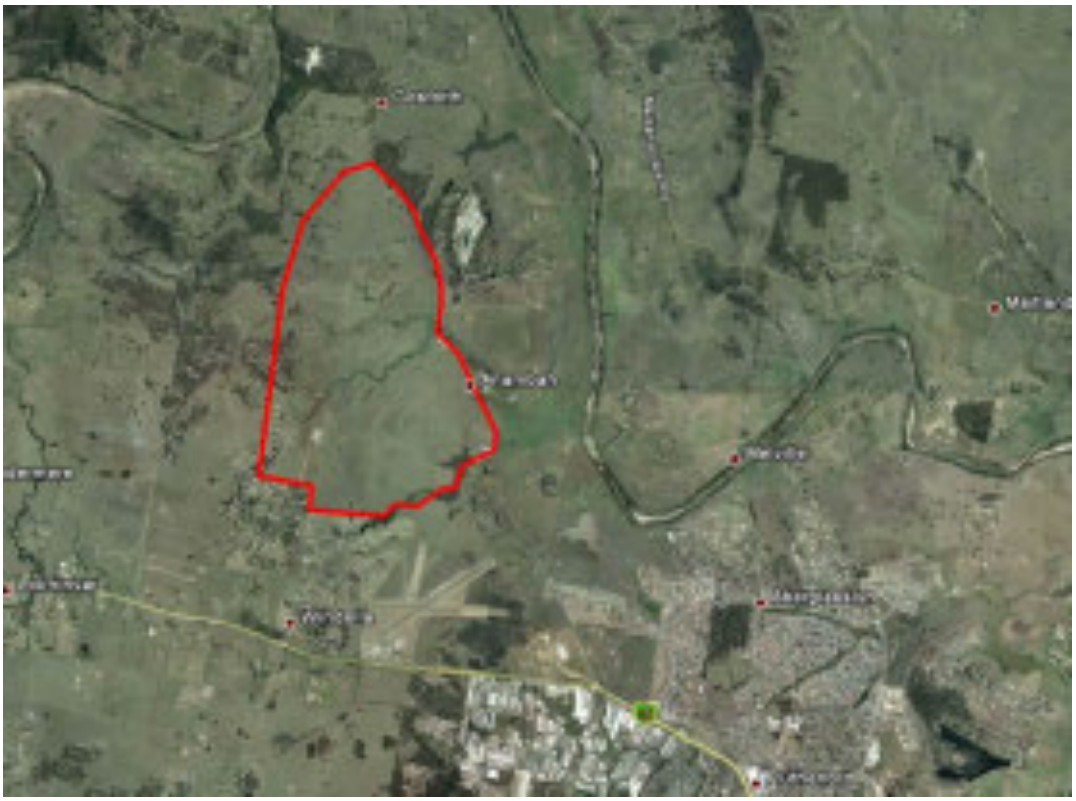
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Mathews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Donna & George Sampson
Cacatua Culture Consultants
Unit 1b/11 Glenwood Drive
THORNTON NSW 2322

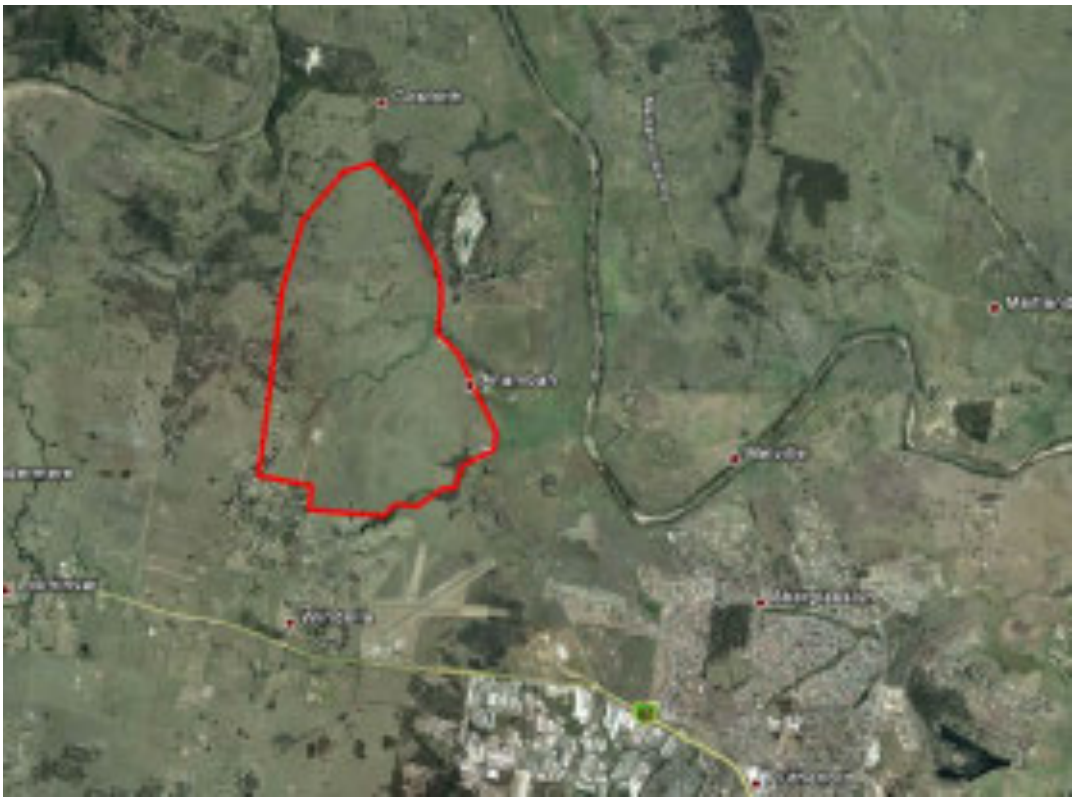
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr and Mrs Sampson

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Cheryl Moodie & Mr Justin Matthews
Carrawonga Consultants
11 Coolibah Close
Muswellbrook NSW 2333

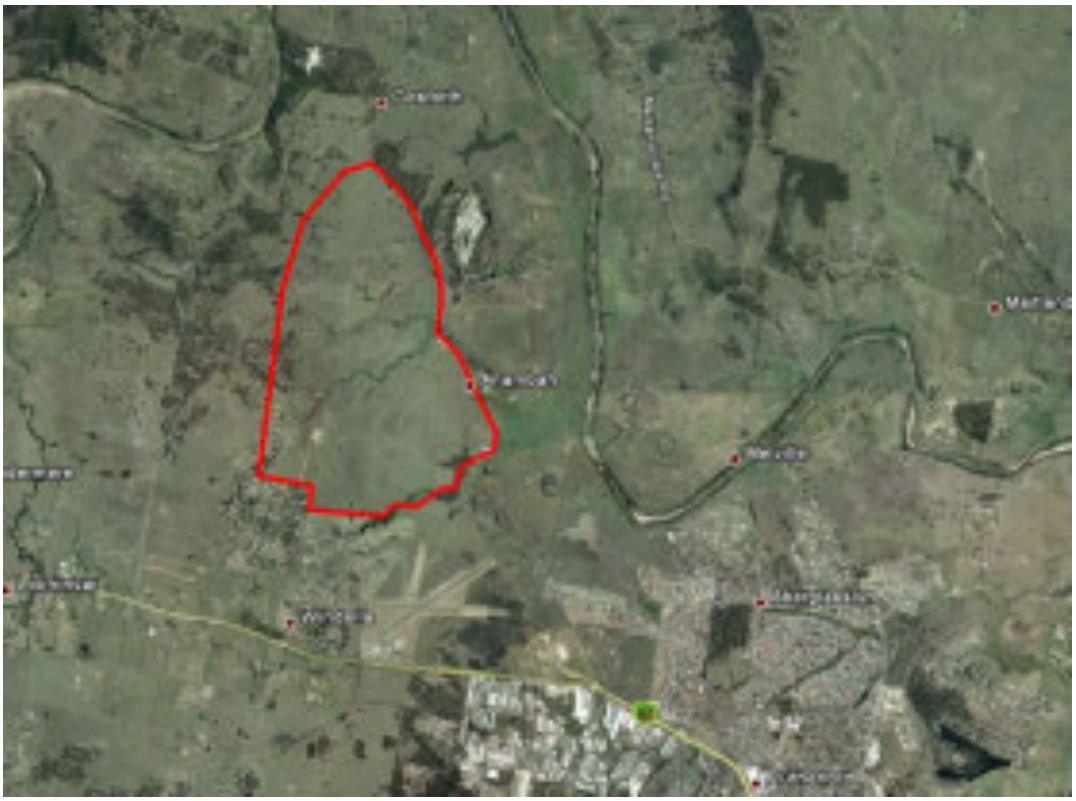
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Moodie & Mr Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Tracey Skene & Mr David Swan
Culturally Aware
7 Crawford Place
Millfield NSW 2325

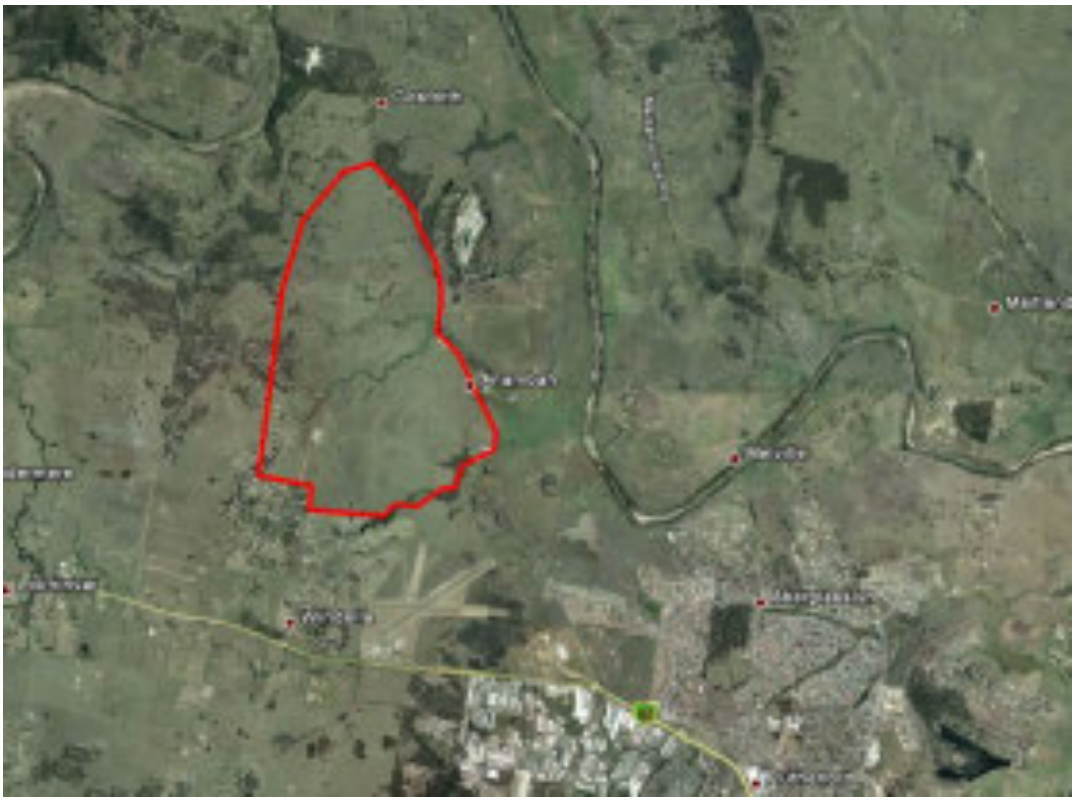
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Skene & Mr Swan

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Derrick Vale Sr
D F T V Enterprises
11/97 Brooke Street
MUSWELLBROOK NSW 2333

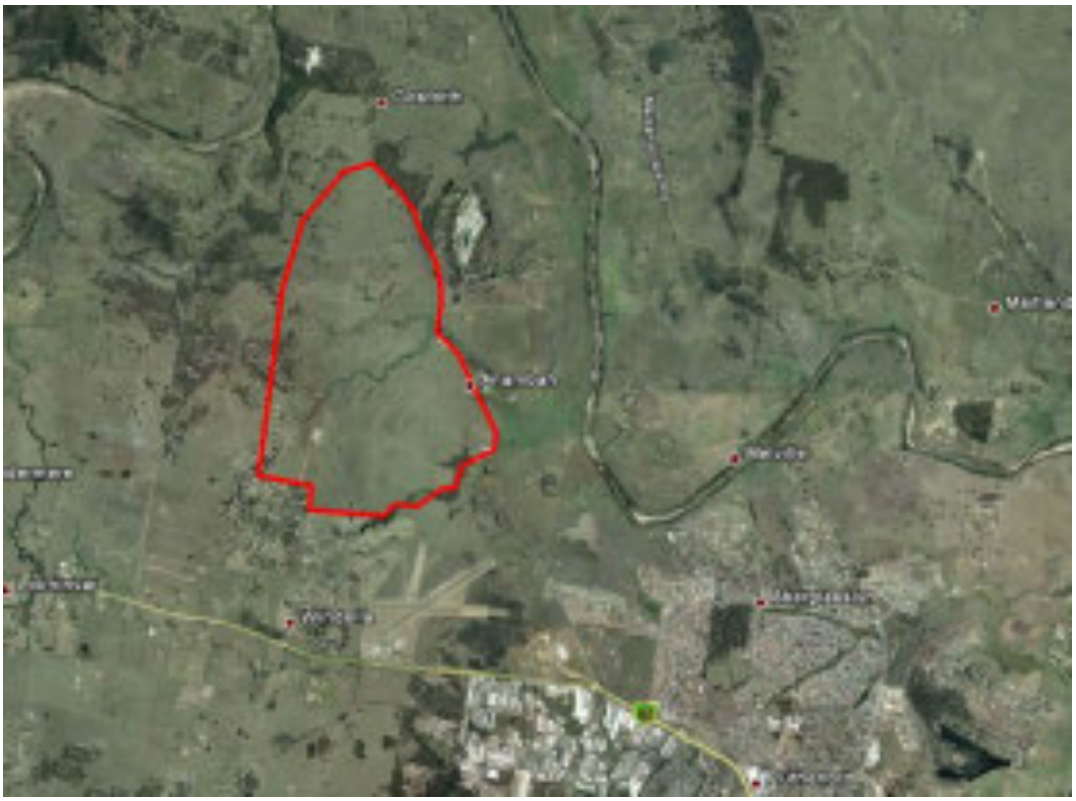
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Vale

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Deslee Matthews
Deslee Talbott Consultants
Unit 2/19 South Street
Gunnedah NSW 2380

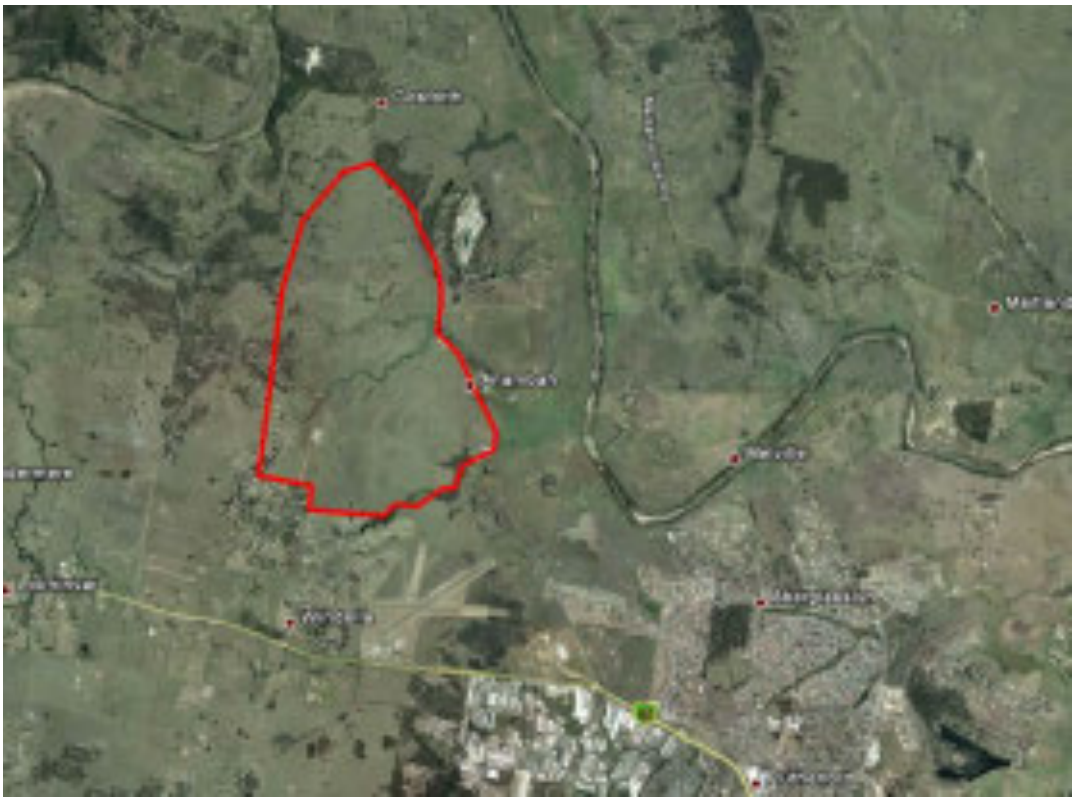
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Debbie Dacey-Sullivan & Ms Annie Hickey
Gidawaa Walang & Barkuma Neighbourhood Centre Inc.
76 Lang Street
Kurri Kurri NSW 2327

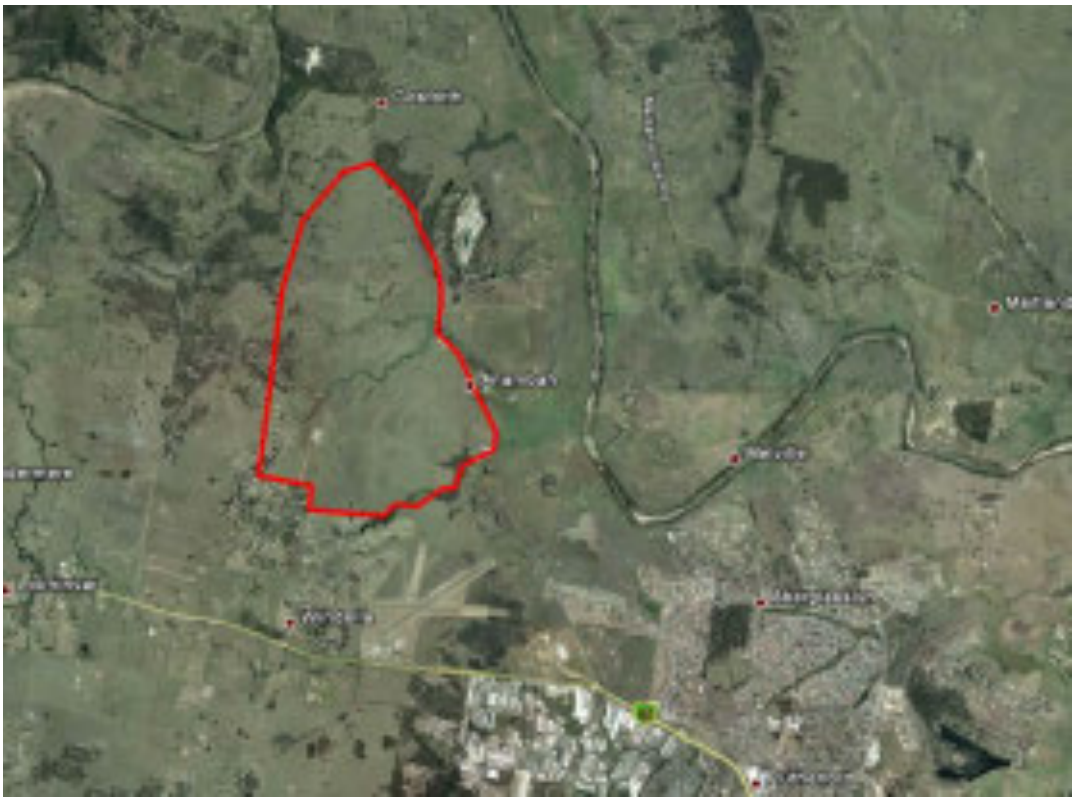
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Dacey-Sullivan & Ms Hickey

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Michele Stair
Giwiirr Consultants
8 Fitzgerald Avenue
Muswellbrook NSW 2333

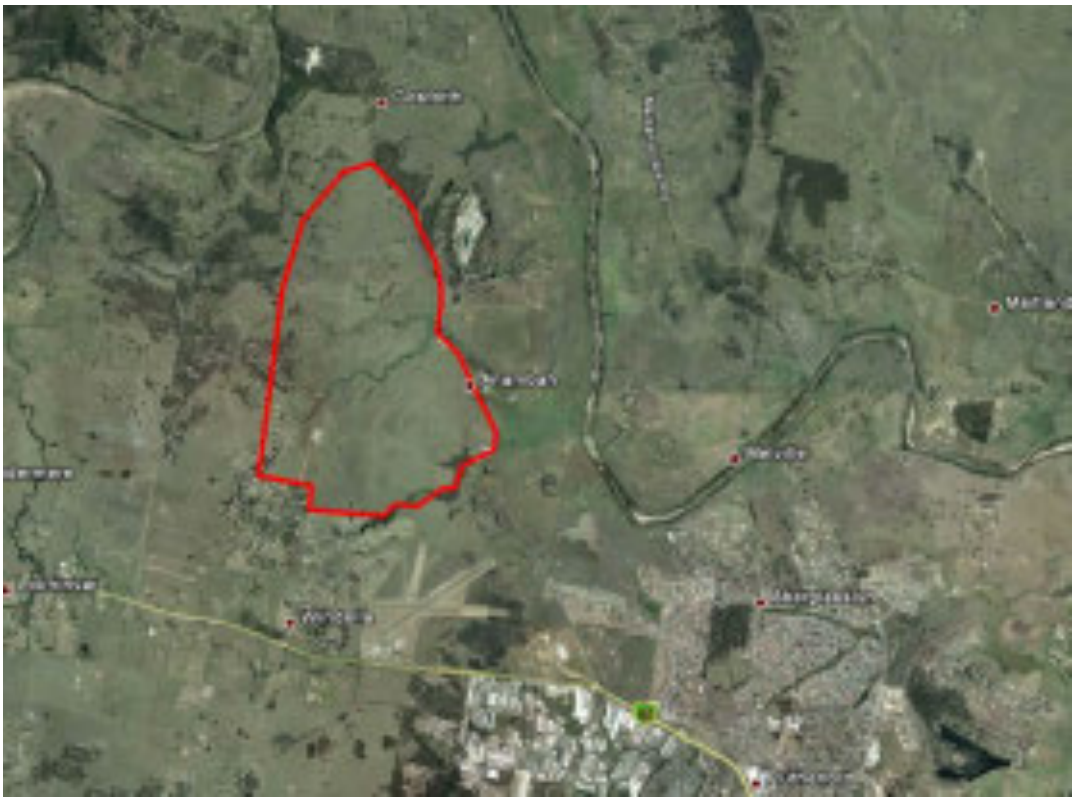
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Stair

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Paulette Ryan
Hunter Traditional Owner
14 Barton Avenue
Singleton Heights NSW 2330

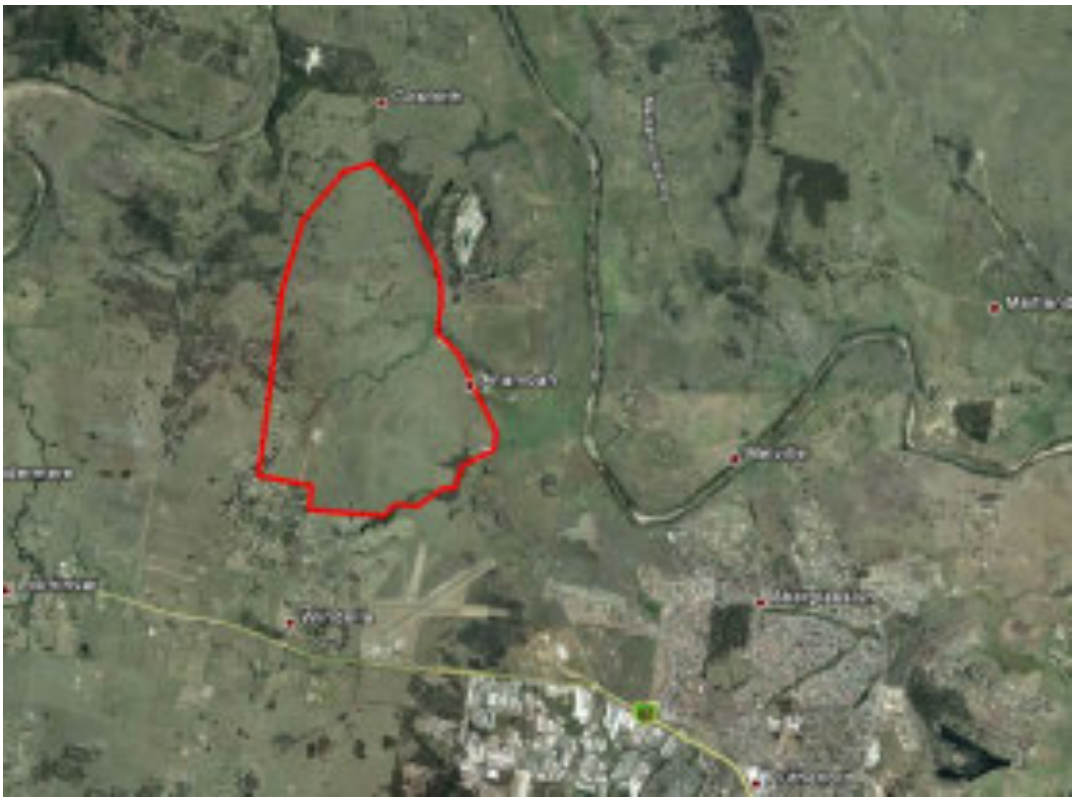
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Ryan

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Rhonda Griffith
Hunter Valley Aboriginal Corporation
PO Box 579
Muswellbrook NSW 2333

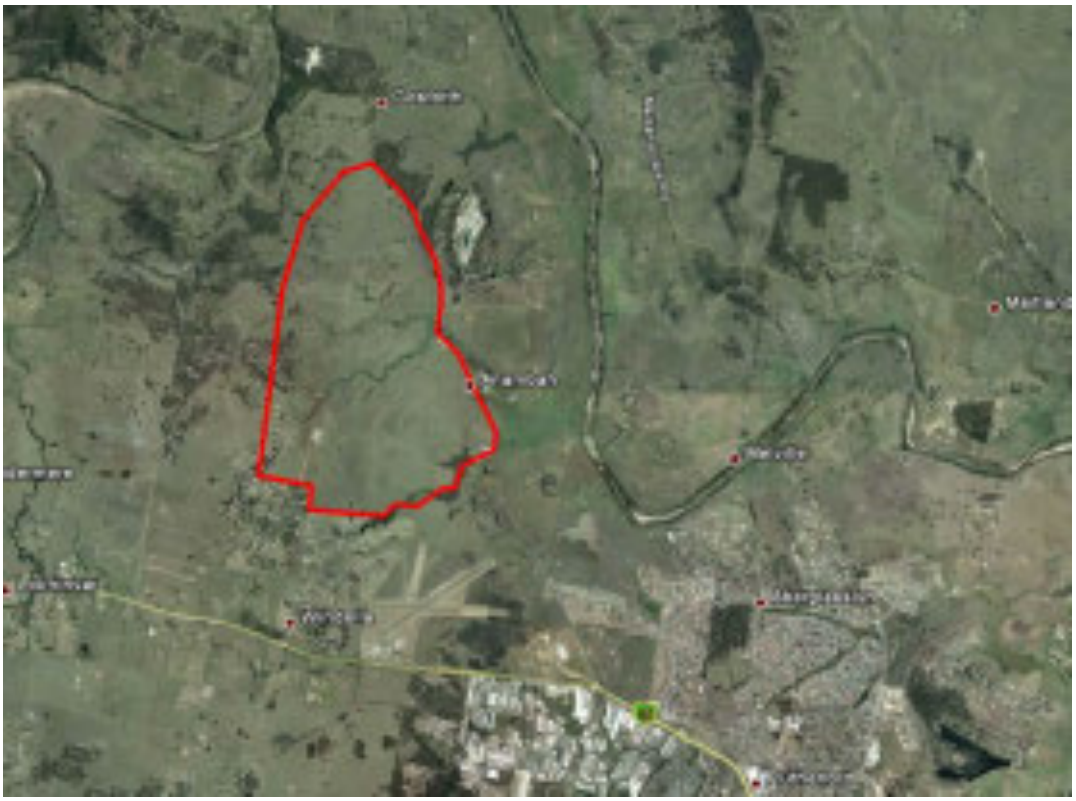
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Griffith

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Christine Matthews & Ms Colleen Stair
Hunter Valley Cultural Consultants
40 Humphries Street
Muswellbrook NSW 2333

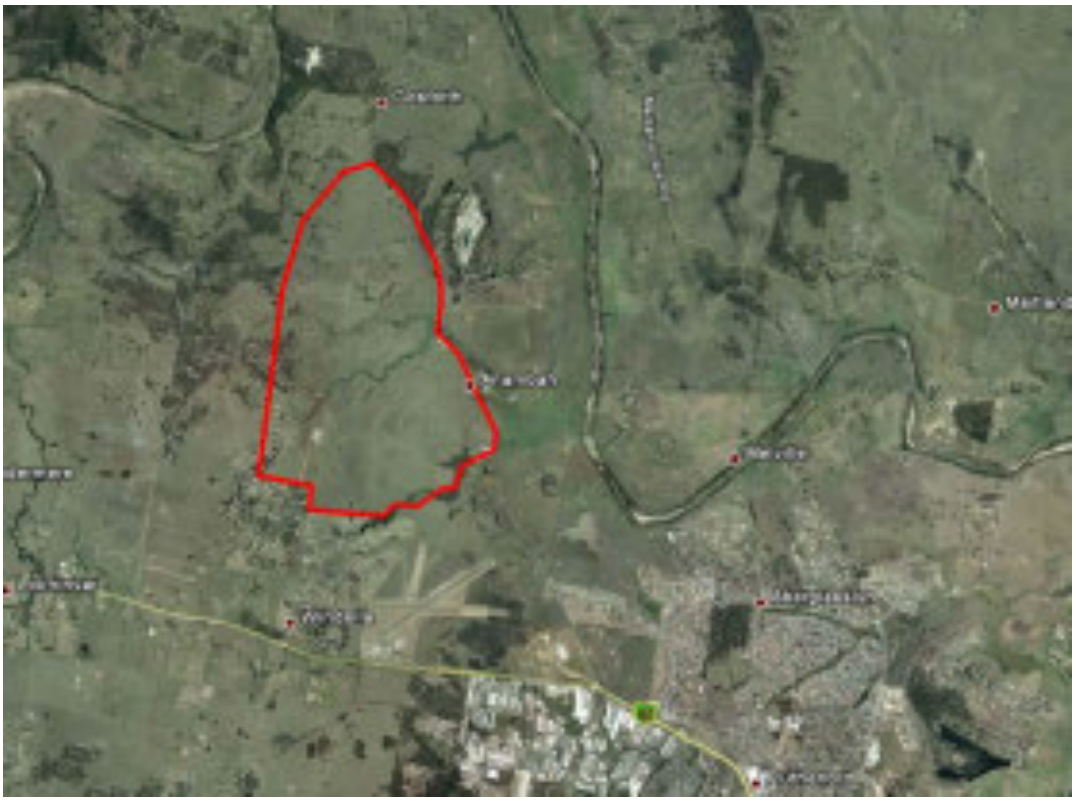
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Matthews & Ms Stair

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Luke Hickey
Hunter Valley Cultural Surveying
165 Susan St
Scone NSW 2337

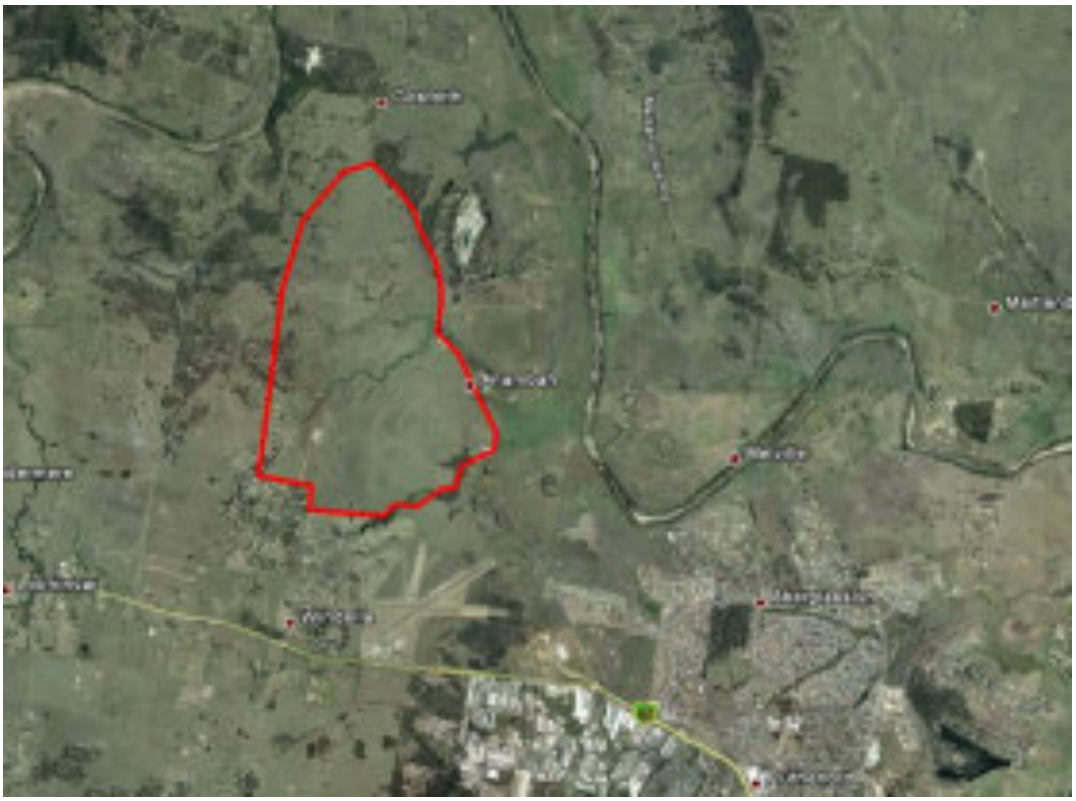
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Hickey

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr David French
Hunter Valley Natural & Cultural Resources
Flat1/72-11Tindale St
Muswellbrook NSW 2333

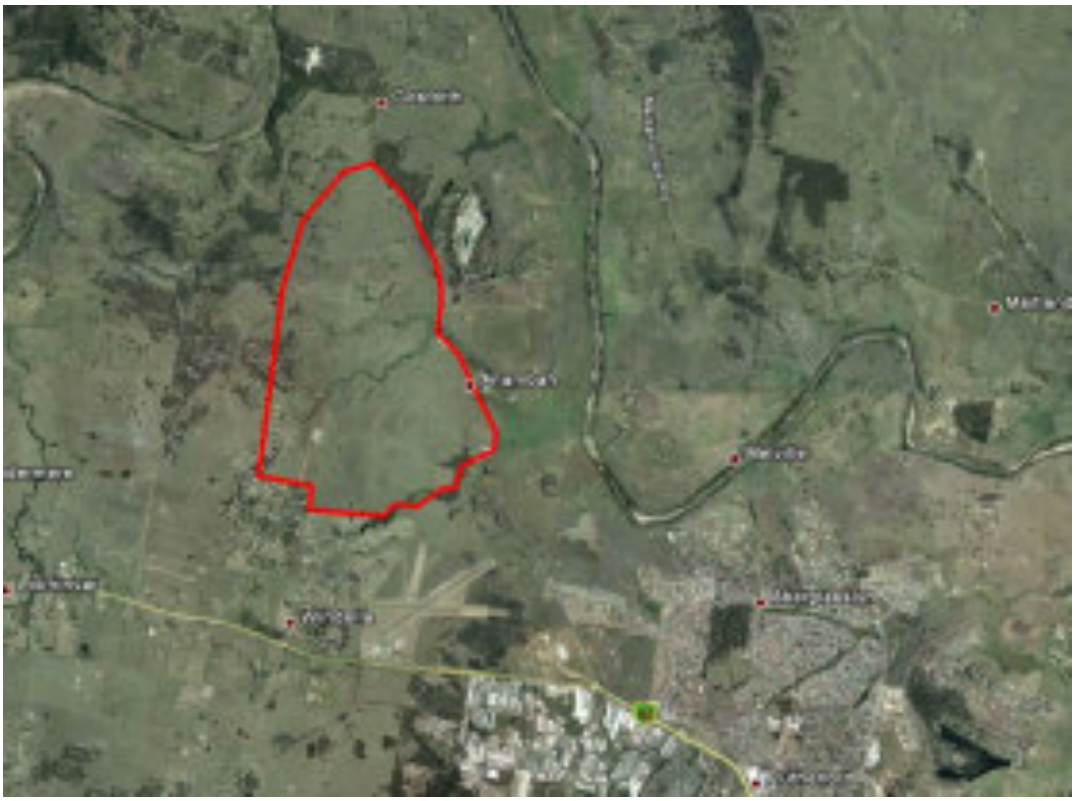
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr French

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Robert Smith
Indigenous Outcomes
33 Clift St
Heddon Greta NSW 2321

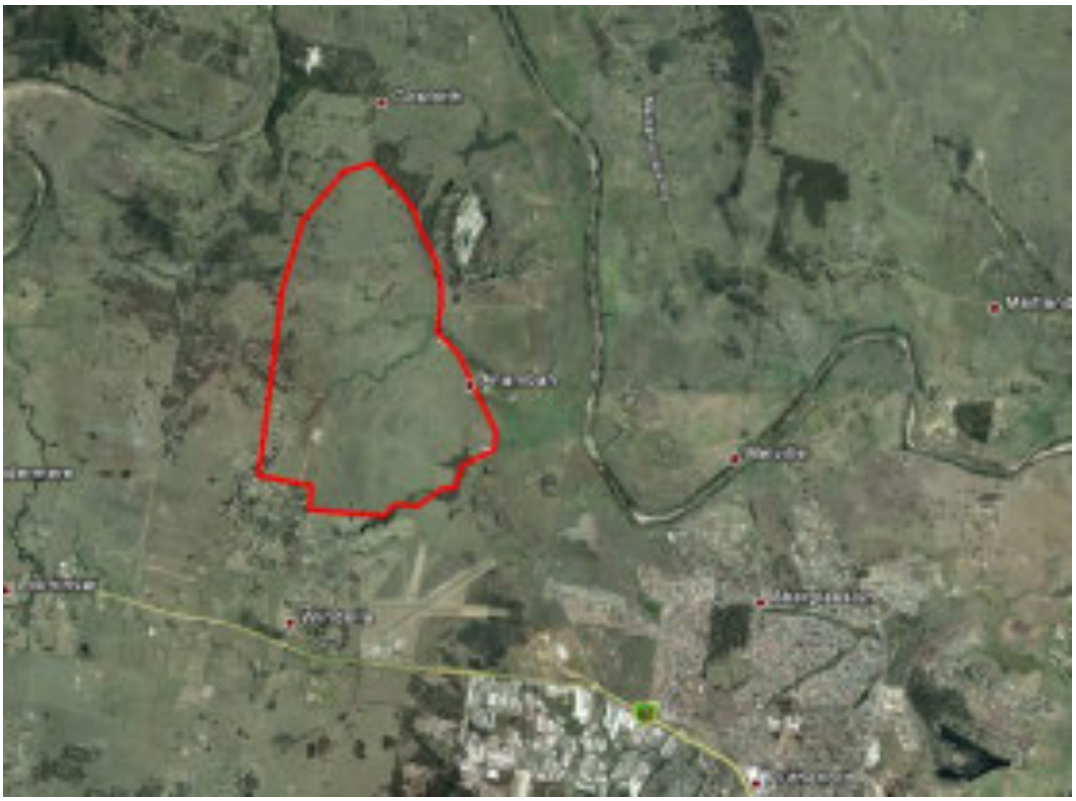
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Smith

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Les Atkinson
Jarban + Mugrebea
11 Nelson Street
Cessnock NSW 2325

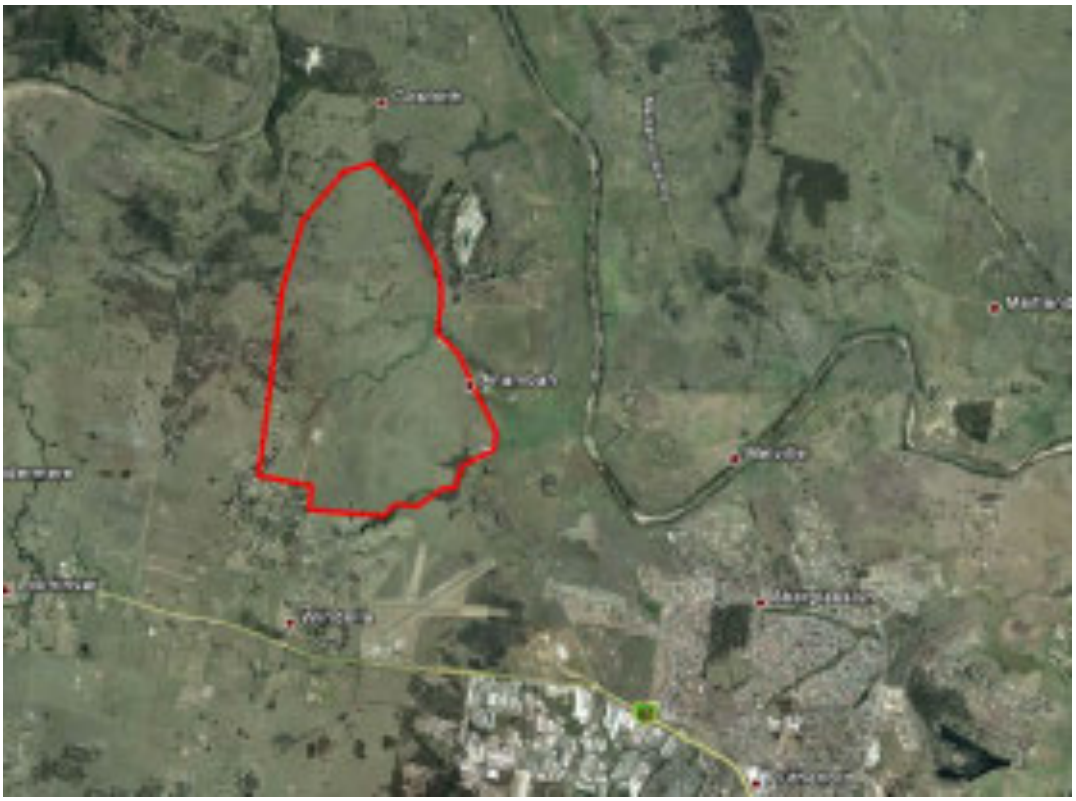
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Atkinson

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Jeff Matthews
Jeff Matthews
6 Eucalypt Ave
MUSWELLBROOK NSW 2333

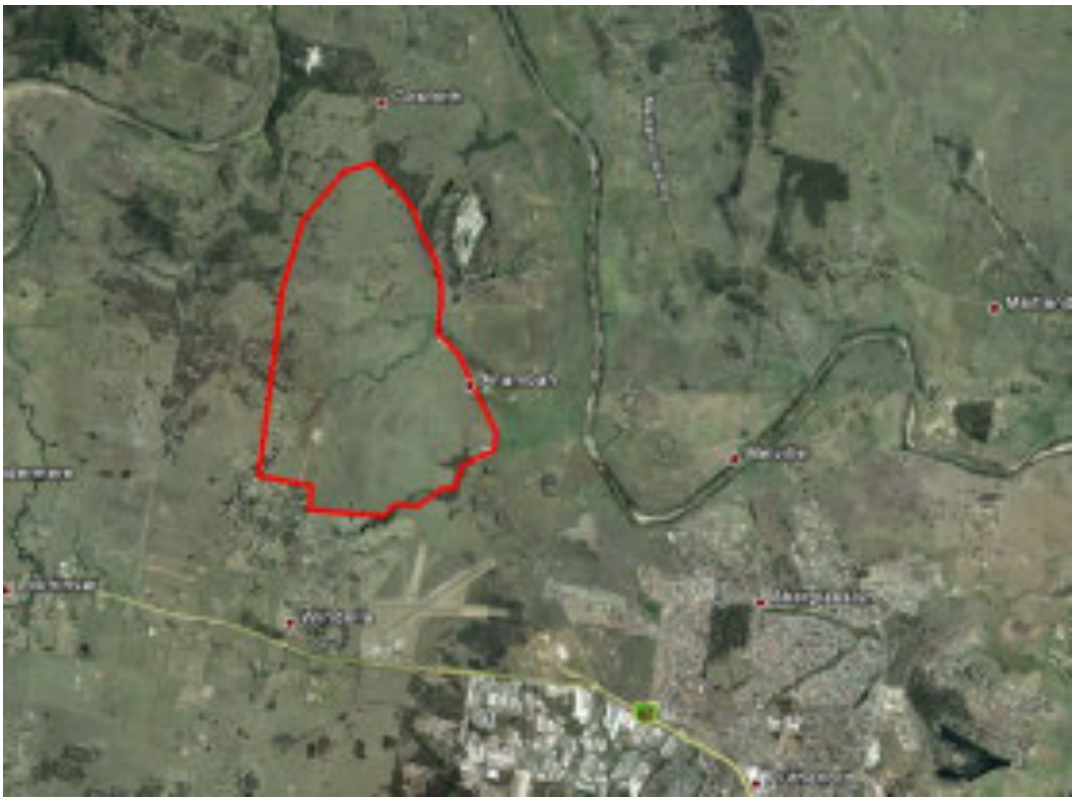
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Vicky Slater
Kawul Cultural Services
PO Box 817
SINGLETON NSW 2330

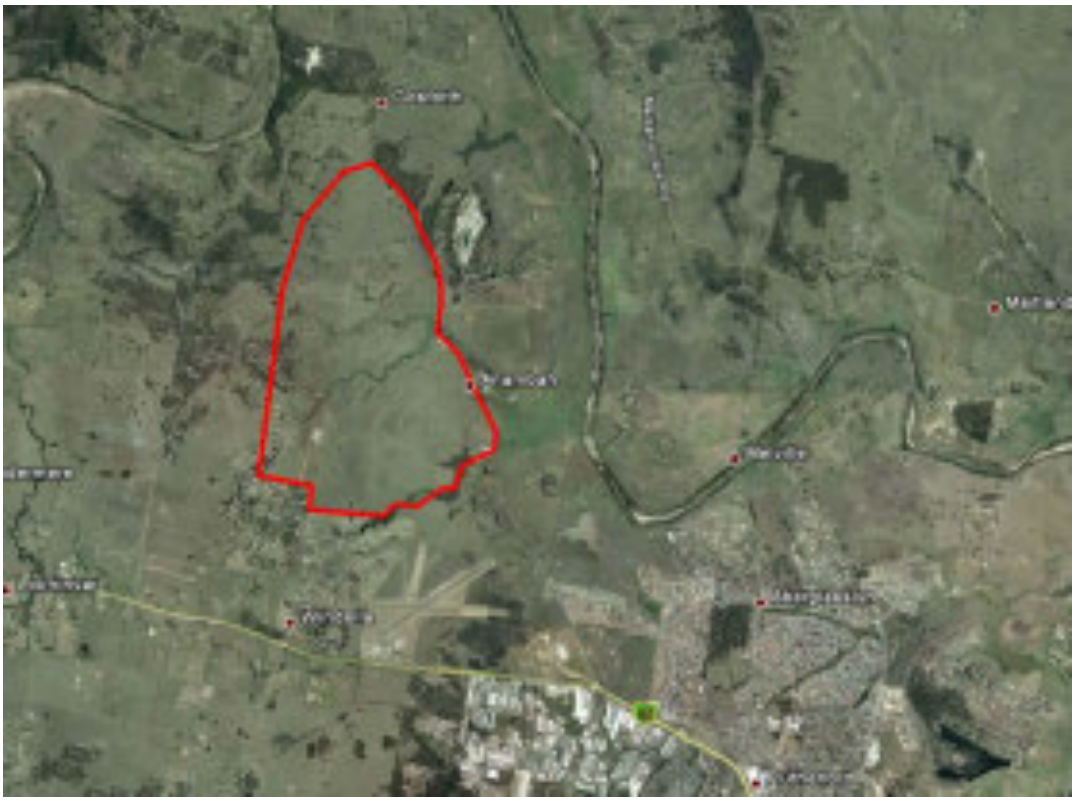
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Slater

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Mark Hickey
Kayaway
6/20-22 Government Road Thornton
Thorton NSW 2322

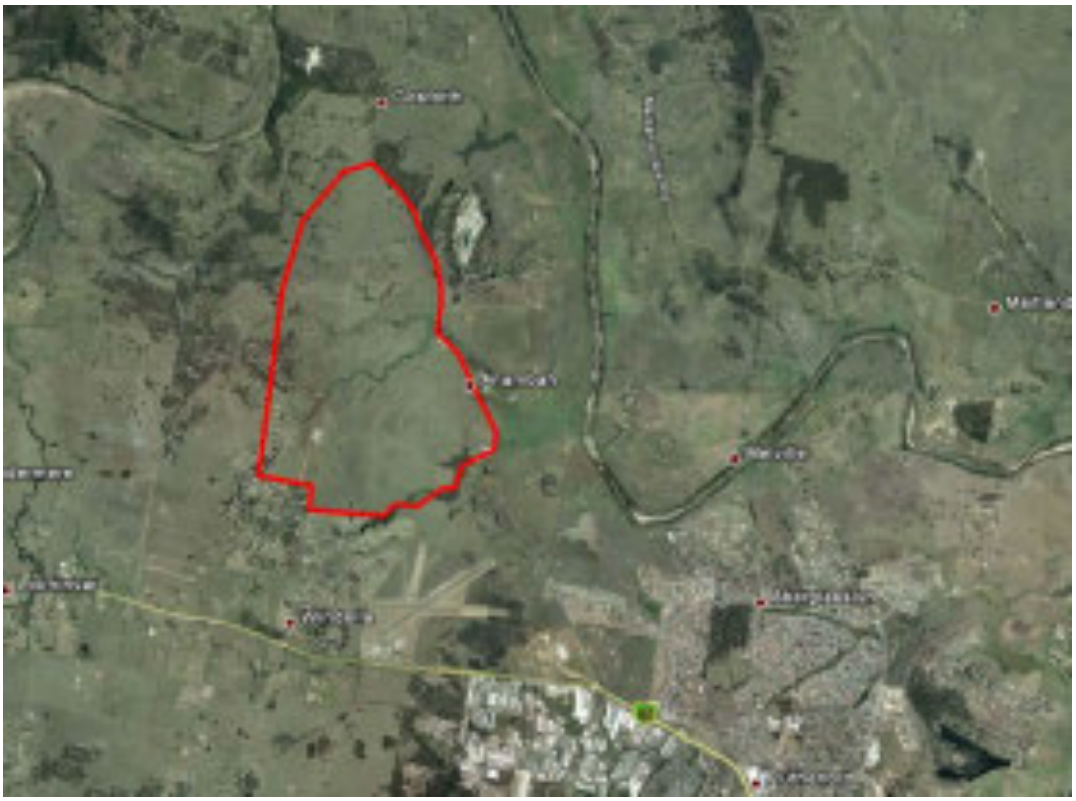
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Hickey

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Lea-Anne Ball
Lower Hunter Wonnarua Council Inc
51 Bowden Street
Heddon Greta NSW 2321

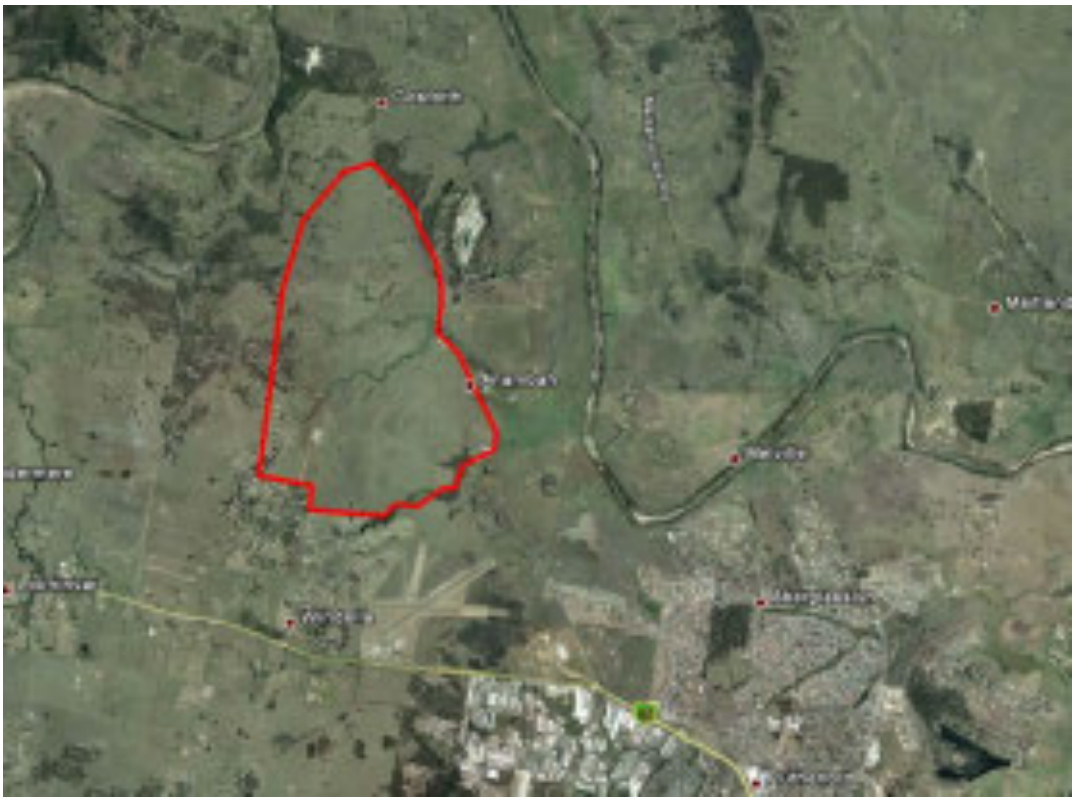
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Ball

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Barry Anderson
Lower Wonnaruah Tribal Consultancy Pty Ltd
156 The Inlet Road
Bulga NSW 2330

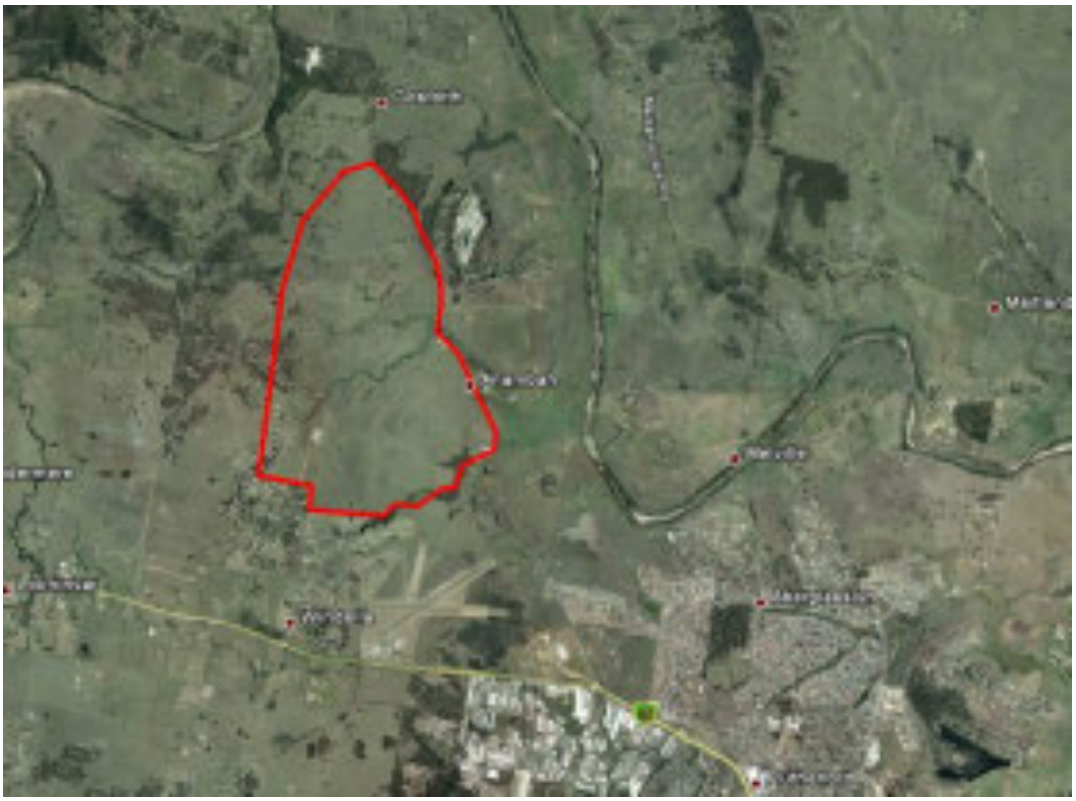
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Anderson

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Steve Talbot
Mindaribba Local Aboriginal Land Council
PO Box 401
East Maitland NSW 2323

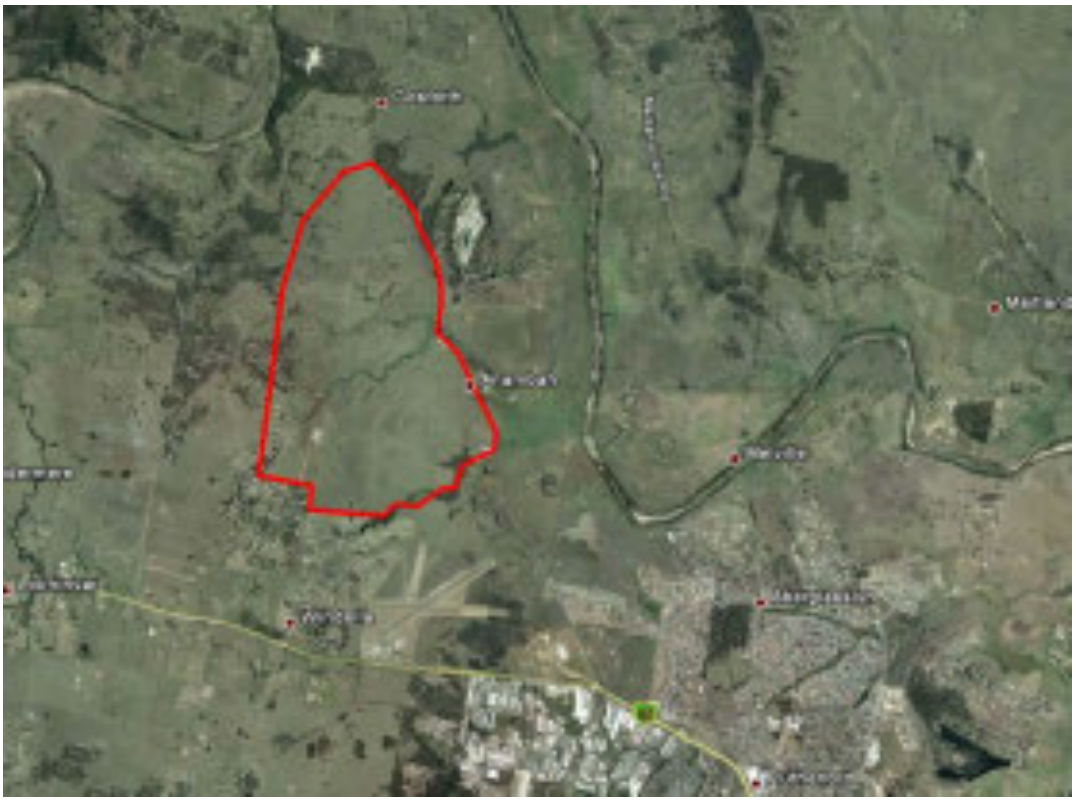
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Talbot

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

Godden Mackay Logan
Heritage Consultants

21 May 2012

Mr Clifford Matthews
Mingga Consultants
11 Coolibah Close
Muswellbrook NSW 2333

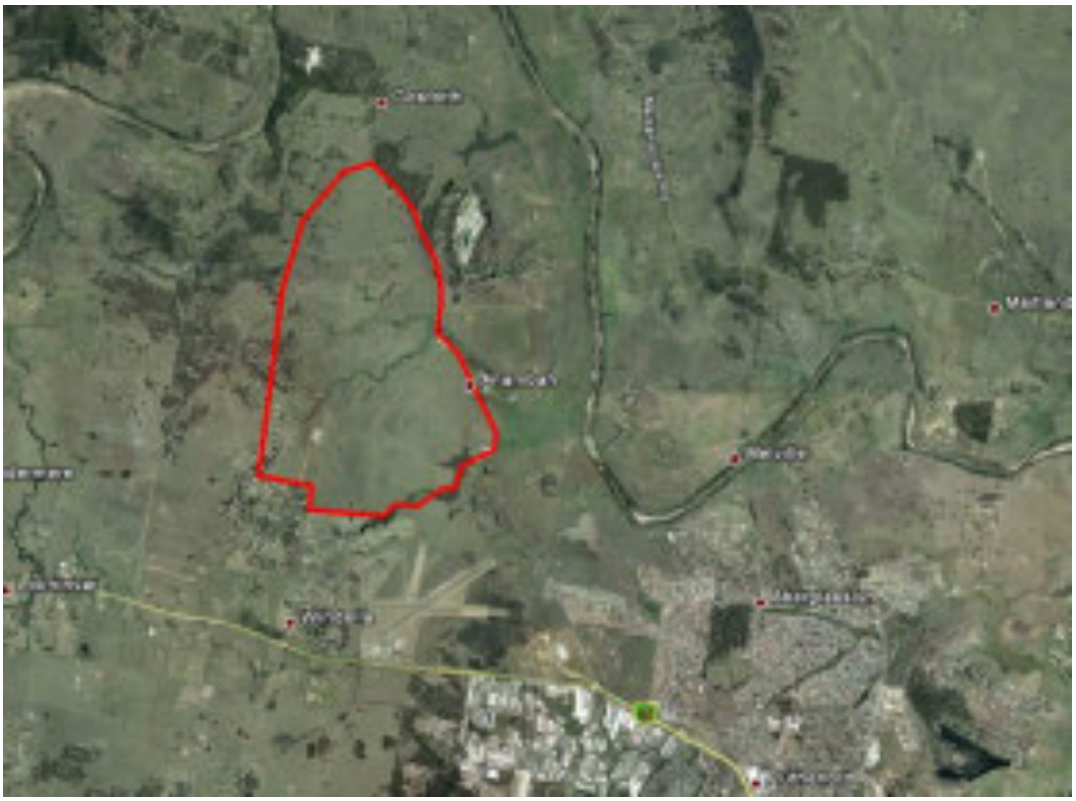
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Stephen Matthews
Mooki Plains Management
28 Herbert Street
GUNNEDAH NSW 2380

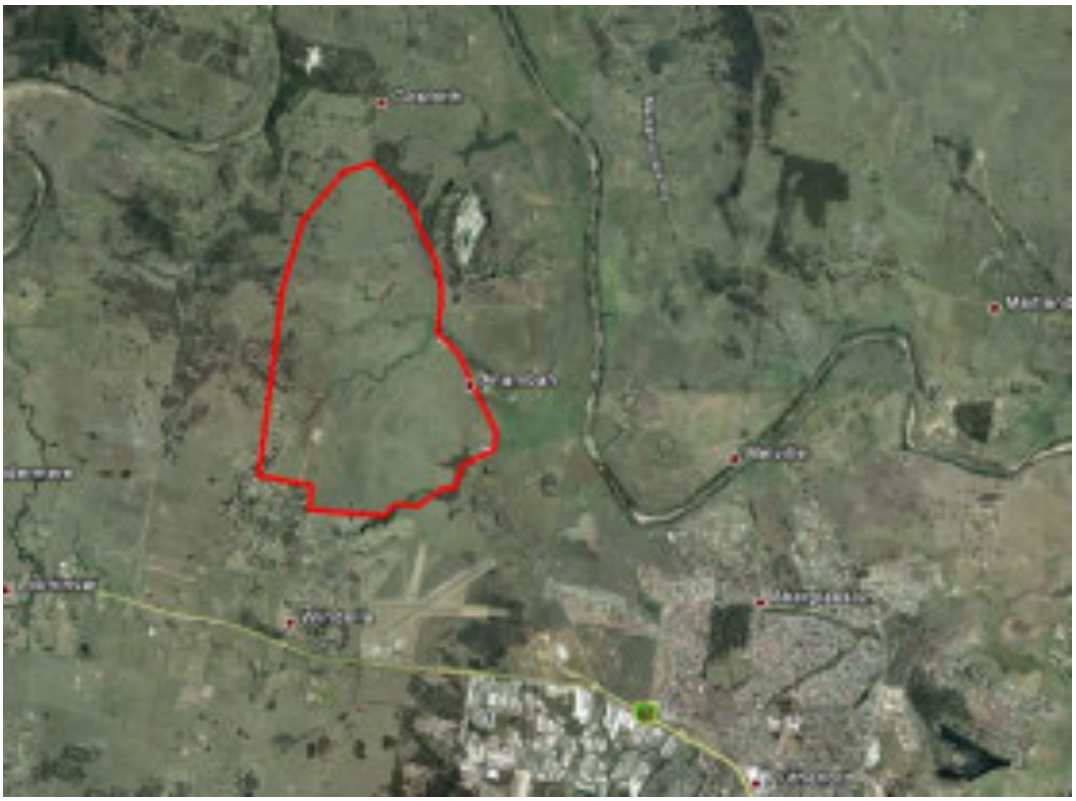
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Les Field
Mooki Plains Management
4 Hinton Drive
GUNNEDAH NSW 2380

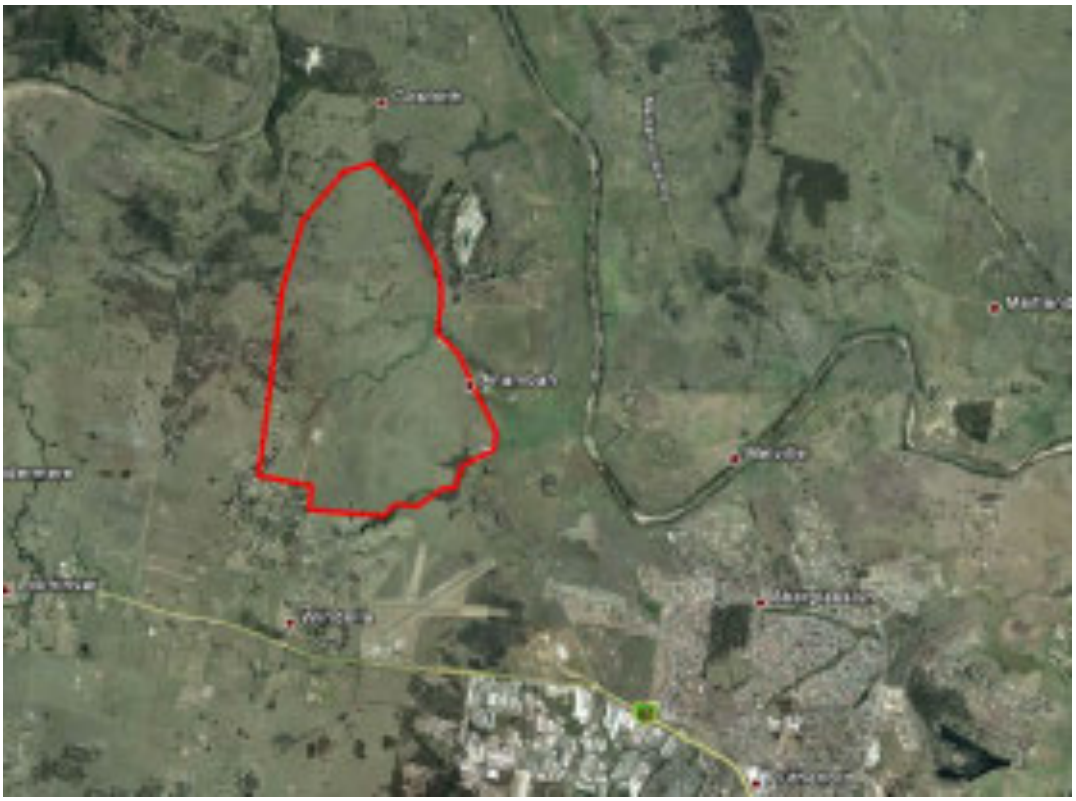
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Field

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Brian & Gay Horton
Muswellbrook Cultural Consultants
10 Scott Street
Muswellbrook NSW 2333

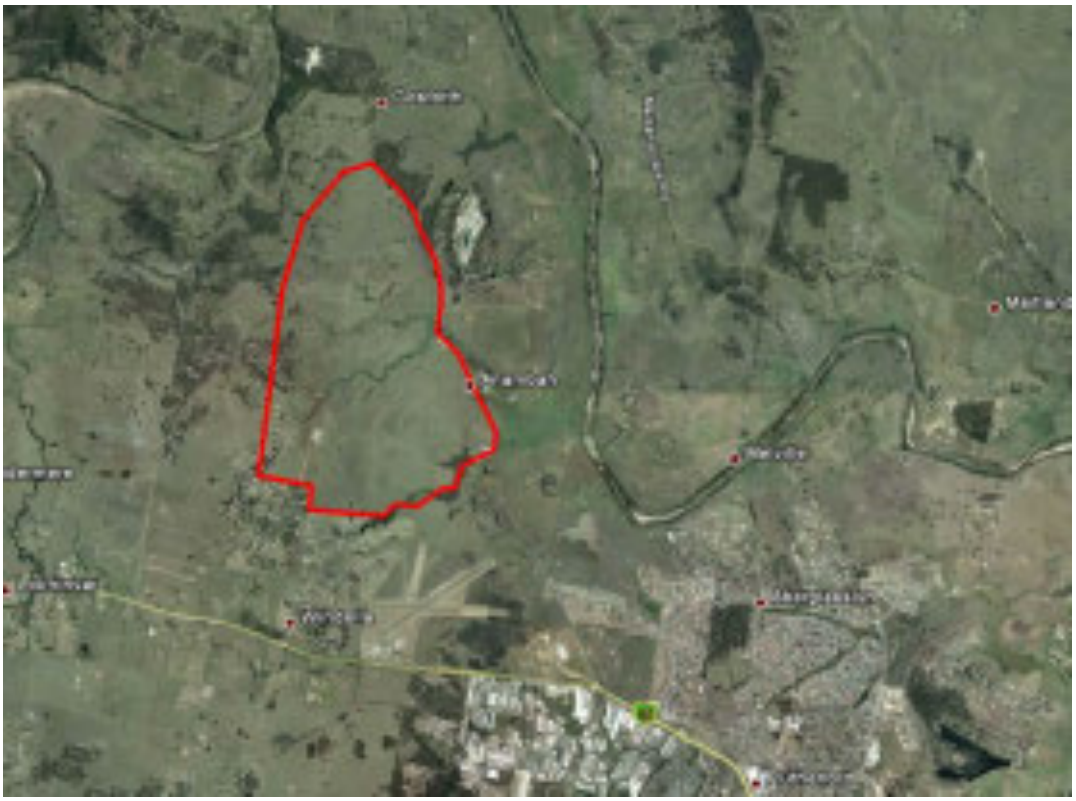
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr and Mrs Horton

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Abie Wright
Ngarramang-Kuri Aboriginal Culture & Heritage Group
21 Bancroft St
Glendale NSW 2285

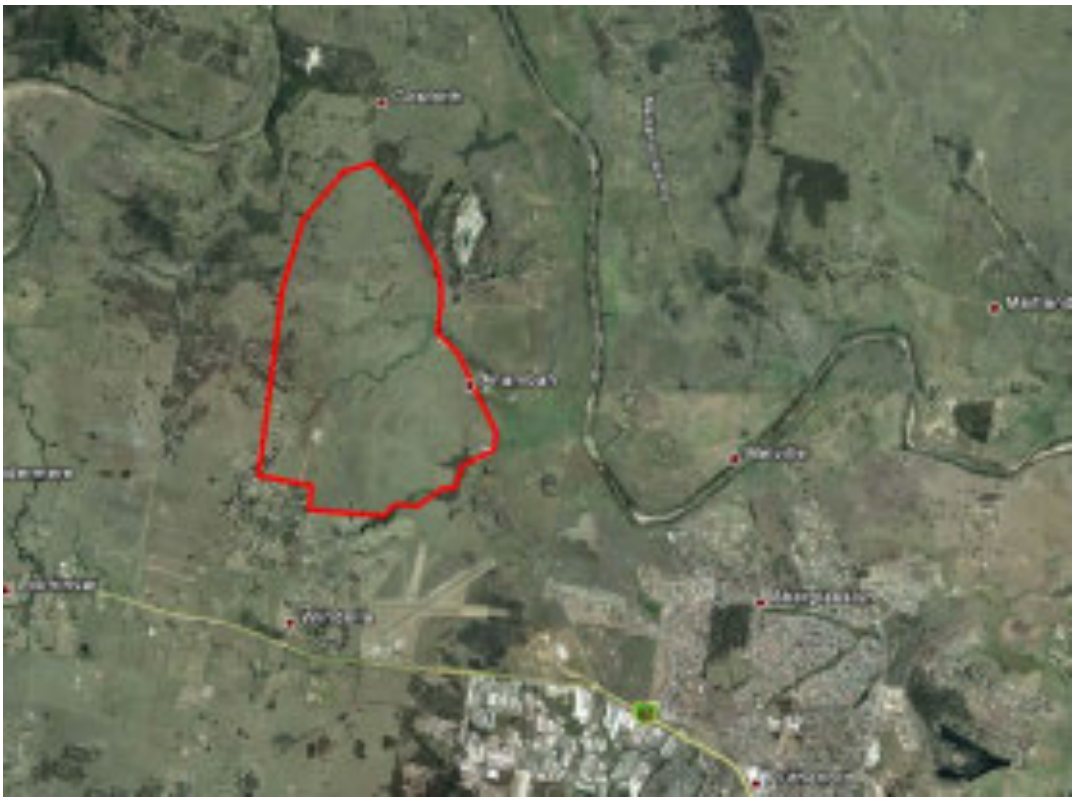
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Abie

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Roger Noel
Roger Noel Matthews Consultancy
15 Parkinson Avenue
Muswellbrook NSW 2333

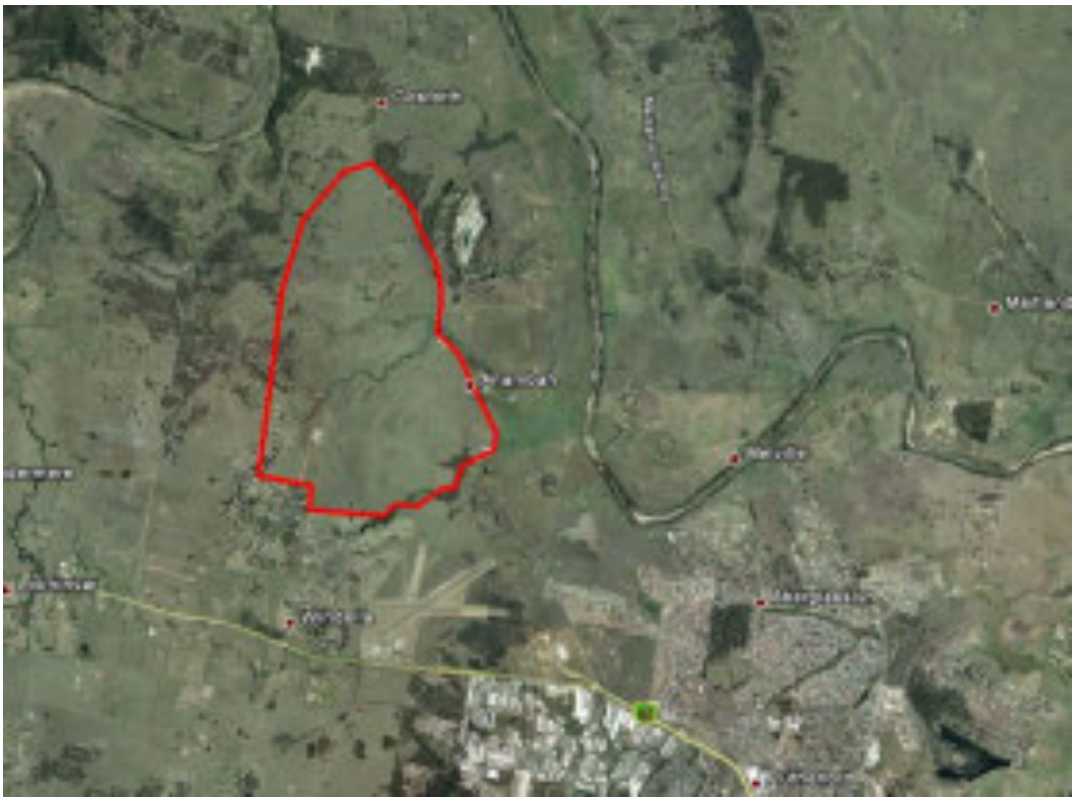
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Noel

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Scott Smith
Scott Smith
Unit 4, 122 Upper St
TAMWORTH NSW 2340

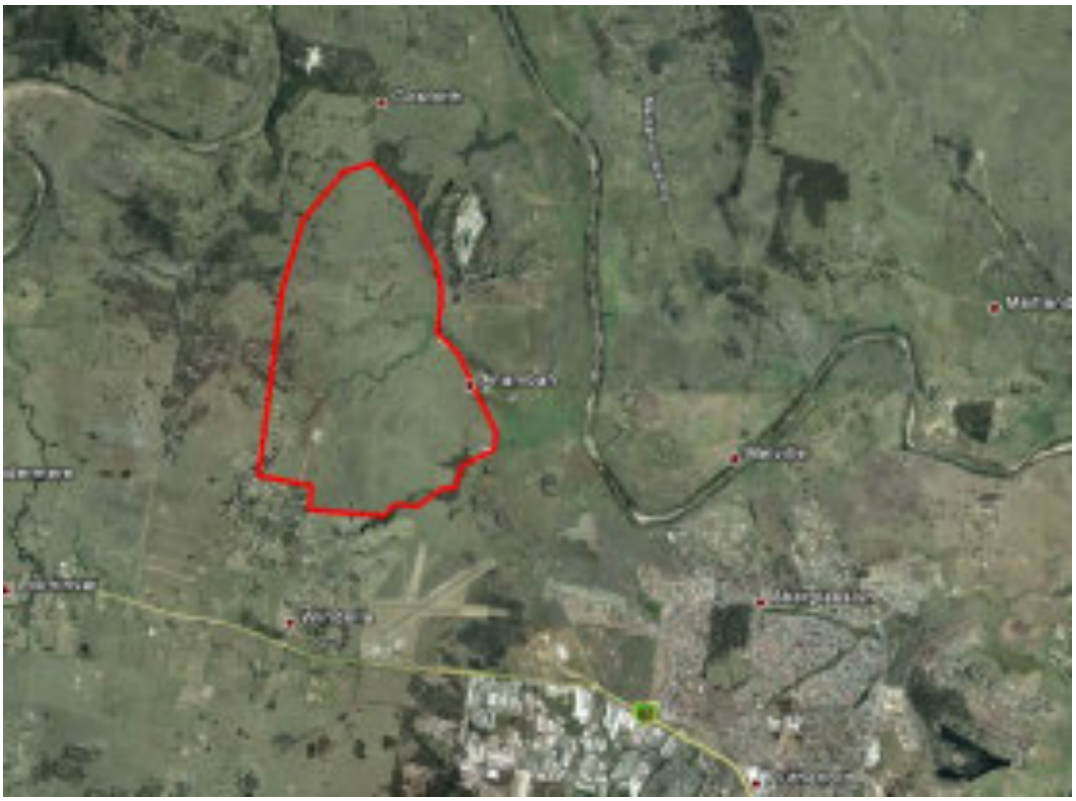
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Smith

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Cultural Heritage Officer
St Clair Singleton Aboriginal Corporation
PO Box 710
Singleton NSW 2330

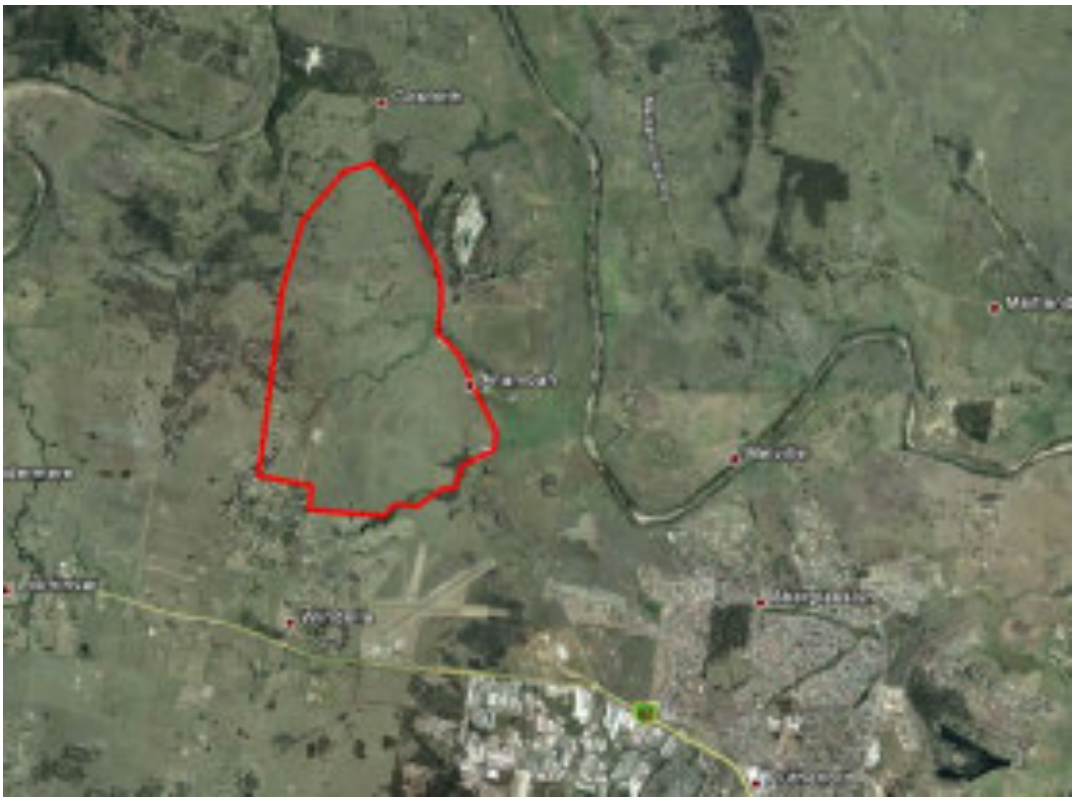
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Cultural Heritage Officer

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

T & G Culture Consultants
19 O'Donnell Cresent
Metford NSW 2323

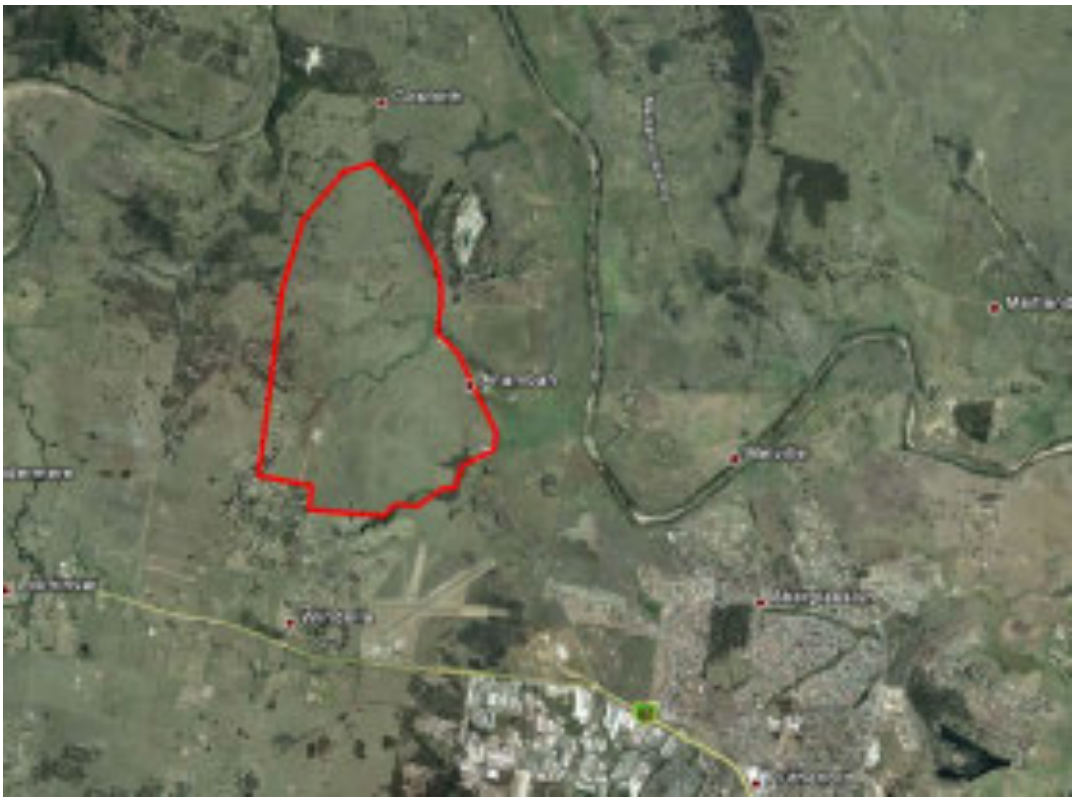
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

To Whom it may Concern:

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Alan Paget & Ms Sarah Hall
Ungooroo Aboriginal Corporation
PO Box 3095
Singleton NSW 2330

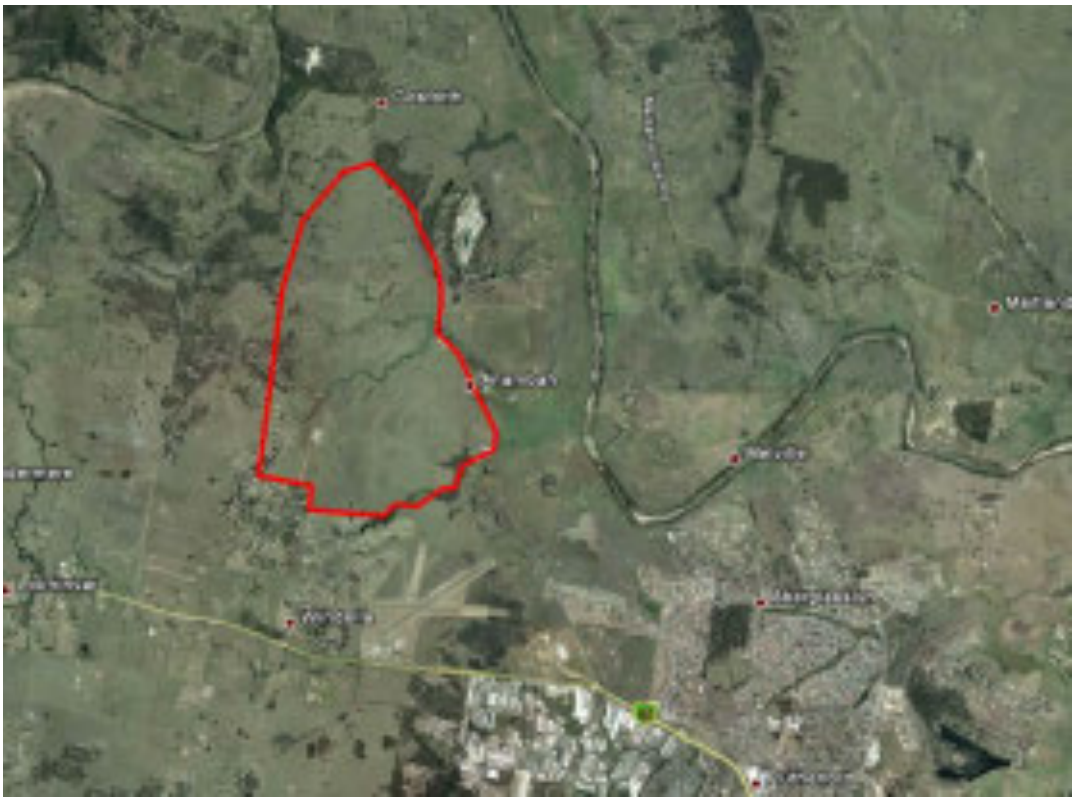
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Paget & Ms Hall

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Rhonda Ward
Ungooroo Cultural & Community Services
8 Blaxland Avenue
Singleton NSW 2330

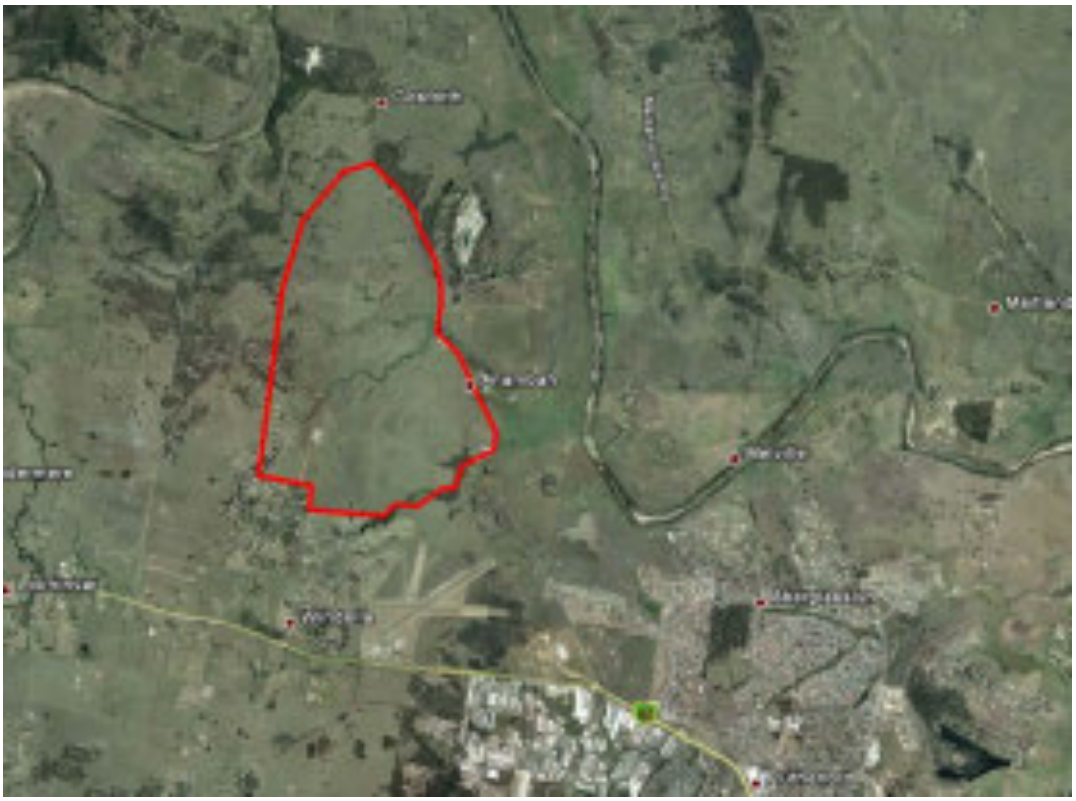
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Ward

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

John, Melissa & Darrel Matthews
Upper Hunter Heritage Consultants
14 Edinglassie Drive
Muswellbrook NSW 2333

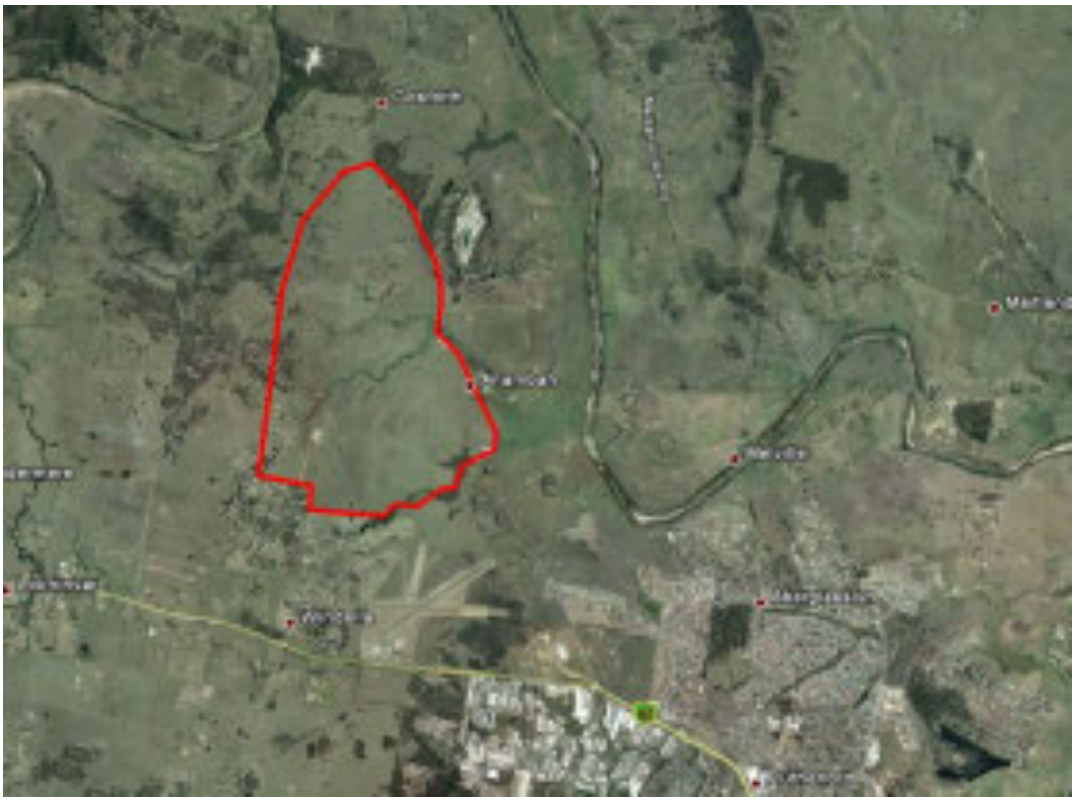
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear John, Melissa & Darrel

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Rhoda Perry & Ms Georgina Berry
Upper Hunter Wonnarua Council Inc
PO Box 184
Singleton NSW 2330

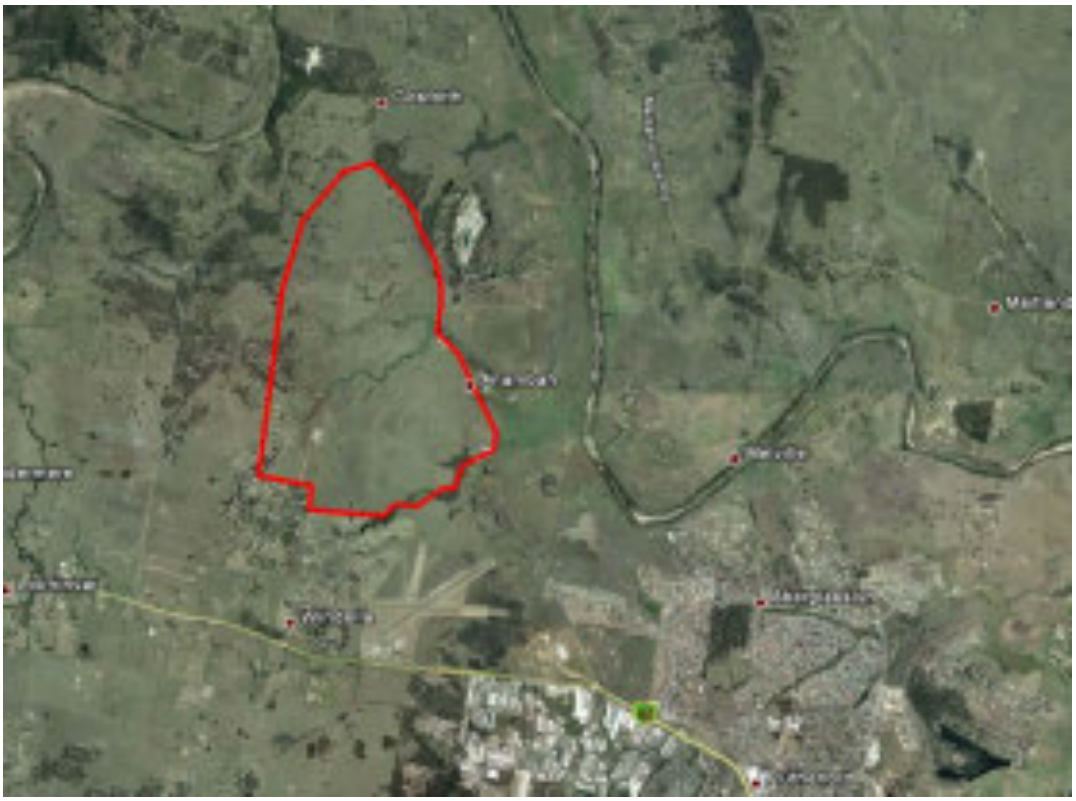
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Perry & Ms Berry

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Larry Van Vliet & Mr John Matthews
Valley Culture
140 Sydney Street
Muswellbrook NSW 2333

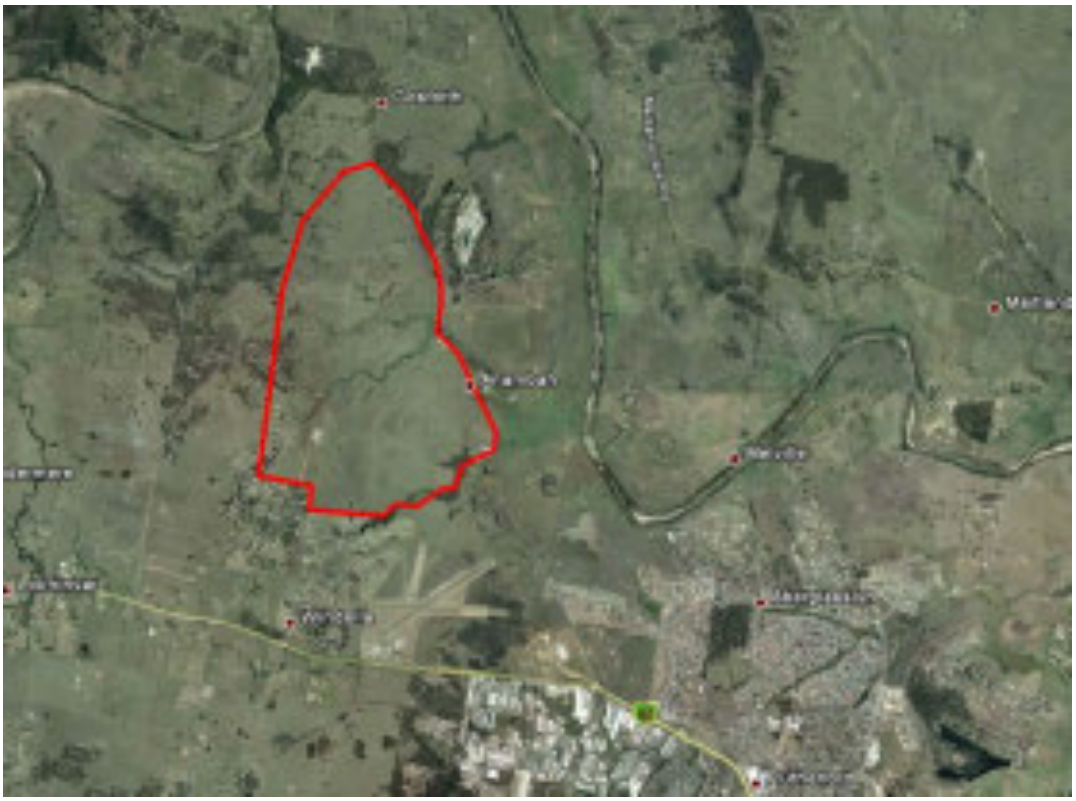
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Van Vliet & Mr Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr David Foot
Wanaruah Custodians
35 Acacia Circuit
Singleton NSW 2330

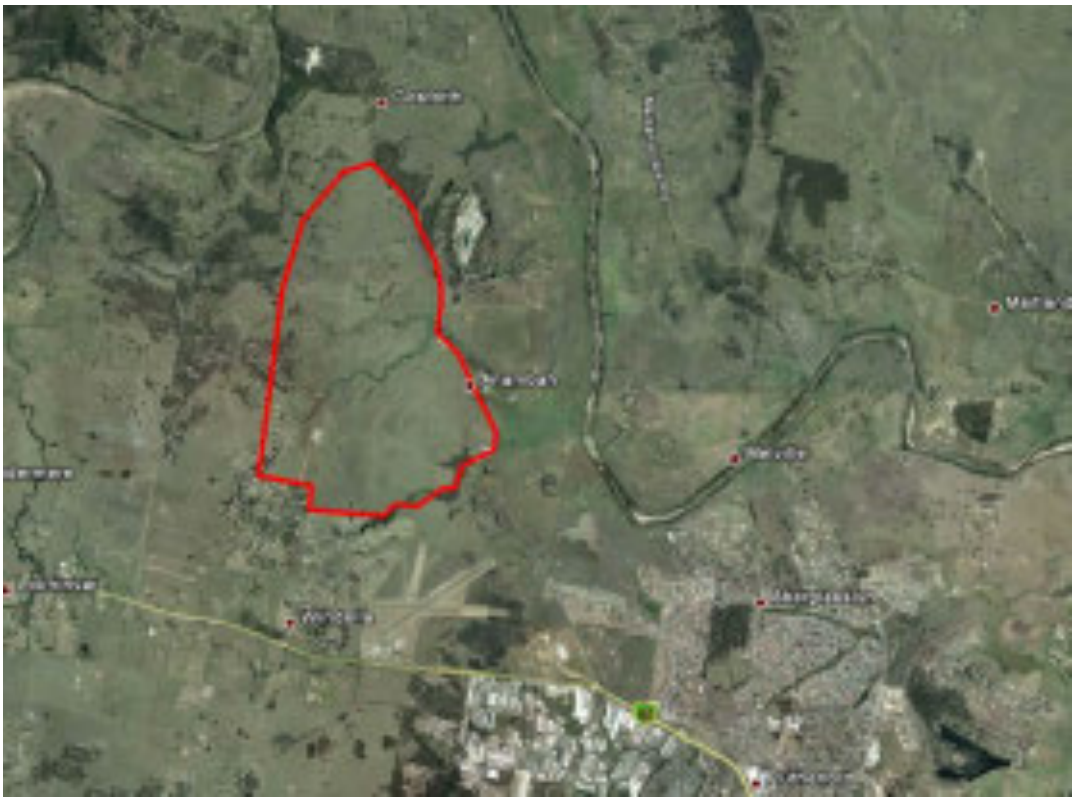
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Foot

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Noel Downs
Wanaruah Local Aboriginal Land Council
PO Box 127
Muswellbrook NSW 2333

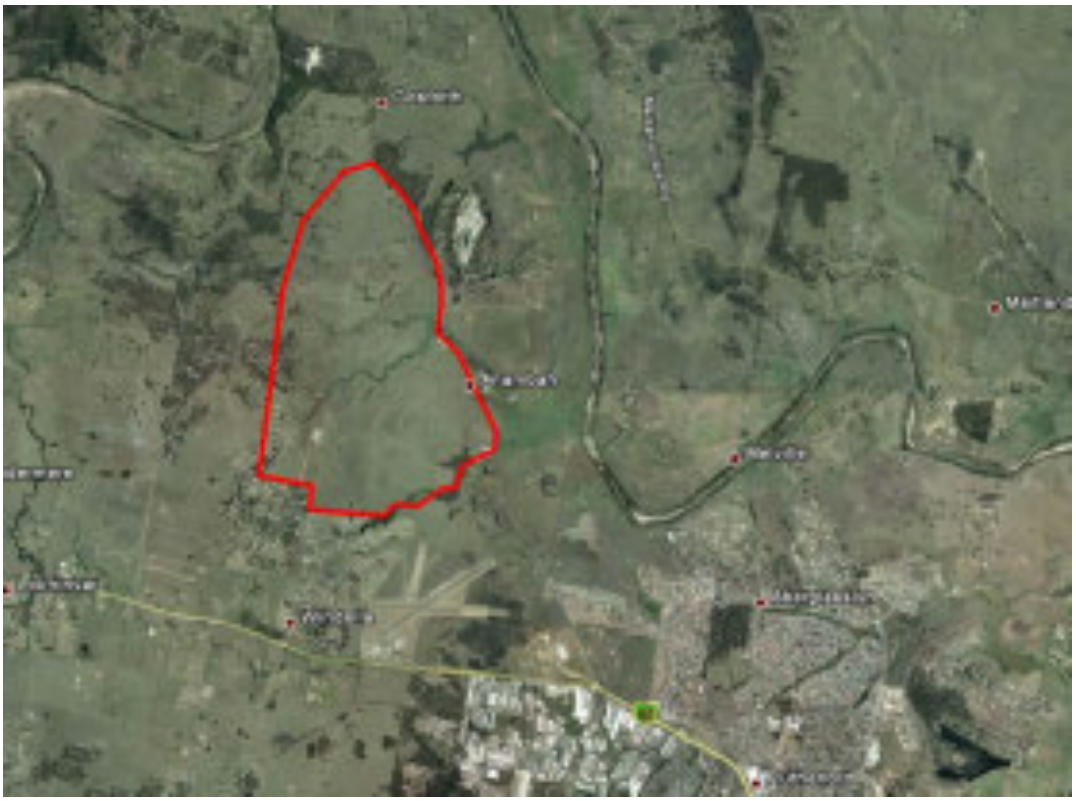
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Downs

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Des Hickey
Wattaka Wonnarua C.C. Service
4 Kennedy Street
Singleton NSW 2330

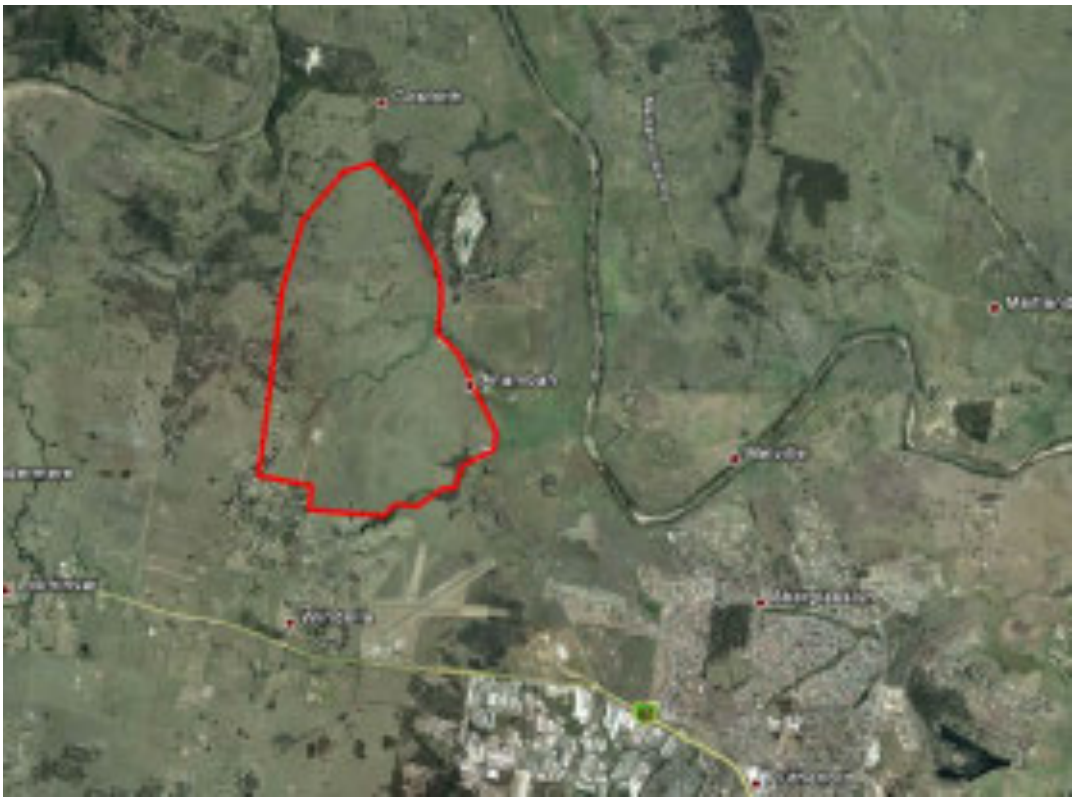
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Hickey

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Amanda Hickey
Widescope Indigenous Group Pty Ltd
73 Russell St
Emu Plains NSW 2750

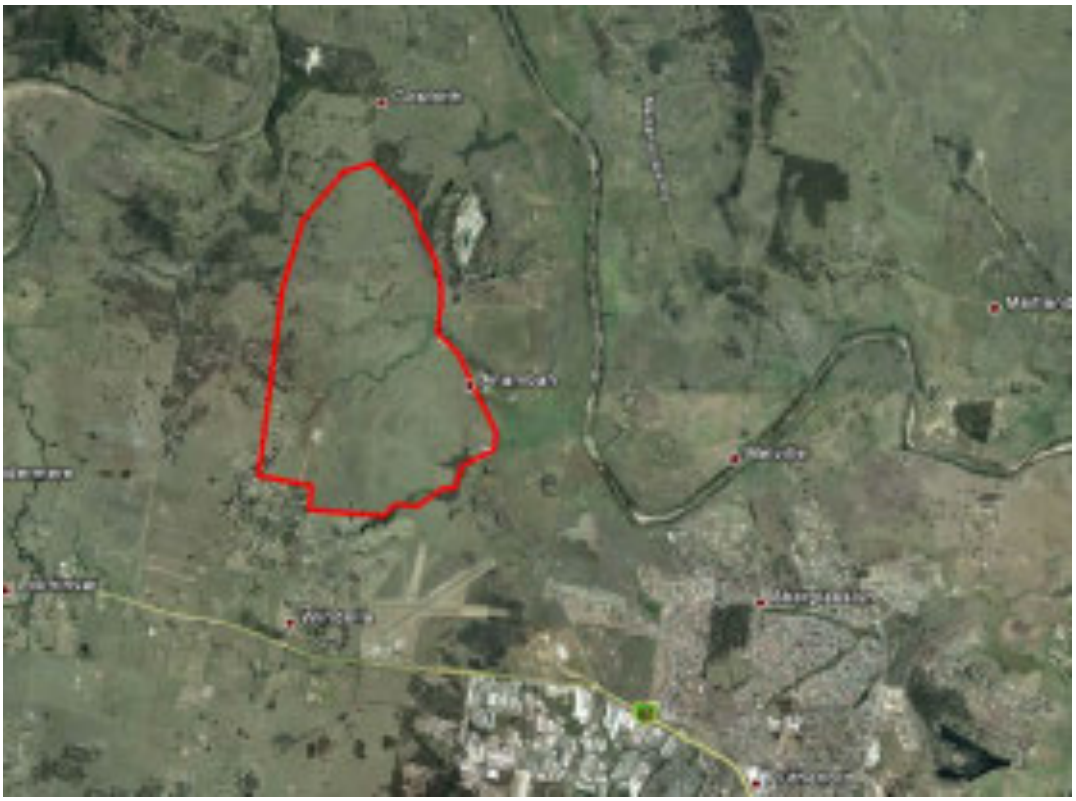
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Hickey

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Arthur Fletcher
Wonn1 Contracting
619 Main Road
Glendale NSW 2285

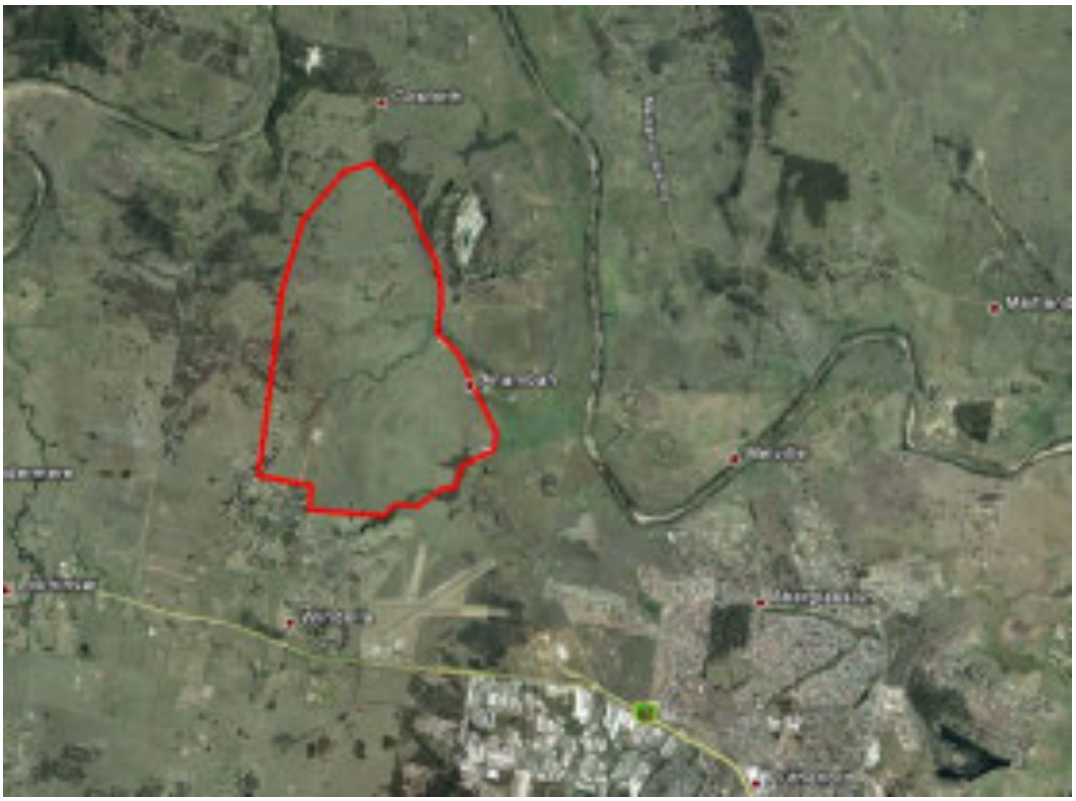
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Fletcher

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Gordon Griffith
Wonnarua Culture Heritage
19 O'Donnell Crescent
Metford NSW 2323

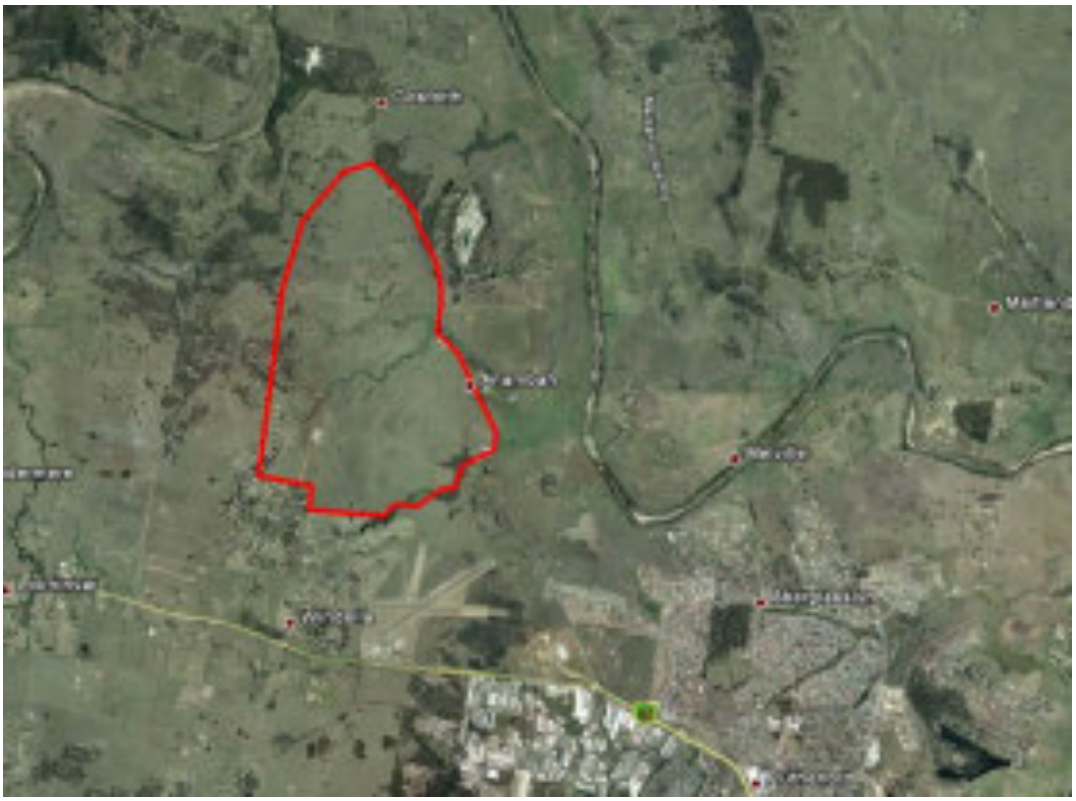
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Griffith

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Laurie Perry
Wonnarua Nation Aboriginal Corporation
PO Box 3066
Singleton NSW 2330

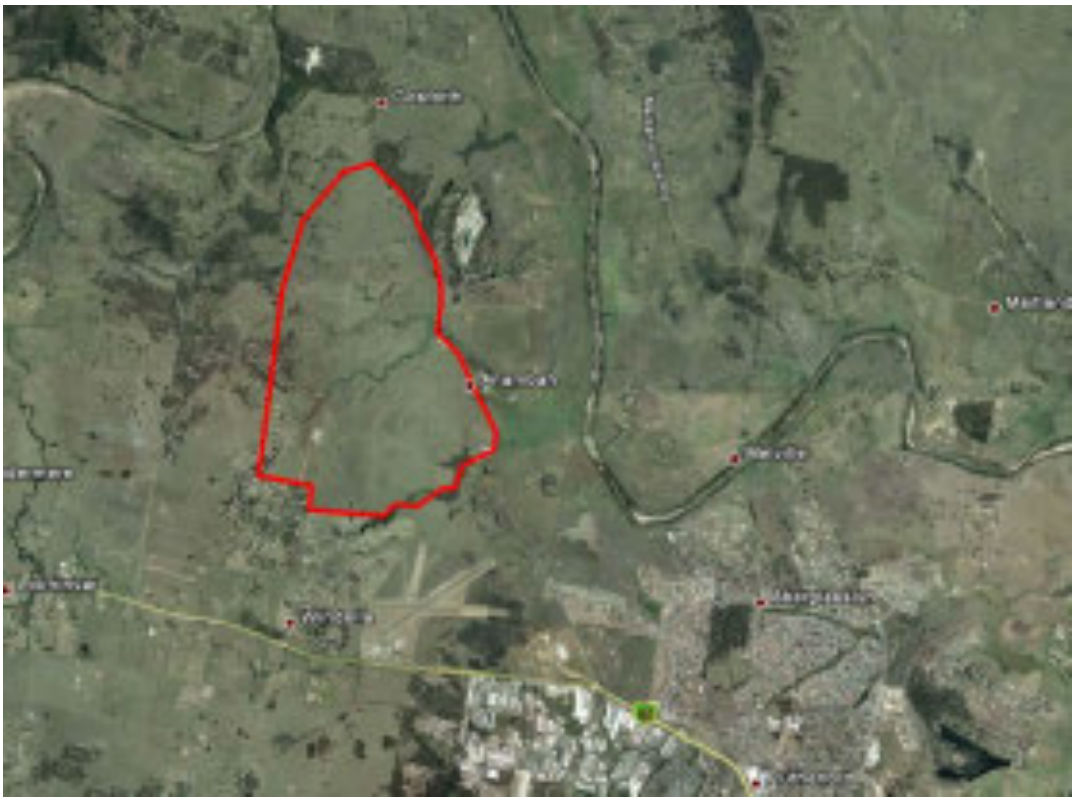
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Perry

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Uncle Tommy Miller
Wonnaruah Elders Council
PO Box 184
Singleton NSW 2330

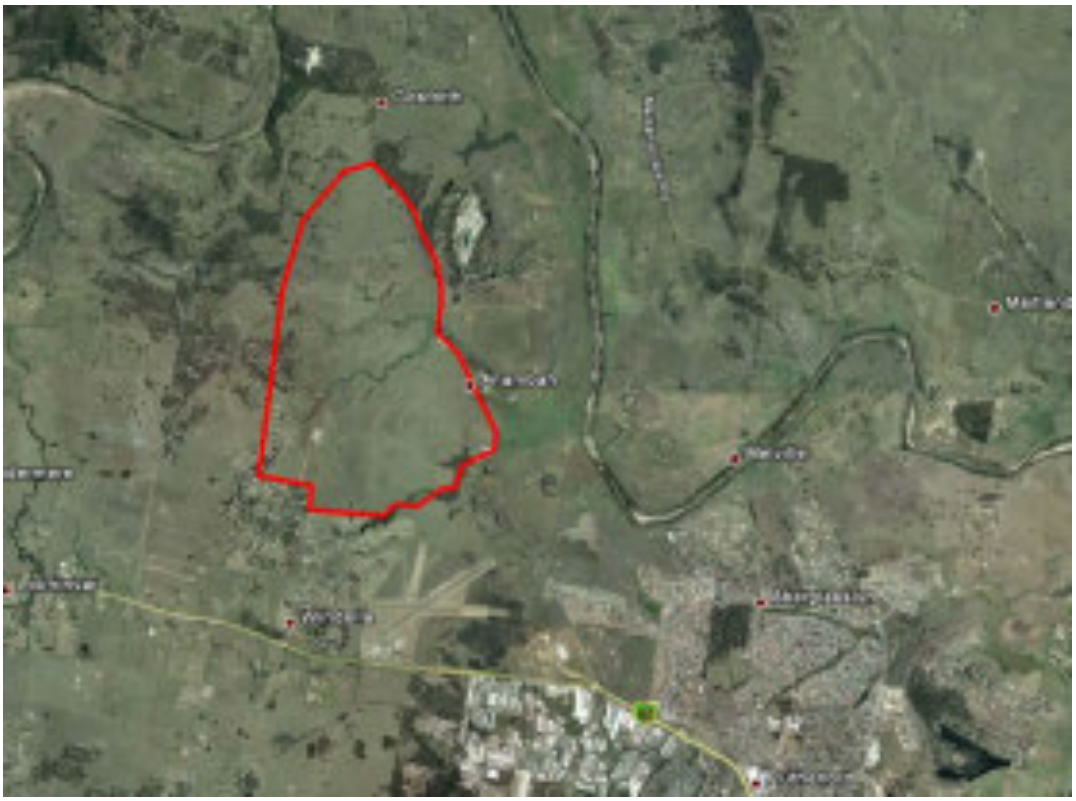
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Uncle Miller

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Scott Franks
Yarrawalk (A division of Tocomwall Pty Ltd)
Po Box 76
CARINGBAH NSW 1495

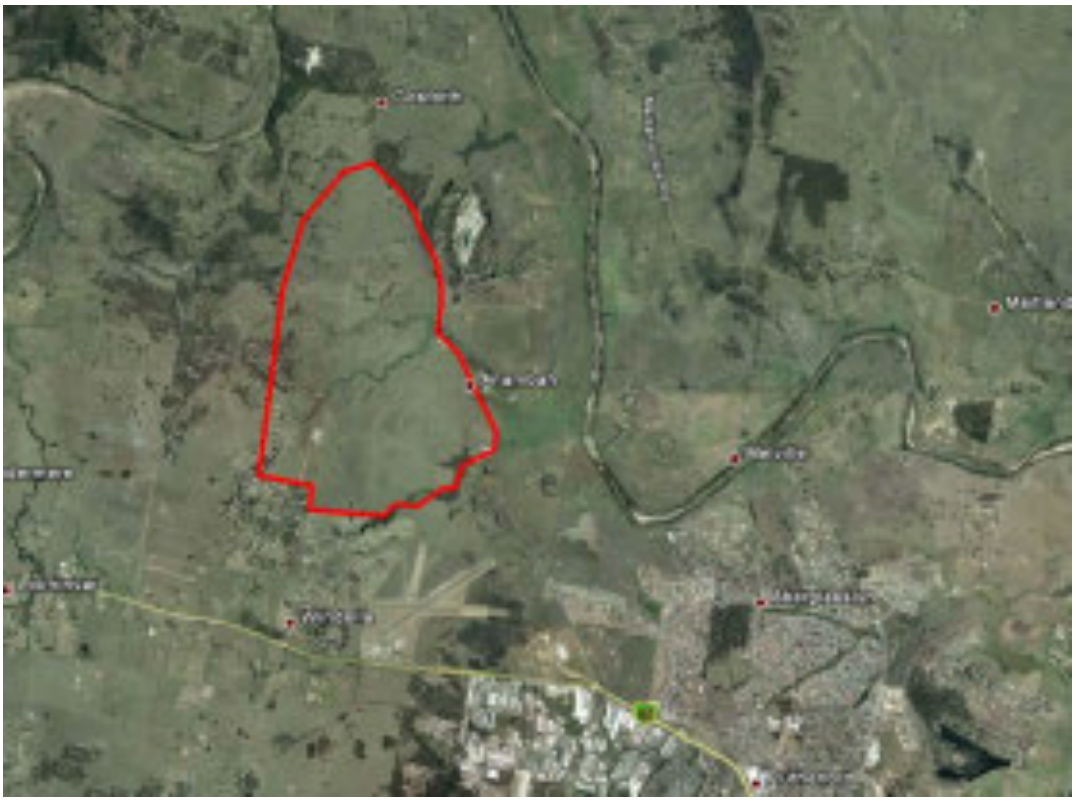
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Franks

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Kathleen Steward
Yinarr Cultural Services
111 Westwood Road
Gungal NSW 2333

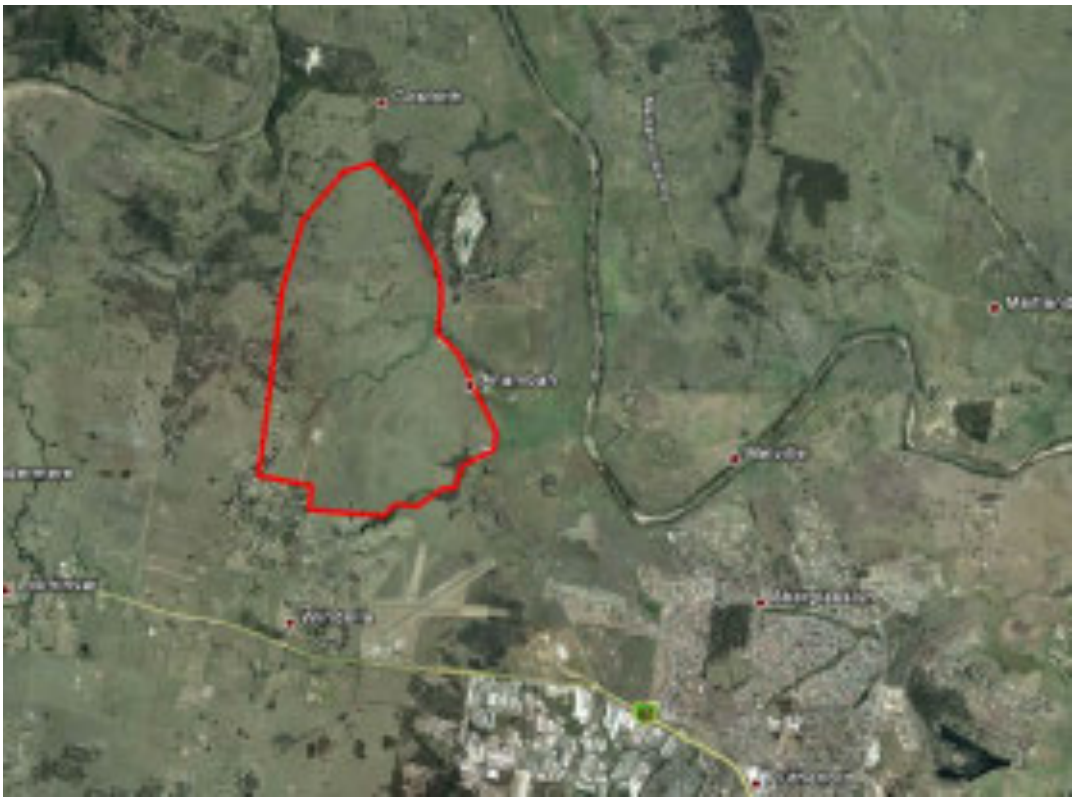
Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Steward

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.



Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

T & G Culture Consultants
19 O'Donnell Cresent
Metford NSW 2323

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

To Whom it may Concern:

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Alan Paget & Ms Sarah Hall
Ungooroo Aboriginal Corporation
PO Box 3095
Singleton NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Paget & Ms Hall

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Rhonda Ward
Ungooroo Cultural & Community Services
8 Blaxland Avenue
Singleton NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Ward

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

John, Melissa & Darrel Matthews
Upper Hunter Heritage Consultants
14 Edinglassie Drive
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear John, Melissa & Darrel

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Rhoda Perry & Ms Georgina Berry
Upper Hunter Wonnarua Council Inc
PO Box 184
Singleton NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Perry & Ms Berry

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Larry Van Vliet & Mr John Matthews
Valley Culture
140 Sydney Street
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Van Vliet & Mr Matthews

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr David Foot
Wanaruah Custodians
35 Acacia Circuit
Singleton NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Foot

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Noel Downs
Wanaruah Local Aboriginal Land Council
PO Box 127
Muswellbrook NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Downs

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Des Hickey
Wattaka Wonnarua C.C. Service
4 Kennedy Street
Singleton NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Hickey

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Amanda Hickey
Widescope Indigenous Group Pty Ltd
73 Russell St
Emu Plains NSW 2750

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Hickey

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Arthur Fletcher
Wonn1 Contracting
619 Main Road
Glendale NSW 2285

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Fletcher

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Gordon Griffith
Wonnarua Culture Heritage
19 O'Donnell Crescent
Metford NSW 2323

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Griffith

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Laurie Perry
Wonnarua Nation Aboriginal Corporation
PO Box 3066
Singleton NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Perry

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Uncle Tommy Miller
Wonnaruah Elders Council
PO Box 184
Singleton NSW 2330

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Uncle Miller

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Mr Scott Franks
Yarrawalk (A division of Tocomwall Pty Ltd)
Po Box 76
CARINGBAH NSW 1495

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Mr Franks

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

21 May 2012

Ms Kathleen Steward
Yinarr Cultural Services
111 Westwood Road
Gungal NSW 2333

Our Ref: 12-0226

Re: Aboriginal registration for Community Consultation—Anambah Investigation Area

Dear Ms Steward

On behalf of the Stockland Development Pty Ltd (the proponent), Godden Mackay Logan heritage consultants (GML) seek registration from local Aboriginal groups and people with respect to a proposed subdivision and residential development which may lead to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The subject land is located at Anambah as shown in the map below.

Community consultation with Aboriginal people is being undertaken to assist Stockland's assessment of the cultural significance of the site. Consultation will assist in the preparation of an application for an AHIP if necessary, and will assist

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

the Director General of OEH in his or her consideration and determination of the application.

In accordance with the DECCW's 'Aboriginal cultural heritage consultation requirements for proponents 2010' GML is required to 'compile a list of Aboriginal people who may have an interest for the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places'.

Your details have been provided by OEH as a known Aboriginal group. Therefore, in accordance with the guidelines, this is an invitation for 'Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal objects and/or places in the area of the proposed project to register an interest in a process of community consultation' with Stockland and GML regarding the project. Should you wish to register an interest in the project, please send written confirmation to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively registration can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Submissions should be marked '12-0226—Anambah' and confirm the name and contact details of the contact person or representative for your organisation or group. Registrations of interested will close on 6 June 2012.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

Cacatua Culture Consultants

Entity of Carcatchua Pty Ltd

ABN: 87 145 082 480 ACN: 145 082 480

May 28, 2012

Jenni Lennox
GML Heritage Consultants
78 George Street
REDFERN NSW 2016

Your Ref 12-0226

Email: jennil@gml.com.au

RE: **Aboriginal Registration for Community Consultation – Anambah Investigation Area.**

Ms Jenni Lennox,

Thank you for your letter dated 21 May 2012. We would like to express our interest in being involved in the Aboriginal Registration for Community Consultation – Anambah Investigation Area.

Cacatua Consulting is a small Aboriginal owned consulting business created for best practice cultural heritage conservation management and to assist proponents and Archaeologists to undertake cultural heritage archaeological assessment according with CHMA and AHIP processes and approved conditions.

We aim to provide both quality Aboriginal cultural heritage assessment works and reporting while ensuring compliance to work specific practices.

Our Organisation is fully insured and registered with OEH / EPRG. Our staff has untaken work on all types of sites. Please do not hesitate to contact us if you require more information.

Yours truly

Donna Sampson

Donna Sampson
Manager/Director

Email: cacatua@resetdsl.net.au

UNIT 1b, 11 Glenwood Drive THORNTON NSW 2322 Ph: 02 4028 6942 Fax: 02 4028 6943

65 Jaeger Avenue, GUNNEDAH NSW 2380 Mob: 0403 765 019 Fax: 02 6742 1491

22 Ibis Parade WOODBERRY NSW 2322 Ph: 02 4964 4685 Fax: 02 4964 4635

Culturally Aware
ABN: 75 379 659 080

Name: Godden Mackey Logan

Address: 78 George Street, Red fern 2016

Date: 5th June 2012

Re: McKeachie Run Extension

Dear Jenni

I would like to submit an interest in the Cultural Heritage Investigation-McKeachie Run Extension

EXECUTIVE SUMMARY

Culturally Aware (CA) was constituted in accordance with the provisions of the Native Title Act 1993 (NTA) and administers the relevant provisions as they apply to the functions listed under Aims and Objectives, which set out the services and standards that can be expect from the organization.

Culturally Aware has the responsibility of protecting and fostering the best interests of all Aboriginal people in the area, including the ongoing protection and conservation of the Aboriginal Culture and Heritage within the Wonnarua Region.

Additionally, Culturally Aware promotes the awareness and protection of the Aboriginal Culture & Heritage of the area to the wider community.

1. Have Representive Fieldworker that is competent in these Investigations.

2. Staff has the relevant experience and hold cultural knowledge of the area. Each of these members has been trained in Cultural Fieldwork.

3. All staff is members of the Aboriginal community and is experienced sites workers.

4. Culturally Aware daily rates are $550 per day, minimum of 4 hours. Our hourly rate is $75 per hour and $275 for half day.

7 Crawford Place, Millfield NSW 2325

Phone/Fax: 02 4998 0053 Mob: 0458 983 941
Email: anigunya@hotmail.com

5. All staff is health and is able to undertake survey field work.

6. Name of individual, who will be attending for Investigation, will be confirmed before field work commences.

Tracey Skene –Mob 0428010077

Director

Culturally Aware

7 Crawford Place, Millfield NSW 2325

Phone/Fax: 02 4998 0053 Mob: 0458 983 941
Email: anigunya@hotmail.com

Cowie, Diana

From: Patterson, Lyndon
Sent: Wednesday, 6 June 2012 12:53 PM
To: Lennox, Jenni
Cc: Cowie, Diana
Subject: Derek Vale, DFTP Enterprises has done a phone registration just now on both McKeachies and Anabar

Hi Jenni,
Derek Vale, DFTP Enterprises has done a phone registration for both McKeachies and Anabar. His new address is 5 Mountbatten Close, Rutherford NSW. I advised him to let OEH know of his new address.
Thanks
Lyndon

Lyndon Patterson | Senior Consultant
Godden Mackay Logan | Heritage Consultants
78 George Street, Redfern NSW 2016
Tel: 02 9319 4811 Fax: 02 9319 4383
www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

DRM Cultural Management

Contact:
81 Wansbeck Valley Rd
Cardiff 2285
0412 369661
Email: drm.cm@hotmail.com

ABN: 60 583 065 953

Dear Jenni,

We would like to register an interest in the Aboriginal Community Consultation – Anambah Investigation Area, as we have an ancestry connection to the Wonnarua country. We have the relevant insurances in place. If you require any further information please do not hesitate to contact me on 0412 369661.

Yours in Culture
Helen Faulkner
Manager

Cowie, Diana

From: Helen Faulkner <drm.cm@hotmail.com>
Sent: Wednesday, 6 June 2012 10:21 AM
To: Lennox, Jenni
Subject: 12-0226 - Anambah
Attachments: DRM Cultural Management Expression of interest.docx

Dear Jenni,

Hi my name is Helen Faulkner and my company name is DRM Cultural Management, we would like to be involved in the Aboriginal Community Consultation - Anambah Investigation Area. Please see attachment.

Yours In Culture
Helen

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Darkuma Neighbourhood Centre Trading as...

Gidawaa Walang

Wiradjuri Meaning = Gooroo Teaching the Home

Cultural Heritage Consultancy

...To keep our Culture...

ABN. 58 290 859 800
76 Lang Street
Kurri Kurri NSW 2327
Phone: (02) 4937 1094
Fax: (02) 4938 4449
Mobile: 0411 195 991

Fax Cover

To: JENNI LENNOX

From: GML HERITAGE CONSULTANTS

Date: 28 · 5 · 2012.

No. of Pages: 2 (including header)

HELLO JENNI,

EXPRESSION OF INTEREST FOR

12-0226 - ANAMBAH.

THANK YOU

- Berkuma Neighbourhood Centre Trading as...

Gidawaa Walang

Weaving Meaning – Quarrying Funding the Future

Cultural Heritage Consultancy

...To keep our Culture...

ABN: 58 290 659 800
76 Long Street
Kurri Kurri NSW 2327
Phone: (02) 4937 1364
Fax: (02) 4936 4446
Mobile: 0411 198 891

28th May 2012

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016
12-0226-Anamhah

Re: Aboriginal registration for Community Consultation – Anamhah Investigation Area.

Gidawaa Walang Cultural Heritage Consultancy would like to register our expression of interest in the above project. Our interest comes from various members of our community including Elders.

Our organisation is made up of members, staff, management and community from various tribal boundaries.

I would like to thank you for the opportunity to register our interest in the project and look forward to meeting you in the future.

Yours sincerely

Ann Hickey
Project Officer

Lower Hunter Aboriginal Incorporated

74 Hayden Brook Road
Booragul NSW 2284
Email: Lowerhunterai@gmail.com
ABN: 8192 4628 138

26/10/2021

Tim Owen
Sydney Office
78 George Street
Redfern NSW 2016
Australia

Dear Tim,

Re: Anambah & McKeachie's Run Registration.

On behalf of Lower Hunter Aboriginal Incorporated I would like to register for all future projects with in the Mindaribba and Wonnarua Boundary.
We would also like to be involved with the current cultural and heritage working group at McKeachie's Run and Anambah Estate.

Executive Summary

The LHAI has Site Officers and members of the community that are traditional owners of the land. We have also been involved in public projects in the past and have vast knowledge of Aboriginal Culture and Heritage in and around the Hunter Valley that have been passed down from generation to generation.
Our Sites Officers have more than 30 years of experience and are properly certified with all the necessary qualifications.

The Lower Hunter Aboriginal Incorporated (LHAI) has a responsibility to its members for ongoing protection and conservation of the Aboriginal Culture and Heritage in the hunter region and recommends that all proposed projects and cultural heritage works within Wonnarua and Mindaribba boundary to be assessed by a Lower Hunter Aboriginal Incorporated Cultural and Heritage Officer.

Thank You David Ahoy
Sites Manager
LHAI
Mobile 0411095249

Kawul Cultural Services

4/6/2012

Jenni Lennox

GML Heritage Consultants

78 George Street.

Redfern. NSW. 2016

12-0226 – Anambah

Please include.

Kawul Cultural Services ***wishes to Register an Interest in the above and all Cultural & Heritage Works.***

We are Registered with DEEC/ OEH, as Traditional Owners and are Registered Native Title Claimants of the Wonnura people.

We have Public Liability insurance and Workers Compensation cover for our experience site Officers..

Please include our Business on your list of interested and Registered Stakeholders.

Regards

Rod Hickey

Vicky Slater-Manager

Kawul Cultural Services

P.O.BOX 817,

Singleton NSW 2330,

Phone: 0431 720 887

Email: Kawul-Culturalservices@hotmail.com .

ABN: 20 546166580

Lower Hunter Wonnarua Council Incorporated
51 Bowden Street Heddon Greta, NSW 2321
Ph: 0402636521 Fax: 0249372694
ABN: 14 937 663 303

RE: ABORIGINAL registration for Community Consultation- Anambah Investigation Area. N.S.W. '12-0226'

To Jenni Lennox,

Lower Hunter Wonnarua Council would like to register our interests for the Anambah Project. WE HOLD Cultural Knowledge of the area and would want to be included in all Aspects of the ABORIGINAL Assessment in this area.

As the Traditional Owners and Registered Native Title claimants for this area we are traditionally the only people in this area that has any rights to speak for this country. We have been conducting Archaeological work in our country for the past 25 years , we have been involved in investigations from Blackhill to Murrurundi and out as far as Sandy Hollow. Our employee's are Aboriginal and are experienced all aspects of archaeological field work.

The above mentioned area is a sensitive area to the Wonnarua people due to its spiritual and physical significance.

That Representatives from LOWER WONNARUA COUNCIL inc must be present through all PHASES of ABORIGINAL ARCHAEOLOGICAL WORK and works that impact on OUR HERITAGE.

If further information or clarification is needed I can be contacted on the numbers above, or Dean Miller on 02 49 33 6936 or 0417650643.

Yours truly,

Thomas Miller
Lower Hunter Wonnarua Council Inc.

Cowie, Diana

From: maree waugh <mareewaugh30@hotmail.com>
Sent: Sunday, 3 June 2012 8:25 PM
To: Lennox, Jenni
Subject: EXPRESSION OF INTEREST
Attachments: scan0002.pdf; scan0003.pdf

Dear …Lyndon……and Jenni……

I would like to submit my expression of interest in for the …12-0226 Anambah ……and 12-0196 Mckeachies Run……..

SUMMARY

Maree /TA Wallangan Cultural Services are a new established Cultural Company that assures protection and works in the best interest of the Aboriginal Communities and holds cultural knowledge and has worked on Aboriginal Culture and Heritage investigation within the Wonnarua Region for several years.

1. Maree / TA Wallangan Cultural Services' Field workers, and myself is highly experienced in Aboriginal Cultural Investigations.

2. Staff has the relevant experience and hold cultural knowledge of the area. Each of these members has been trained in Cultural Fieldwork.

3. Maree /TA Wallangan Cultural Services daily rates are $550 per day, minimum of 4 hours. Our hourly rate is $75 per hour and $275 for half day.

4. Have valid Public Liability Insurance and Workers Compensation.

Yours Sincerely

Mrs Maree Waugh

29 Anzac Ave Cessnock 2325

Ph 0487805487

ABN 89512505007

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Cowie, Diana

From: CEO <ceo@mindaribbalalc.org>
Sent: Tuesday, 5 June 2012 1:36 PM
To: Lennox, Jenni
Subject: Aboriginal Registration for community consultation - Anambah Investigation area.

Hi Jenni,
Please note I am registering Mindaribba LALCs interest in for the Aboriginal Registration for community consultation - Anambah Investigation area.
Many thanks

Ken Riddiford
CEO
Mindaribba LALC
Phone: 02 4015 7000
Mobile: 0439 770 789
Fax: 02 4934 8544
Email: CEO@mindaribbalalc.org
Website: www.mindaribbalalc.org

Security Statement

This email may be confidential and contain privileged information. If you are not the intended recipient you must not use, disclose, copy or distribute this email, including any attachments. Confidentiality and legal privilege attached to this communication are not waived or lost by reason of mistaken delivery to you. If you have received the email in error please delete and notify the sender. Any views expressed in this email are those of the author and do not necessarily represent those of the organisation, except where the sender expressly, and with authority, states them to be the views of the Mindaribba Local Aboriginal Land Council. The organisation does not represent, warrant or guarantee that the integrity of this email has been maintained, or that the communication is free of error, virus, interception, inference or interference.

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cowie, Diana

From: Warren Schillings <schillo@yarnteen.com.au>
Sent: Tuesday, 29 May 2012 12:13 PM
To: Lennox, Jenni
Subject: FW: Aboriginal registration/community consultation- Anambah investigation area
Attachments: SKMBT_C22012020816150.pdf; SKMBT_C22011121215530.pdf; SKMBT_C22011121215531.pdf; SKMBT_C22011121215540.pdf; SKMBT_C22011121215541.pdf; SKMBT_C22011121215550.pdf

Hi, Jenni

My name is Warren Schillings I would like to express an interest in registering as an Aboriginal party for the ` 12-0226-Anambah' Project.
My company name is Myland Cultural & Heritage Group and the ABN Number is 15 836 072 108, I also have the relevant
Insurances in place. My interest in the project is having Traditional Custodial interest and as such would like to be part of the process.
Please advise my Registration and possible involvement in the proposed salvage and Cultural Heritage Management Program.

Yours in Culture

Warren F Schillings
MYLAND CULTURAL & HERITAGE GROUP
30 Taurus Street
ELERMORE VALE NSW 2287
Mobile : 0431 392 554 Email : schillo@yarnteen.com.au

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cowie, Diana

From: Abie Wright <abie@yarnteen.com.au>
Sent: Friday, 1 June 2012 11:39 AM
To: Lennox, Jenni
Subject: My EOI for "12-0226-Anambah"

Hi Jenni!

I would like to express my interests as an Aboriginal Party for the "12-0226-Anambah'(ACHA). I have traditional family connections to the area & would greatly appreciate it it you would include me & my company, "Ngarramang-Kuri Aboriginal Culture & Heritage Group", My current contact details are - 21 Bancroft St, Glendale. NSW. 2285. My email address is - abie@yarnteen.com.au. My mobile number is - 0466589238. I would greatly appreciate it if you didn't forward my details onto the Wanaruah Local Aboriginal Land Council.

Yours in Culture,
Abie Wright(N.K.A.C&H.G)

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

T&G
Culture Consultants

JENNI LENNOX
GOAL HERITAGE CONSULTANTS
78 GEORGE STREET
REDFERN N.S.W 2016

T&G CULTURE CONSULTANTS
PH. 0428147417
FAX - 0267426266

RE - 12-0226 - ANAMBAH

THIS LETTER IS IN REGARDS TO LODGING A EXPRESSION OF INTEREST IN THE 12-0226-ANAMBAH PROTECT ABORIGINAL CULTURE & HERITAGE ASSESSMENT PROCESS.

P.S. SEE ATTACHED ANCESTRAL CONNECTION TO WANARUAH COUNTRY

YOUR IN UNITY

TONY GRIFFITHS

Born:
Occup: Labourer, Blacksmith, Boundary Rider
a.k.a. Oliver GRIFFITHS
a.k.a. Oliver Henry GRIFFIN
a.k.a. Oliver GRIFFIN

Robert GRIFFITHS
Born: 1858 (app) in Wybong, NSW, NSW[illegible]
Born: bte 1857 and 1858 in Wybong, NSW, NSW[illegible]
Occup: [illegible]
Died: 8 A. 1929 in Cudgewa, NSW
Age: [illegible]

Robert GRIFFITHS
Born: bte 1878 and 1879 in Blandford, NSW, NSW[illegible]
Occup: labourer

Edward SEALS
Born: bte 1809 and 1813 in England, Devonshire
Born: 1813 in England, Somersetshire
Occup: Mason, farmer, grazier, bricklayer, stockman and labourer
Died: 1 Sep 1880 in Wybong Creek, NSW, NSW[illegible]
a.k.a. Edward SEAL

Susan BISHOP-YOUNG
Born: 1832 in Singleton, NSW, NSW[illegible]
Born: bte 1835 and 1837 in Warlekis, NSW, NSW[illegible]
Born: bte 1836 and 1837 in Neatsfield, Singleton, NSW, NSW[illegible]
Born: 1838 in Neatsfield, Singleton, NSW, NSW[illegible]
Mort: 26 Dec 1857 in Warlekis, NSW, NSW[illegible]
a.k.a. Susan DANGAR
a.k.a. Susan DWYER
a.k.a. Susan BISHOP

[illegible]
Born: 1901 (app)
Died: 1 Feb 1877 in Scone, NSW, NSW[illegible]
Occup: [illegible] SEALS

Sydney Harold GRIFFITHS
Born: 1901 in Cudgewa, NSW, NSW[illegible]
Occup: Casual Labourer
Died: 1 May 1957 in Dungowan, NSW, NSW[illegible]
Age: 50
a.k.a. Sydney GRIFFITHS

ELIZABETH GLENISTER

GEORGE GRIFFITHS

TONY GRIFFITHS

LOCAL ABORIGINAL LAND COUNCIL
WANARUAH

PO BOX 192
19 MAITLAND STREET
MUSWELLBROOK 2333
ABN 32 201 780 184

PH: (02) 6543 1288
(02) 6543 1968
FAX: (02) 6543 5377
EMAIL: wanarua@bigpond.net.au

31 May 2012

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern, NSW, 2016

Re: Aboriginal registration for Community Consultation – Abanyboh Investigation Area

Dear Jenni,

Thank you for your letter dated 21st May 2012 asking the Wanaruah LALC if we are aware of any Aboriginal stakeholder groups or individuals who may hold cultural knowledge of the area and would be interested in being consulted with regards to the above study. Please find attached the current stakeholder listing for those within the Wanaruah LALC boundary.

Please may be advised that the Wanaruah LALC cannot be consulted in this project as this is out of our area. Please do not hesitate to contact me should you wish to discuss the project and any other assistance we can provide, on (02) 6543 1288.

Kind regards,

Noel Downs
Chief Executive Officer
Wanaruah Local Aboriginal Land Council

GROUP NAME	CONTACT NAME	ADDRESS	PH	FAX	MOBILE	E-MAIL
Aboriginal Native Title Consultants	John & Margaret Matthews	16a Mahogany Cresent MUSWELLBROOK NSW 2333	6541 1204	6541 1204	4[illegible]	
Buller Buller Heritage Consultants	Lloyd Matthews	16c Mahogany Cresent MUSWELLBROOK NSW 2333	6542 0658			
Cacatua Culture Consultants	George Sampson Donna Sampson	22 Isla Parade WOODBERRY NSW 2333	4954 4665	[illegible]	0434 577 016 0403 735 013	[illegible]
Carrawanga	Justin Matthews	160 Mahogany Avenue MUSWELLBROOK NSW 2333				
Culturally Aware	Tracey Skene	7 Crawford Place [illegible] NSW 2325			0437 [illegible] 0447 236 [illegible]	[illegible]
Gidawaa Walang Cultural Heritage Consultancy	Annie Hickey	76 Long Street [illegible] NSW 2327	4937 [illegible]	[illegible]	0402 322 374	[illegible]
Gowor Consultants	Rodney Matthews Michelle Stair	8 Fitzgerald Avenue MUSWELLBROOK NSW 2333	6541 0506	6541 0741	0432 475 069 0432 214 402	[illegible]
Hunter Valley Aboriginal Corporation	Rhonda Griffith	PO Box 379 MUSWELLBROOK NSW 2333	6541 1180	6543 1105		[illegible]
Hunter Valley Cultural Consultants	Christine Archibald	40 Humphries Street MUSWELLBROOK NSW 2333	6541 2265		0438 350 532	
Hunter Valley Cultural & Natural Resources	David French	Flat 3, 60 Tinplate Street MUSWELLBROOK NSW 2333	6541 2601		[illegible]	[illegible]

Hunter Valley Cultural Surveying	Lance & Penny Hickey	165 Swan Street, SCONE NSW 2337			0402 445 223	
Lower Hunter Wonnarua Council	Lee-Ann Hall (Miffy)	142 Westhorne Street KURRI KURRI NSW 2327	4937 2604		0409 516 531	lea5972@hotmail.com
Lower Wonnarua Tribal Corporation Pty Ltd	Barry Anderson	156 The Inlet Road BULGA NSW 2330	6574 5309	6574 5309	0417 403 153	barry1969@bigpond.com
Minaga Consultants	Clifford Matthews	16 Goobar Close MUSWELLBROOK NSW 2333			0421 963 962 0411 057 511	
Muswellbrook Cultural Consultants	Brian or David Pearson	70 Scott Street MUSWELLBROOK NSW 2333			0488 014 441	
Ngi Gai Aboriginal Corporation	Hank Mahoney (Secretary)	30 Cessnock Street, SINGLETON NSW 2330	6572 4224	6572 6934		
Ungooroo Aboriginal Corporation	Tasha Lower	PO Box 3094 SINGLETON NSW 2330	6571 5111	6571 5777	0422 755 661	[illegible]
Ungooroo Cultural & Community Services Inc	Brenda Ward	8 Blaxland Avenue SINGLETON NSW 2330	6571 1650	6571 1660	0421 049 909	
Upper Hunter Heritage Consultants	Darryl Matthews	14 Eckingsale Drive MUSWELLBROOK NSW 2333		6541 5533	0422 910 805 0439 559 041	
Upper Hunter Wonnarua Council Inc	Victor Perry	PO Box 261 SINGLETON NSW 2330	6571 4888	6571 4888	0417 593 024	[illegible]@optusnet.com.au
Valley Culture	Terry van Vliet	140 Sydney Street MUSWELLBROOK NSW 2333	6542 5445	6542 5852	0414 872 230	
Wanaruah Consultants	Barbara Fearland Reginald Delaney	35 Acacia Grove SINGLETON NSW 2330	6571 1935		0427 653 521	
Wanaua Wanarua Cultural Consultants	Dave Gibney	2 Kennedy Street SINGLETON NSW 2330	6571 5211	6571 5109	0428 977 978	dashickers@bigpond.com
Wonnarua Culture Heritage	Joseph and Gordon Griffiths	19 Ollinnight Crescent MEREDOO NSW 2575	4933 2067	4933 2067	0401 078 807	[illegible]

Wonnarua Elders Council	Rhoda Perry Tom Miller	PO Box 184 SINGLETON NSW 2330	6571 4888	6571 4888		[illegible]
Wonnarua Nation Aboriginal Corporation	Laurie Perry and Sandra Miller	PO Box 5006 SINGLETON DELIVERY CENTRE 2330	6571 5419	6571 5419	0412 [illegible] (Laurie)	[illegible]
Woon1 Contracting	Arthur Fletcher	619 Main Road GLENDALE NSW 2285	4915 5833	4954 7751	0402 146 195	[illegible]
Yarrawalk	Scott Franks Barry McDiggart	PO Box 75 [illegible] 1495 915 WOLLOMBI ROAD BRIDGE 2330	6579 1185	6579 1485	0404 171 544 0429 220 207	[illegible] [illegible]
Yinam Cultural Services	Kathleen Stewart-Kinchela	7 Cypress Place MUSWELLBROOK NSW 2333		6547 6145	[illegible]	[illegible]
Janbani Mugrebea	Les Atkinson	11 Nelson Street Lesstock nsw 2125			0402 355 217	[illegible]
Allera French Trading	Allera French	12 Hayden Street Muswellbrook nsw 2333	65 417 765	same as house phone	0421 297 963	[illegible]
Wasbi Gaurya Cultural Consultancy	Elizabeth Howard	19 Foley Street Muswellbrook NSW 2333			0409 898 570	[illegible]
GALAMAY CONSULTANT	Karen Matthews	10 Scott Street MUSWELLBROOK NSW 2333			0421 853 260	
Deslee Talbott Consultant	Deslee Talbott	2/19 South street Gunnedah NSW 2380			0431 205336	
Kuki Saunders Trading Services	Krystal Saunders	6 Grafield Place Muswellbrook NSW 2333			0411 394 455	[illegible]

Warragil Cultural Services

28/05/2012

Anambah Investigation Area

Attn: Jenni Lennox
GML Heritage Consultants
78 George Street, Redfern. NSW, 2016

Dear Jenni
I Aaron Slater Manager of Warragil Cultural Services
Would like to be consulted and involved in the Anambah Investigation
We are registered with OEH and have insurance we also have
Experience with the cultural & Heritage work.

If you require any further information
Please contact me by phone or email my contact details are below.

Yours sincerely
Aaron Slater - Manager

Contact Details: Aaron Slater, Warragil Cultural Services, P.O.BOX 1095, Singleton NSW 2330, Phone: 0478 844 530,ABN: 30 283 019 937

EMAIL:warragil_c.s@hotmail.com

Cowie, Diana

From: WIDESCOPE . <widescope.group@live.com>
Sent: Friday, 1 June 2012 9:16 AM
To: Lennox, Jenni
Subject: Widescope EOI

Widescope Indigenous Group
Contact : Steven Hickey
Address H/O: 73 Russell St, Emu Plains NSW 2750
E-mail :**Widescope.group@live.com**
Mobile : 0425230693

Jenni Lennox,
Thank you for your consideration, Widescope would like to register their interest in the cultural heritage Consultation, assessment and any up coming survey fieldwork at Anambah Investigation Area
Please feel free to contact me on the details supplied above, I look forward to hearing from you.

Thank you
Steven Hickey

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cowie, Diana

From: Laurie Perry <l.perry@optusnet.com.au>
Sent: Sunday, 3 June 2012 2:53 PM
To: Lennox, Jenni; Patterson, Lyndon; maree waugh; Rebecca lester; Sandra Jones; Tracey Skene
Subject: McKeachies Run Extension and Anambah investigation area
Attachments: IMG_0009.pdf; IMG_0010.pdf

Hi Lyndon and Jenni

The WNAC would like to be consulted for 12-0226 Anambah and 12-0196 McKeachies Run.

The WNAC have a number of Native Title agreements with mining companies in the greater hunter region and have traditional knowledge of both areas of this development, name and contact details below, I have also included the WNAC culture and heritage team in this email.

Cheers

Laurie Perry
CEO
Wonnarua Nation Aboriginal Corporation
Ground Floor 254 John St Singleton NSW
PO BOX 3066
Singleton Delivery Centre 2330
Ph: 02 6571 8595
Fax: 02 6571 8551
Mob : 0412 593 020
Email: wonnarua@bigpond.com.au
Home : l.perry@optusnet.com.au
Website: www.wonnarua.org.au

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Wonn1
Entity of Kauwul Pty Ltd

619 Main Road Glendale, 2285

PHONE: 0249547751 Mobile: 0402146193

ABN: 27 153 953 363

10 December 2012

Your Reference : 12-0226 – Anambah

Ms J Lennox
GML Heritage Consultants
78 George Street
REDFERN NSW 2016
Email: jennil@gml.com.au

Dear Jenni

RE: EXPRESSIONS OF INTEREST FOR PARTICIPATION AND CONSULTATION IN FUTURE ABORIGINAL CULTURAL HERITAGE STUDIES AT ANAMBAH INVESTIGATION AREA

Thank you for this opportunity to submit our expressions of interest in the next phase of work and to be involved in the proposed field work at the Anambah Investigation Area. We have read the relevant methodologies and the rezoning report which were forwarded to us by Tim and Natalie Vinton.

Below are this organisation's details:

Registered Aboriginal Party: Kauwul trading as Wonn1

Brief Description of Skills and Experience:
Arthur Fletcher has had many years' experience in cultural heritage/archaeological survey and excavation work within the Hunter Valley on projects including mining, infrastructure and development sites. He has worked with EnergyAustralia, Hunter Water, RTA/RMS including Hunter Expressway, ARTC and on many mine sites including Centennial, Xstrata Ravensworth, Rio Tinto, etc. Arthur has had sites training through NSW NPWS and continues to expand cultural heritage knowledge independently through his association with skilled knowledge-holder Elders within the Hunter Valley and further afield. He has undertaken many inductions for RTA, ARTC and carries SGS Induction cards for Xstrata and Rio Tinto Coal & Allied sites (Induction cards are available upon request).
(White Card: Arthur Fletcher Work Cover CG100787865SEQ1 11/03/2006)

Statement of Physical Fitness to Undertake the Necessary Sites Work:
Arthur is physically fit and will be able to complete the specific project tasks required within acceptable survey terrain limits and climate.

Statement of Cultural Knowledge and/or Connection with Country:
Arthur is a Wonnarua/Gringai elder with knowledge of cultural lore and a concentrated interest, knowledge and understanding of cultural heritage, sites and spiritual beliefs of his traditional Country.

Organisations Commercial Rates and Terms of Engagement:
Total rates per day (including travel and GST) = $660.00/day
Terms of payment is 14 day following your receipt of our invoice.

Certificates of Currency:
Both the Certificates of Currency for Workers Compensation and Public Liability Insurance are attached to this letter as requested.

Thank you once again for this opportunity to lodge an expression of interest for this project. We look forward to working with you in the new year.

Kind regards

Suzie Worth
For Arthur C Fletcher
Wonn1 (Kauwal Pty Ltd)

Markey Insurance Brokers ABN 83 002 301 288
Cooks Hill Commercial Centre 235 Darby Street
(PO Box 989) Newcastle NSW 2300
Ph (02) 49258655 Fax (02) 49295158
Email: [illegible]
- Member of the National Insurance Brokers Association of Australia
- Registered General Insurance Brokers
- Australian Financial Services Licensee Lic No 240567

Issued: 31 October 2012

CERTIFICATE OF INSURANCE

In our capacity as insurance brokers, we confirm having arranged insurance as follows:

INSURED:	Kauwul Pty Ltd T/as Wonn1	
INSURANCE CLASS:	LIABILITY	
SITUATION:	AUSTRALIA WIDE	
INTEREST:	Legal Liability for Personal Injury or Property Damage within the Territorial Limits that happens in connection with the Insured's Business - Cultural Site Officer	
LIMIT OF INDEMNITY:	**PUBLIC LIABILITY** **PRODUCTS LIABILITY**	**$20,000,000** **$20,000,000**
PERIOD OF COVER:	**31/10/2012 – 31/10/2013**	
INSURER:	QBE Insurance (Australia) Pty Ltd	
POLICY NUMBER:	120A691476BPK	

This certificate is subject always to the terms, conditions and limitations of the policy and is issued as a matter of record only. It does not alter or extend the coverage provided by the policy or assume its continuity beyond the date stated or confer rights under the policy to any party other than the parties noted as the Insured.

In arranging this certificate, we do not guarantee that the insurance outlined will continue to remain in force for the period referred to as the policy may be cancelled or altered by either party to the contract at any time in accordance with the terms and conditions of the policy or in accordance with the terms of the "Insurance Contracts Act". We accept no responsibility or liability to advise any party who may be relying on this certificate of such alteration to or cancellation of the policy of insurance.

Signed by and on behalf of
Markey Group Pty Ltd

Sarah Nixon
Internal Broker

QBE

CERTIFICATE OF CURRENCY
Personal Injury and Illness

This certificate acknowledges that the policy referred to is in force for the period shown.

Details of the cover are listed below.

Policy Number:	**120A107387PAN**
Period of Insurance:	From **31/10/2012** to **31/10/2013** at 4.00pm
Insured Name:	**ARTHUR FLETCHER**

Insured Person:	ARTHUR FLETCHER	**Risk 1 of 1**
Occupation:	SURVEYORS (EXCLUDING MINING)	
Capital Benefits:	$60,000	
Capital Benefits - Payable Conditions:	Conditions 1-30	
Weekly Benefits - Injury:	$600	
Injury Benefit Period:	104 week(s)	
Weekly Benefits - Illness:	$600	
Illness Benefit Period:	104 week(s)	
Excluded Period of Claim:	1 week(s)	

This policy is current until 4:00pm on the expiry date shown unless it is cancelled in the meantime

Issued by:	QBE Australia
Date Issued:	31 October 2012

CERTIFICATE OF CURRENCY

KAUWUL PTY LIMITED
619 Main Road
GLENDALE NSW 2285

Dear Sir/Madam,

1. STATEMENT OF COVERAGE

The following policy of insurance covers the full amount of the employer's liability under the Workers Compensation Act 1987.

This Certificate is valid from 31/10/2012 to 31/10/2013.

The information provided in this Certificate of Currency is correct at: 31/10/2012

2. EMPLOYERS INFORMATION

POLICY NUMBER	WGB111112510122
LEGAL NAME	KAUWUL PTY LIMITED
TRADING NAME	WONN1 SITE ABBO
ABN	27153953363
TRUST NAME	
TRUST ABN	

WorkCover Industry Classification Number (WIC)	Industry	Numbers of Workers*	Wages**
782920	Technical Services nec	5	$53,661.00

* Number of workers includes contractors/deemed workers
**Total wages estimated for the current period

3. IMPORTANT INFORMATION

Principals relying on this certificate should ensure it is accompanied by a statement under section 175B of the Workers Compensation Act 1987. Principals should also check and satisfy themselves that the information is correct and ensure that the proper workers compensation insurance is in place, ie. compare the number of employees on site to the average number of employees estimated; ensure that the wages are reasonable to cover the labour component of the work being performed; and confirm that the description of the industry/industries noted is appropriate.

A principal contractor may become liable for an outstanding premium of the sub contractor if the principal has failed to obtain a statement or has accepted a statement where there was reason to believe it was false.

Yours Faithfully

MIRYANA VASIC

NSW WorkCover Scheme

CGU Workers Compensation (NSW) Ltd – Agent for the NSW WorkCover Scheme
ABN 83 564 379 108/007
Phone: 1300 666 506 Fax: 02 9088 9709

Wonnarua
Culture Heritage
[illegible]

FAX 02 93194383

TO JENNI LENNOX

Wonnarua Culture Heritage Hold Culture Values within the use proposed for [illegible] development and would like to be involved in the project also we would get like any information be given out to local land council or any other groups respect our privacy

SUBMISSIONS
12-6326-ANAMBAH.

Kind Regards
S Griffith
SHANNON GRIFFITHS

[illegible]

Yinarr Cultural Services
Discover Preserve Protect

28th May 2012

Jenni Lennox
GML Heritage Consultants
78 George Street
REDFERN NSW 2016

Dear Jenni,

RE: ABORIGINAL REGISTRATION FOR COMMUNITY CONSULTATION – '12-0226 – ANAMBAH' INVESTIGATION AREA

Yinarr Cultural Services would like to express its interest for the above project as well being consulted and placed on the Aboriginal Stakeholder Register with GML Heritage Consultants and for future works that may arise.

I have pleasure in forwarding an application to be listed as a register stakeholder as a traditional owner and Native Title Descendant. I do so because I am an aboriginal person who continues to maintain a deep respect for their ancestral belief system and traditional lore and custom who recoginises my responsibilities and obligations to protect and conserve our culture and heritage and I care for my traditional lands or country. I have the trust of my community, knowledge and understanding of my culture.

Ms Kathie Kinchela and Norm Archibald are very acknowledgeable people who have been involved with numerous fieldwork jobs carried out by Yinarr Cultural Services and numerous other Aboriginal cultural groups that they have worked for. Some of the fieldwork that Kathie and Norm has been involved with include Anvil Hill Project, Bulga Project, Ashton Coal, Xstrata Mangoola, Liddell Coal Operations, Bayswater, Mt Arthur, Mt Penny and Ravensworth Operations Muswellbrook Coal just to mention a few. Kathie and Norm has also worked along side with Umwelt, Hansen Bailey, GSS Environmental, Wells Environmental Services, ENSR/ECOM, Insite Heritage, and Coal and Allied just to name a few.

As a registered and confirmed Aboriginal Stakeholder and ancestor of Wonnarua and Gamilaroi. Kathie and Norm have been living in the community all their lives and are acknowledged by the Aboriginal community; Kathie and Norm also have experience working on various sites. Kathie and Norm are our skilled field officer's who have current induction cards and are very fit and have been doing site work such as excavation work, grader scrapes, test pits, site surveys at various work sites for over 18 years and are very experienced, Kathie is currently studying Indigenous Archaeology through UNE.

Yinarr Cultural Services aim is to preserve and protect items that are of significance to the Culture and Heritage of the Aboriginal people and as Aboriginal objects which may be affected, and Yinarr Cultural Services primary vision and aim is to discover, preserve and protect the aboriginal people and to protect the cultural heritage of our ancestors.

Please find enclosed Yinarr Cultural Services current and up to date insurance certificates. Our Company is fully insured and registered with DECC.

Yinarr Cultural Services also have other traditional site workers holders who hold knowledge of the Hunter Valley and surrounding areas. Yinarr Cultural Services site workers have all required PPE when working on site. We would also recommend that if possible we would like to be part of the artifact analysis within this project and when work is completed.

Kathie has completed a training course which was conducted and held by Mr. Glen Morris from National Parks and Wildlife. This involved such things as recognising artefacts, identifying artefacts, recording of artefacts and completing written reports on fieldwork completed including artefacts found and identified, what she believes to be the best outcome for the site surveyed. Kathie also has experience working on various sites if there was something Kathie wasn't sure about she is very grateful and willing to contact people such as Mr. Glen Morris to discuss things and have their input and assistance.

Kathie and Norm are both reliable and punctual, and are always actively involved with all work conducted, they are always keen to learn more and be involved more whenever possible. Kathie and Norm will openly admit if they are not sure about something or believe that it is not of their expertise or knowledge. Kathie and Norm are also a board member's of Wanaruah Local Aboriginal Land Council (WLALC), members of Hunter Valley Aboriginal Corporation, Kathie is a board member of Aboriginal Development Consultative Committee (ADCC) they are very active within the community

On all these grounds I believe that Kathie and Norm would be a very adequate people to participate in any works/jobs offered. Kathie and Norm are very friendly, outgoing, easy people to work with this alone is a great asset to any position filled.

Yinarr Cultural Services would like the opportunity to work with GML Heritage Consultants to give our views on the area to be surveyed where we will comment on specific area that we believe that are significant. Within the area in general is highly significant and is very sacred to our people and the community our descendants not only travelled through the area but are still in the area today.

Kathie Kinchela's contact no is (Mobile) 043 272 0623, (Home) 0265 476077, (Fax) 0265 4760145, and email is yinarrculturalservices@gmail.com

Thank you once again for the opportunity and we look forward to working with you. Should you wish to discuss any of the above issues, please do not hesitate to contact me on 0265 476077 or 0432720623. I look forward in hearing from you.

Yours sincerely,

Kathleen Steward Kinchela
Stakeholder
Yinarr Cultural Services

Cowie, Diana

From: Aaron Slater <warragil_c.s@hotmail.com>
Sent: Monday, 28 May 2012 6:01 PM
To: Lennox, Jenni
Subject: Re: Expression of Interest " 12-0226-Anambah"
Attachments: Anambah Area - warragil.docx

Hi Jenni

We would like to Register a Expression of Interest,

for the project : 12-0226- Anambah,

Looking forward to working with you.

Kind Regards

Aaron Slater - Manager

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Yinarr Cultural Services
Discover Preserve Protect

28th May 2012

Jenni Lennox
GML Heritage Consultants
78 George Street
REDFERN NSW 2016

Dear Jenni,

RE: ABORIGINAL REGISTRATION FOR COMMUNITY CONSULTATION – '12-0226 – ANAMBAH' INVESTIGATION AREA

Yinarr Cultural Services would like to express its interest for the above project as well being consulted and placed on the Aboriginal Stakeholder Register with GML Heritage Consultants and for future works that may arise.

I have pleasure in forwarding an application to be listed as a register stakeholder as a traditional owner and Native Title Descendant. I do so because I am an aboriginal person who continues to maintain a deep respect for their ancestral belief system and traditional lore and custom who recoginises my responsibilities and obligations to protect and conserve our culture and heritage and I care for my traditional lands or country. I have the trust of my community, knowledge and understanding of my culture.

Ms Kathie Kinchela and Norm Archibald are very acknowledgeable people who have been involved with numerous fieldwork jobs carried out by Yinarr Cultural Services and numerous other Aboriginal cultural groups that they have worked for. Some of the fieldwork that Kathie and Norm has been involved with include Anvil Hill Project, Bulga Project, Ashton Coal, Xstrata Mangoola, Liddell Coal Operations, Bayswater, Mt Arthur, Mt Penny and Ravensworth Operations Muswellbrook Coal just to mention a few. Kathie and Norm has also worked along side with Umwelt, Hansen Bailey, GSS Environmental, Wells Environmental Services, ENSR/ECOM, Insite Heritage, and Coal and Allied just to name a few.

As a registered and confirmed Aboriginal Stakeholder and ancestor of Wonnarua and Gamilaroi. Kathie and Norm have been living in the community all their lives and are acknowledged by the Aboriginal community; Kathie and Norm also have experience working on various sites. Kathie and Norm are our skilled field officer's who have current induction cards and are very fit and have been doing site work such as excavation work, grader scrapes, test pits, site surveys at various work sites for over 18 years and are very experienced, Kathie is currently studying Indigenous Archaeology through UNE.

Yinarr Cultural Services aim is to preserve and protect items that are of significance to the Culture and Heritage of the Aboriginal people and as Aboriginal objects which may be affected, and Yinarr Cultural Services primary vision and aim is to discover, preserve and protect the aboriginal people and to protect the cultural heritage of our ancestors.

Please find enclosed Yinarr Cultural Services current and up to date insurance certificates. Our Company is fully insured and registered with DECC.

Yinarr Cultural Services also have other traditional site workers holders who hold knowledge of the Hunter Valley and surrounding areas. Yinarr Cultural Services site workers have all required PPE when working on site. We would also recommend that if possible we would like to be part of the artifact analysis within this project and when work is completed.

Kathie has completed a training course which was conducted and held by Mr. Glen Morris from National Parks and Wildlife. This involved such things as recognising artefacts, identifying artefacts, recording of artefacts and completing written reports on fieldwork completed including artefacts found and identified, what she believes to be the best outcome for the site surveyed. Kathie also has experience working on various sites if there was something Kathie wasn't sure about she is very grateful and willing to contact people such as Mr. Glen Morris to discuss things and have their input and assistance.

Kathie and Norm are both reliable and punctual, and are always actively involved with all work conducted, they are always keen to learn more and be involved more whenever possible. Kathie and Norm will openly admit if they are not sure about something or believe that it is not of their expertise or knowledge. Kathie and Norm are also a board member's of Wanaruah Local Aboriginal Land Council (WLALC), members of Hunter Valley Aboriginal Corporation, Kathie is a board member of Aboriginal Development Consultative Committee (ADCC) they are very active within the community

On all these grounds I believe that Kathie and Norm would be a very adequate people to participate in any works/jobs offered. Kathie and Norm are very friendly, outgoing, easy people to work with this alone is a great asset to any position filled.

Yinarr Cultural Services would like the opportunity to work with GML Heritage Consultants to give our views on the area to be surveyed where we will comment on specific area that we believe that are significant. Within the area in general is highly significant and is very sacred to our people and the community our descendants not only travelled through the area but are still in the area today.

Kathie Kinchela's contact no is (Mobile) 043 272 0623, (Home) 0265 476077, (Fax) 0265 4760145, and email is yinarrculturalservices@gmail.com

Thank you once again for the opportunity and we look forward to working with you. Should you wish to discuss any of the above issues, please do not hesitate to contact me on 0265 476077 or 0432720623. I look forward in hearing from you.

Yours sincerely,

Kathleen Steward Kinchela
Stakeholder
Yinarr Cultural Services

2 July 2012

Cacatua Culture Consultants
Donna & George Sampson
Unit 1b/11 Glenwood Drive
THORNTON NSW 2322

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr and Mrs Sampson,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Culturally Aware
Tracey Skene & David Swan
7 Crawford Place
MILLFORD NSW 2325

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Ms Skene & Mr Swan,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

D F T V Enterprises
Mr Derrick Vale Sr
5 Mountbatten Close
RUTHERFORD NSW 2320

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr Vale,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

DRM Cultural Management
Ms Helen Faulkner
81 Wansbeck Valley Rd
CARDIFF NSW 2285

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Ms Faulkner,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Gidawaa Walang Cultural Heritage Consultancy
Ms Ann Hickey
76 Lang Street
KURRI KURRI NSW 2327

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Ms Hickey,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Hunter Valley Cultural Surveying
Mr Luke Hickey
165 Susan St
SCONE NSW 2337

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr Hickey,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Kawul Cultural Services
Rod Hickey & Vicky Slater
PO Box 817
SINGLETON NSW 2330

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr Hickey & Ms Slater,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Lower Hunter Wonnarua Council Inc
Uncle Tommy Miller
51 Bowden Street
HEDDON GRETA NSW 2321

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Uncle Tommy,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Maree/TA Wallangan Cultural Services
Ms Maree Waugh
29 Anzac Ave
CESSNOCK NSW 2325

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Ms Waugh,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Mindaribba Local Aboriginal Land Council
Mr Ken Riddiford
PO Box 401
EAST MAITLAND NSW 2323

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr Riddiford,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Myland Cultural & Heritage Group
Mr Warren Schillings
30 Taurus St
ELERMORE VALE NSW 2287

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr Schillings,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Ngarramang-Kuri Aboriginal Culture & Heritage Group
Ms Abie Wright
21 Bancroft St
GLENDALE NSW 2285

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Ms Wright,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

T & G Culture Consultants
Mr Tony Griffiths
19 O'Donnell Cresent
METFORD NSW 2323

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr Griffiths,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Warragil Cultural Services
Mr Aaron Slater
PO Box 1095
SINGLETON NSW 2330

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr Slater,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Widescope Indigenous Group Pty Ltd
Mr Steven Hickey
73 Russell St
EMU PLAINS NSW 2750

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr Hickey,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Wonnarua Culture Heritage
Shannon Griffiths
19 O'Donnell Crescent
METFORD NSW 2323

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Shannon,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Wonnarua Nation Aboriginal Corporation
Mr Laurie Perry
PO Box 3066
SINGLETON NSW 2330

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr Perry,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

2 July 2012

Yinarr Cultural Services
Ms Kathleen Steward
111 Westwood Road
GUNGAL NSW 2333

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Ms Steward,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

Lennox, Jenni

From:	Lennox, Jenni
Sent:	Wednesday, 15 July 2012 10:39 AM
To:	hws@optusnet.com.au
Subject:	Methodology
Attachments:	Methodology.pdf; TMCS.pdf

Dear Luke,

As per our phone call this morning, please find attached a cover letter and the methodology for the proposed archaeological and cultural assessment of Anambah for your review and comment. I will resend the hard copy for your regards too.

Regards,
Jenni

Jenni Lennox | Consultant
Godden Mackay Logan | Heritage Consultants
78 George St, Redfern NSW 2016 | Tel: 02 9319 4811 | Fax: 02 9319 4383 | www.gml.com.au

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

2 July 2012

Hunter Valley Cultural Surveying
Mr Luke Hickey
165 Susan St
SCONE NSW 2337

Re: Methodology for Community Consultation—Anambah Investigation Area.

Dear Mr Hickey,

Thank you for your registration of interest for consultation in the Anambah Investigation Area Aboriginal Cultural Heritage Assessment.

The attachment to this letter contains the archaeological and cultural assessment methodology. GML would like to receive your feedback on this methodology. We would also be very keen to hear your views and opinions on Aboriginal cultural heritage across the wider Anambah area.

In accordance with OEH community consultation guidelines, GML asks that you respond within 4 weeks (28 days) of the date of this letter. Further assessment of Stockland's land holdings within the Anambah Investigation Area will commence shortly after this date. I will be in contact to discuss the contents of this letter and your involvement in the cultural heritage assessment process.

Please send written comments to:

Jenni Lennox
GML Heritage Consultants
78 George Street
Redfern
NSW 2016

Alternatively comments can be made by email (jennil@gml.com.au) or faxed to GML at 02 9319 4383.

Comments should be marked '12-0226—Anambah'. Please provide comment by Monday 30 July 2012. Comments received after this date may not be addressed in the final methodology.

If you have any questions about this project please call me on 9319 4811.

Yours sincerely
Godden Mackay Logan Pty Ltd

Jenni Lennox
Consultant

GML

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540
F +61 2 6273 8114

Melbourne
PO Box 434
South Melbourne BC
VIC 3205
T +61 3 9380 1933
F +61 3 9380 4066

Hobart
GPO Box 554 Hobart
TAS Australia 7001
T +61 3 6223 2810
F +61 3 6223 2820

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362
www.gml.com.au
heritage@gml.com.au

Lennox, Jenni

From:	Lennox, Jenni
Sent:	Wednesday, 25 July 2012 11:24 AM
To:	Lennox, Jenni
Subject:	Methodology for the Cultural and Archaeological Assessment, Anamban
Attachments:	Methodology.pdf
Bcc:	Caroline, Cultural Awareness Enterprises; DKM CMC; Gidaiwa Walang; [illegible]; Kawul Cultural Services; Lower Hunter Wonnarua Council; Inc; Merce/IA Wollongan; MLALC Mylano; Ngamanu [illegible]; Wildscape; Wonnarua Cultural Heritage; Wonnarua Nation Aboriginal Corporation; Yinart Cultural Services; Adam Crammond; Glyn Richards; Jade Brason; Matt Owen; Michael Nelmes

Dear Stakeholder,

Just a friendly reminder that comments on the methodology (pdf version attached) for the Anamban Investigation Area are due on Monday 30 July. Comments can be provided via mail to the below address, via this email address, or the below fax number. Alternatively, verbal comments are welcomed via the below telephone number.

I look forward to receiving your input for this project.

Kind regards,
Jenni

Jenni Lennox | Consultant
Gradon Yackay Logan | Heritage Consultants
[illegible] | www.gml.com.au

[illegible]

Phone call 25/7 - Tony Griffiths: Indicated no problem with methodology

Phone call 25/7 - Ken Liddiford: Happy with methodology

Cowie, Diana

From: Vicky Slater <kawul-culturalservices@hotmail.com>
Sent: Monday, 30 July 2012 11:55 AM
To: Lennox, Jenni
Subject: RE: Methodology for the Cultural and Archaeological Assessment, Anambah

Hi Jenni,

Review & Comments - Anambah Investigation Area.

We agree with your Draft Report & Methodology of the above project.

And would like to be involved in the physical Archaeological site inspection & test exvavation phases of this period.

We stride our company with experienced site officers & the ability for the fitness for walk overs.

Kind regards

Rod Hickey
Vicky Slater- Mnager

From: jennil@gml.com.au
To: jennil@gml.com.au
Subject: Methodology for the Cultural and Archaeological Assessment, Anambah
Date: Wed, 25 Jul 2012 01:24:31 +0000

Dear Stakeholder,

Just a friendly reminder that comments on the methodology (pdf version attached) for the Anambah Investigation Area are due on Monday 30 July. Comments can be provided via mail to the below address, via this email address, or the below fax number. Alternatively, verbal comments are welcomed via the below telephone number.

I look forward to receiving your input for this project.

Kind regards,
Jenni

Jenni Lennox | Consultant
Godden Mackay Logan | Heritage Consultants
78 George St, Redfern NSW 2016 | Tel: 02 9319 4811 | Fax: 02 9319 4383 | www.gml.com.au

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cowie, Diana

From: Aaron Slater <warragil_c.s@hotmail.com>
Sent: Monday, 30 July 2012 12:13 PM
To: Lennox, Jenni
Subject: RE: Methodology for the Cultural and Archaeological Assessment, Anambah

Hi Jenni

Archaeological & Cultural Assessment Methodology Draft Report- Anambah Investigation Area.

We have read and are quite happy with the Methodology and approve the draft report.

We would like to be involved in physical Archaeohical site inspection & test exvaction phass of this project.

We have experienced site officers & that have the ability for the fitness for the walk overs.

Looking forward to working with you.

Aaron Slater- Manager

From: jennil@gml.com.au
To: jennil@gml.com.au
Subject: Methodology for the Cultural and Archaeological Assessment, Anambah
Date: Wed, 25 Jul 2012 01:24:31 +0000

Dear Stakeholder,

Just a friendly reminder that comments on the methodology (pdf version attached) for the Anambah Investigation Area are due on Monday 30 July. Comments can be provided via mail to the below address, via this email address, or the below fax number. Alternatively, verbal comments are welcomed via the below telephone number.

I look forward to receiving your input for this project.

Kind regards,
Jenni

Jenni Lennox | Consultant
Godden Mackay Logan | Heritage Consultants
78 George St, Redfern NSW 2016 | Tel: 02 9319 4811 | Fax: 02 9319 4383 | www.gml.com.au

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Roberts, Sian

From: DECKA VALE <deckavale@hotmail.com>
Sent: Thursday, 2 August 2012 6:08 PM
To: Cowie, Diana
Subject: RE: Anambah Investigation Area AHIP

G'day Diana

Thank you for the invitation. Pleased to attend with one other person.

Regards

Derrick Vale Sr

DFTV Enterprises
5 Mountbatten Close
Rutherford NSW 2320
M.0438 812 197
F. 0249 320 720
deckavale@hotmail.com

From: dcowie@gml.com.au
To: deckavale@hotmail.com
Subject: Re: Anambah Investigation Area AHIP
Date: Tue, 31 Jul 2012 06:18:35 +0000

Our Ref: 12-0226
Dear Mr Vale,
Following your registration for the aforementioned project, Godden Mackay Logan (GML) and Stockland invite you to attend a briefing meeting on Wednesday, 8 August 2012, where GML will present the methodology for the cultural and archaeological assessment for this study area, and Stockland will present information on the proposed development project for their land holdings within the Anambah Investigation Area.
The meeting will be held at: Maitland Mercure located at
11 Denton Park Drive,
Rutherford NSW 2320
Time: 2:00pm to around 4:00pm
Afternoon tea will be provided, however, we require an RSVP by Monday, 6 August 2012, to ensure sufficient food is available on the day.
You may RSVP by email to dianac@gml.com.au or by calling me on 9319 4811.
If you anticipate wanting to participate in future fieldwork, please bring copies of all

- insurance policies (Professional Indemnity Insurance, Public Liability Insurance, Workers Compensation Insurance, Motor Vehicle/ Travel Insurance), and
- licences and certificates including Construction Certificate (Green/ White Card), First Aid certificate etc.

that you/ your organisation currently holds, for our records and the field work administration.

Yours sincerely

Diana Cowie | Consultant
Godden Mackay Logan | Heritage Consultants
78 George Street, Redfern NSW 2016
Tel: 02 9319 4811 Fax: 02 9319 4383
www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and

delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Roberts, Sian

From: Helen Faulkner <drm.cm@hotmail.com>
Sent: Tuesday, 7 August 2012 2:54 PM
To: Cowie, Diana
Subject: RE: Anambah Investigation Area AHIP

Hi Diana

Sorry for the late notice, there will be 2 of us attending the meeting tomorrow if that is okay.

Yours In Culture
Helen

From: dcowie@gml.com.au
To: drm.cm@hotmail.com
Subject: Re: Anambah Investigation Area AHIP
Date: Tue, 31 Jul 2012 06:19:06 +0000

Our Ref: 12-0226
Dear Ms Faulkner,
Following your registration for the aforementioned project, Godden Mackay Logan (GML) and Stockland invite you to attend a briefing meeting on Wednesday, 8 August 2012, where GML will present the methodology for the cultural and archaeological assessment for this study area, and Stockland will present information on the proposed development project for their land holdings within the Anambah Investigation Area.
The meeting will be held at: Maitland Mercure located at
11 Denton Park Drive,
Rutherford NSW 2320
Time: 2:00pm to around 4:00pm
Afternoon tea will be provided, however, we require an RSVP by Monday, 6 August 2012, to ensure sufficient food is available on the day.
You may RSVP by email to dianac@gml.com.au or by calling me on 9319 4811.
If you anticipate wanting to participate in future fieldwork, please bring copies of all

- insurance policies (Professional Indemnity Insurance, Public Liability Insurance, Workers Compensation Insurance, Motor Vehicle/ Travel Insurance), and
- licences and certificates including Construction Certificate (Green/ White Card), First Aid certificate etc.

that you/ your organisation currently holds, for our records and the field work administration.

Yours sincerely,

Diana Cowie | Consultant
Godden Mackay Logan | Heritage Consultants
78 George Street, Redfern NSW 2016
Tel: 02 9319 4811 Fax: 02 9319 4383
www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Roberts, Sian

From: Vicky Slater <kawul-culturalservices@hotmail.com>
Sent: Tuesday, 31 July 2012 7:25 PM
To: Cowie, Diana
Subject: RE: Anambah Investigation Area AHIP- meeting

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

Hi Diana,

Yes one will be attending from kawul & will will bring along workers comp & Insurances on the day for field work.

Kind Regards

Vicky Slater

From: dcowie@gml.com.au
To: kawul-culturalservices@hotmail.com
Subject: Re: Anambah Investigation Area AHIP
Date: Tue, 31 Jul 2012 06:21:14 +0000

Our Ref: 12-0226
Dear Mr Hickey and Ms Slater,
Following your registration for the aforementioned project, Godden Mackay Logan (GML) and Stockland invite you to attend a briefing meeting on Wednesday, 8 August 2012, where GML will present the methodology for the cultural and archaeological assessment for this study area, and Stockland will present information on the proposed development project for their land holdings within the Anambah Investigation Area.
The meeting will be held at: Maitland Mercure located at
11 Denton Park Drive,
Rutherford NSW 2320
Time: 2:00pm to around 4:00pm
Afternoon tea will be provided, however, we require an RSVP by Monday, 6 August 2012, to ensure sufficient food is available on the day.
You may RSVP by email to dianac@gml.com.au or by calling me on 9319 4811.
If you anticipate wanting to participate in future fieldwork, please bring copies of all

- insurance policies (Professional Indemnity Insurance, Public Liability Insurance, Workers Compensation Insurance, Motor Vehicle/ Travel Insurance), and
- licences and certificates including Construction Certificate (Green/ White Card), First Aid certificate etc.

that you/ your organisation currently holds, for our records and the field work administration.

Yours sincerely

Diana Cowie | Consultant
Godden Mackay Logan | Heritage Consultants
78 George Street, Redfern NSW 2016
Tel: 02 9319 4811 Fax: 02 9319 4383
www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Roberts, Sian

From: Vicky Slater <kawul-culturalservices@hotmail.com>
Sent: Wednesday, 8 August 2012 9:51 AM
To: Cowie, Diana
Subject: Re. Meeting today

Hi Diana,

Sorry due to coming down last night with a virus,

wont be able to attend the Meeting today.
will email insurances & various cards for field work.

thanks

Vicky Slater- Manager

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Roberts, Sian

From: Tom Miller <tn.miller@southernphone.com.au>
Sent: Tuesday, 7 August 2012 6:49 AM
To: Cowie, Diana
Subject: RE: Anambah Investigation Area AHIP

Diana we would like to be a part of the process for this meeting I am sorry but I have not been here so I could not respond to your e-mail until now regards

Tom Miller WONNARUA ELDER LHWC inc

From: Cowie, Diana [mailto:dcowie@gml.com.au]
Sent: Tuesday, 31 July 2012 4:22 PM
To: tn.miller@southernphone.com.au
Cc: lea-anne.ball@bigpond.com
Subject: Re: Anambah Investigation Area AHIP

Our Ref: 12-0226

Dear Mr Miller,

Following your registration for the aforementioned project, Godden Mackay Logan (GML) and Stockland invite you to attend a briefing meeting on Wednesday, 8 August 2012, where GML will present the methodology for the cultural and archaeological assessment for this study area, and Stockland will present information on the proposed development project for their land holdings within the Anambah Investigation Area.

The meeting will be held at: Maitland Mercure located at

11 Denton Park Drive,

Rutherford NSW 2320

Time: 2:00pm to around 4:00pm

Afternoon tea will be provided, however, we require an RSVP by Monday, 6 August 2012, to ensure sufficient food is available on the day.

You may RSVP by email to dianac@gml.com.au or by calling me on 9319 4811.

If you anticipate wanting to participate in future fieldwork, please bring copies of all

- insurance policies (Professional Indemnity Insurance, Public Liability Insurance, Workers Compensation Insurance, Motor Vehicle/ Travel Insurance), and
- licences and certificates including Construction Certificate (Green/ White Card), First Aid certificate etc.

that you/ your organisation currently holds, for our records and the field work administration.

Yours sincerely,

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Roberts, Sian

From: maree waugh <mareewaugh30@hotmail.com>
Sent: Wednesday, 1 August 2012 7:02 PM
To: Cowie, Diana
Subject: MEETING

I can attend this meeting

Maree Waugh

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Roberts, Sian

From: CEO <ceo@mindaribbalalc.org>
Sent: Tuesday, 31 July 2012 4:36 PM
To: Cowie, Diana
Subject: RSVP

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Red Category

HI, I will be in attendance

Ken Riddiford
CEO
Mindaribba LALC
Phone: 02 4015 7000
Mobile: 0439 770 789
Fax: 02 4934 8544
Email: CEO@mindaribbalalc.org
Website: www.mindaribbalalc.org

Security Statement

This email may be confidential and contain privileged information. If you are not the intended recipient you must not use, disclose, copy or distribute this email, including any attachments. Confidentiality and legal privilege attached to this communication are not waived or lost by reason of mistaken delivery to you. If you have received the email in error please delete and notify the sender. Any views expressed in this email are those of the author and do not necessarily represent those of the organisation, except where the sender expressly, and with authority, states them to be the views of the Mindaribba Local Aboriginal Land Council. The organisation does not represent, warrant or guarantee that the integrity of this email has been maintained, or that the communication is free of error, virus, interception, inference or interference.

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Roberts, Sian

From: Laurie Perry <l.perry@optusnet.com.au>
Sent: Wednesday, 1 August 2012 7:38 AM
To: Cowie, Diana; maree waugh; bw820@iprimus.com.au
Subject: Re: Anambah Investigation Area AHIP

Importance: High

Hi Diana

I have included our heritage team in this email to see if Maree can attend this meeting.

Cheers

Laurie Perry
CEO
Wonnarua Nation Aboriginal Corporation
Ground Floor 254 John St Singleton NSW
PO BOX 3066
Singleton Delivery Centre 2330
Ph: 02 6571 8595
Fax: 02 6571 8551
Mob : 0412 593 020
Email: wonnarua@bigpond.com.au
Home : l.perry@optusnet.com.au
Website: www.wonnarua.org.au

From: Cowie, Diana
Sent: Tuesday, July 31, 2012 4:28 PM
To: wonnarua@bigpond.com.au ; l.perry@optusnet.com.au
Subject: Re: Anambah Investigation Area AHIP

Our Ref: 12-0226

Dear Mr Perry,

Following your registration for the aforementioned project, Godden Mackay Logan (GML) and Stockland invite you to attend a briefing meeting on Wednesday, 8 August 2012, where GML will present the methodology for the cultural and archaeological assessment for this study area, and Stockland will present information on the proposed development project for their land holdings within the Anambah Investigation Area.

The meeting will be held at: Maitland Mercure located at

11 Denton Park Drive,

Rutherford NSW 2320

Time: 2:00pm to around 4:00pm

Afternoon tea will be provided, however, we require an RSVP by Monday, 6 August 2012, to ensure sufficient food is available on the day.

You may RSVP by email to dianac@gml.com.au or by calling me on 9319 4811.

If you anticipate wanting to participate in future fieldwork, please bring copies of all

- insurance policies (Professional Indemnity Insurance, Public Liability Insurance, Workers Compensation Insurance, Motor Vehicle/ Travel Insurance), and

- licences and certificates including Construction Certificate (Green/ White Card), First Aid certificate etc.

that you/ your organisation currently holds, for our records and the field work administration.

Yours sincerely,

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2012.0.2196 / Virus Database: 2437/5166 - Release Date: 07/30/12

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2012.0.2196 / Virus Database: 2437/5166 - Release Date: 07/30/12

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Roberts, Sian

From: Tracey Skene <anigunya@hotmail.com>
Sent: Wednesday, 1 August 2012 1:43 PM
To: Cowie, Diana
Subject: RE: Anambah Investigation Area AHIP

Hi Diana,

I will be attending this meeting again can I have Mr Swans details as he no longer works for me any more.
Tracey Skene

From: dcowie@gml.com.au
To: anigunya@hotmail.com
Subject: Re: Anambah Investigation Area AHIP
Date: Tue, 31 Jul 2012 06:17:44 +0000

Our Ref: 12-0226
Re: Anambah Investigation Area AHIP
Dear Ms Skene and Mr Swan,
Following your registration for the aforementioned project, Godden Mackay Logan (GML) and Stockland invite you to attend a briefing meeting on Wednesday, 8 August 2012, where GML will present the methodology for the cultural and archaeological assessment for this study area, and Stockland will present information on the proposed development project for their land holdings within the Anambah Investigation Area.
The meeting will be held at: Maitland Mercure located at
11 Denton Park Drive,
Rutherford NSW 2320
Time: 2:00pm to around 4:00pm
Afternoon tea will be provided, however, we require an RSVP by Monday, 6 August 2012, to ensure sufficient food is available on the day.
You may RSVP by email to dianac@gml.com.au or by calling me on 9319 4811.
If you anticipate wanting to participate in future fieldwork, please bring copies of all

- insurance policies (Professional Indemnity Insurance, Public Liability Insurance, Workers Compensation Insurance, Motor Vehicle/ Travel Insurance), and
- licences and certificates including Construction Certificate (Green/ White Card), First Aid certificate etc.

that you/ your organisation currently holds, for our records and the field work administration.

Yours sincerely

Diana Cowie | Consultant
Godden Mackay Logan | Heritage Consultants
78 George Street, Redfern NSW 2016
Tel: 02 9319 4811 Fax: 02 9319 4383
www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

8/8/12

Consultation Meeting Register

Organisation	Name	Signature
STEVEN HICKEY	[illegible]	[illegible]
[illegible] WARD	[illegible]	[illegible]
[illegible] SIMPSON	[illegible]	[illegible]
GREG COUTHOFF	T G [illegible] CONST	[illegible]
Shannon Griffiths	[illegible]	[illegible]
DOUG MILLER	LHLWC	[illegible]
TOM MILLER	LHLWC	[illegible]
Ken Liddiford	MLALC	[illegible]
[illegible]	[illegible]	[illegible]
[illegible] Enterprises	[illegible]	[illegible]
Jenni Field	DRN Cultural Manager	[illegible]
Helen Faulkner	DRN [illegible] Manager	[illegible]
[illegible] SCHRODER	[illegible]	[illegible]

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 3:56 PM
To: 'anigunya@hotmail.com'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

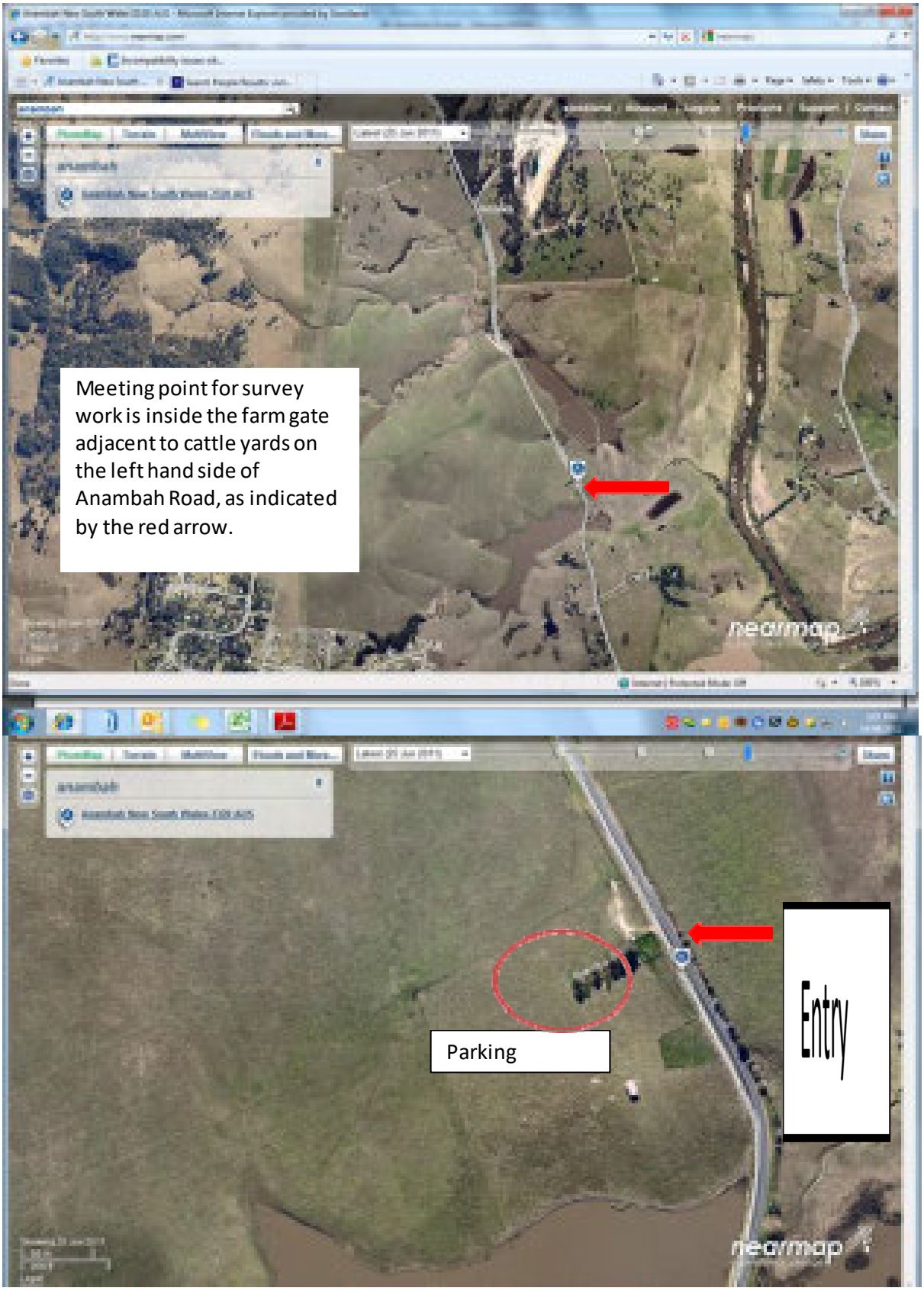
Importance: High

Our Ref: 12-0226fsi

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000



Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 4:03 PM
To: 'barkumanc@hotmail.com'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

Importance: High

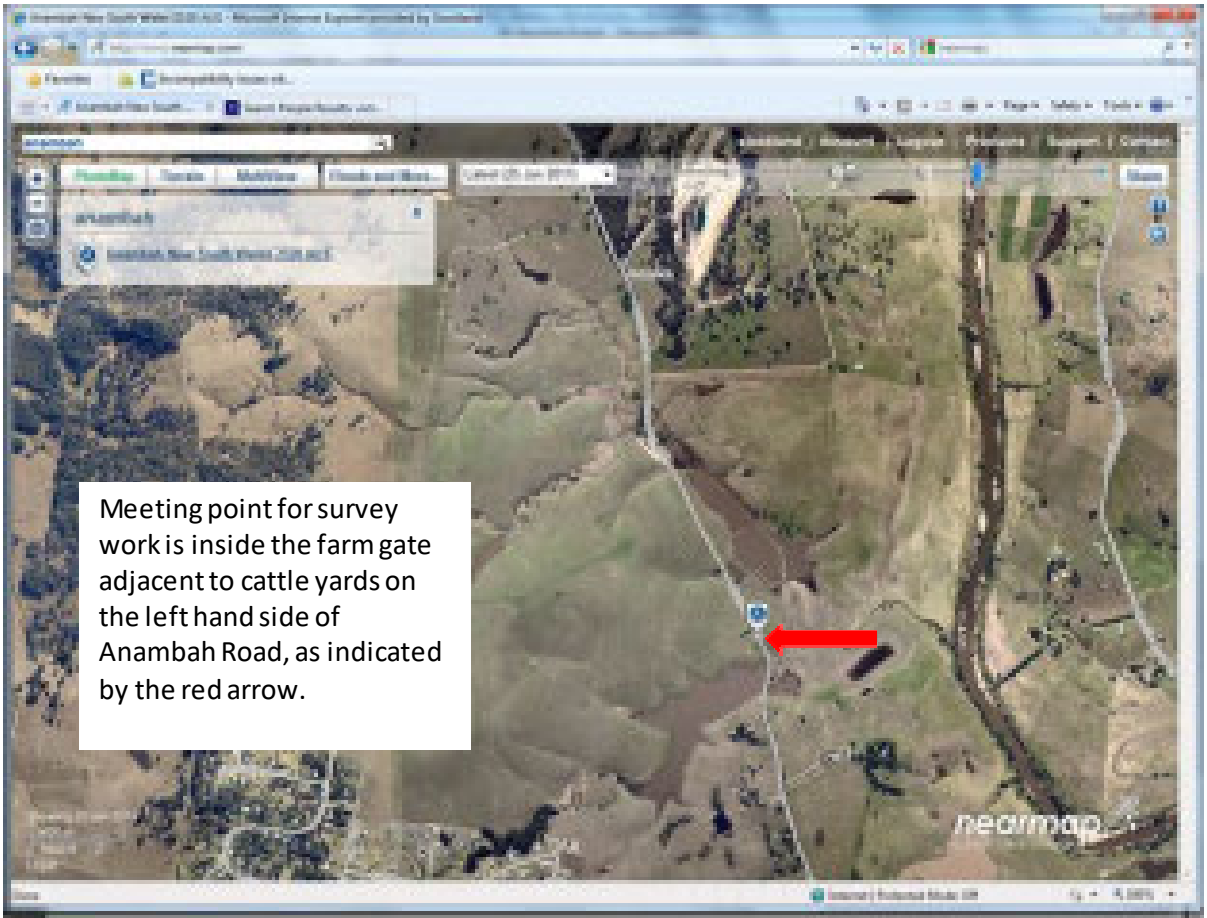
Our Ref: 12-0226fsi

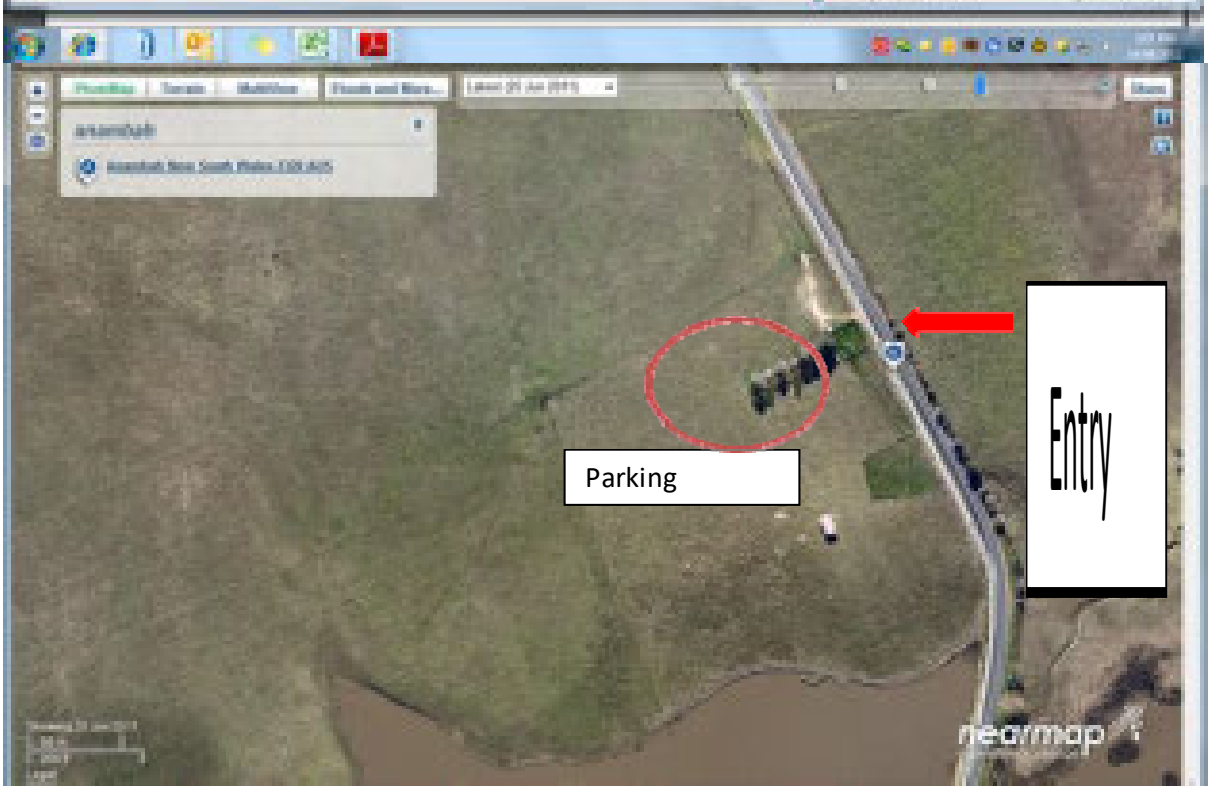
Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 3:53 PM
To: 'cacatua@resetdsl.net.au'; cacatua4service@tpg.com.au
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

Importance: High

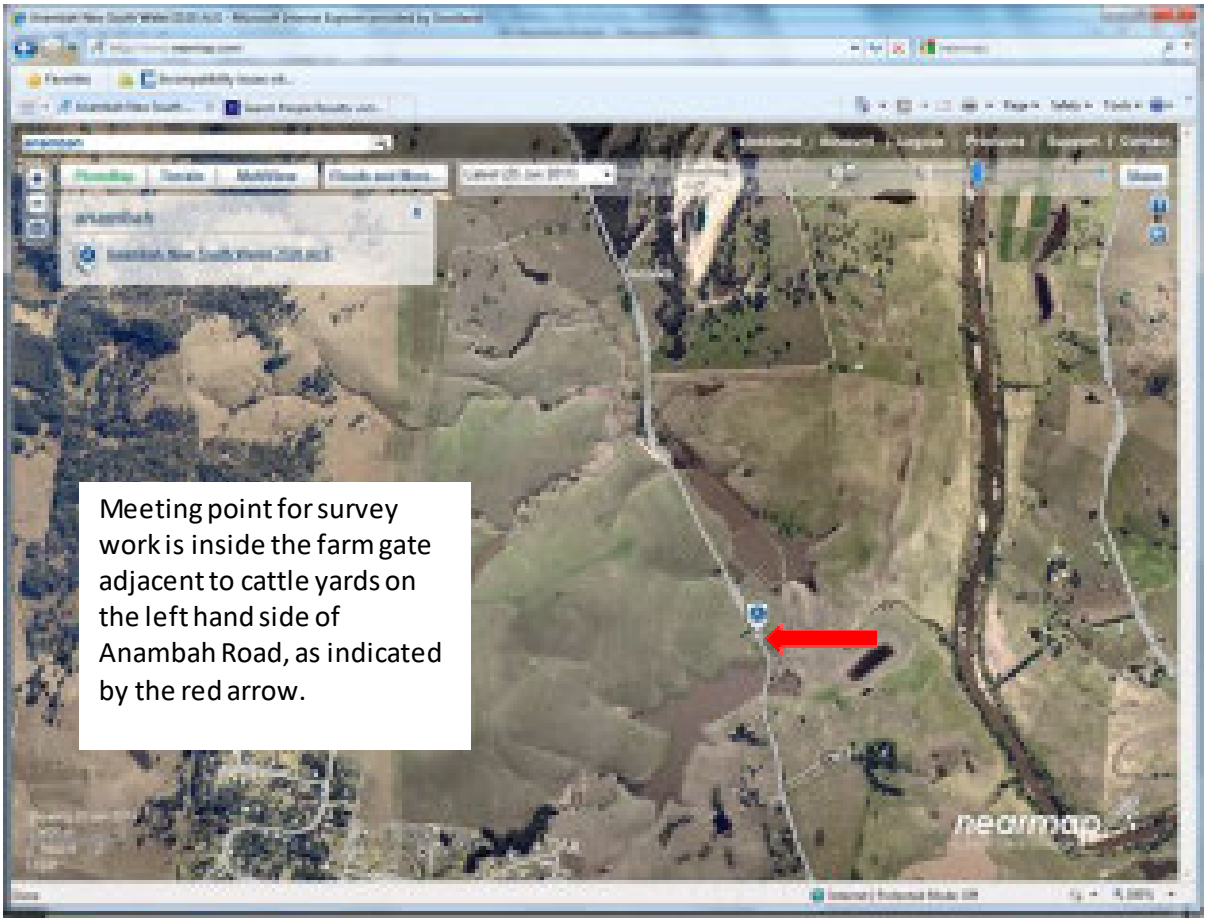
Our Ref: 12-0226fsi

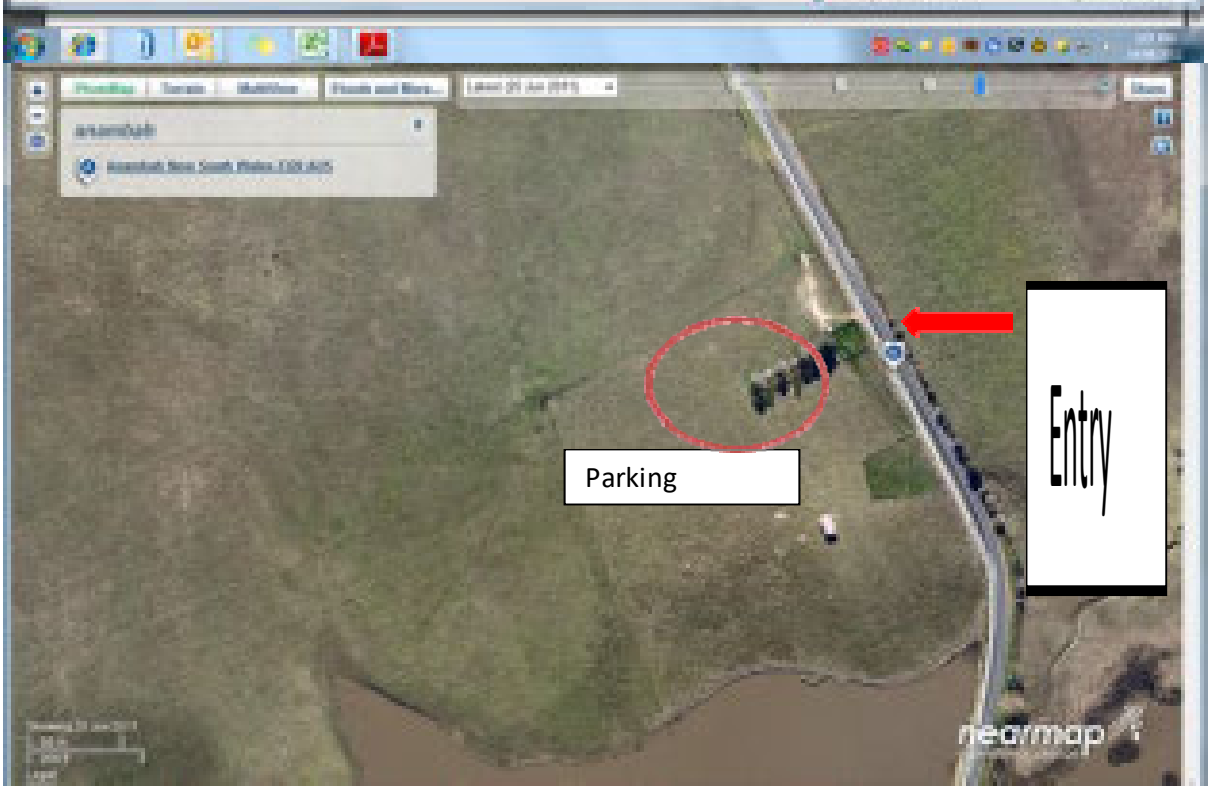
Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 4:03 PM
To: 'drm.cm@hotmail.com'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

Importance: High

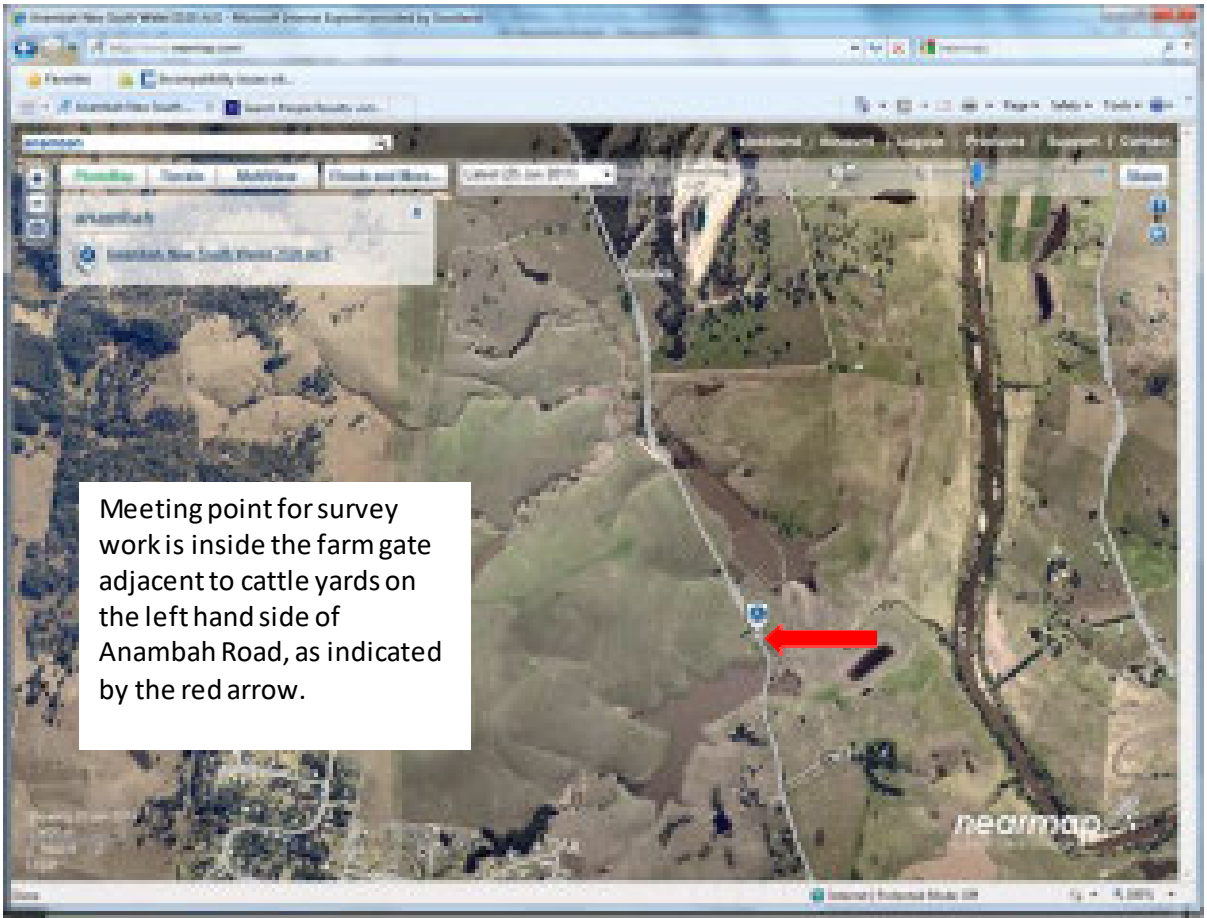
Our Ref: 12-0226fsi

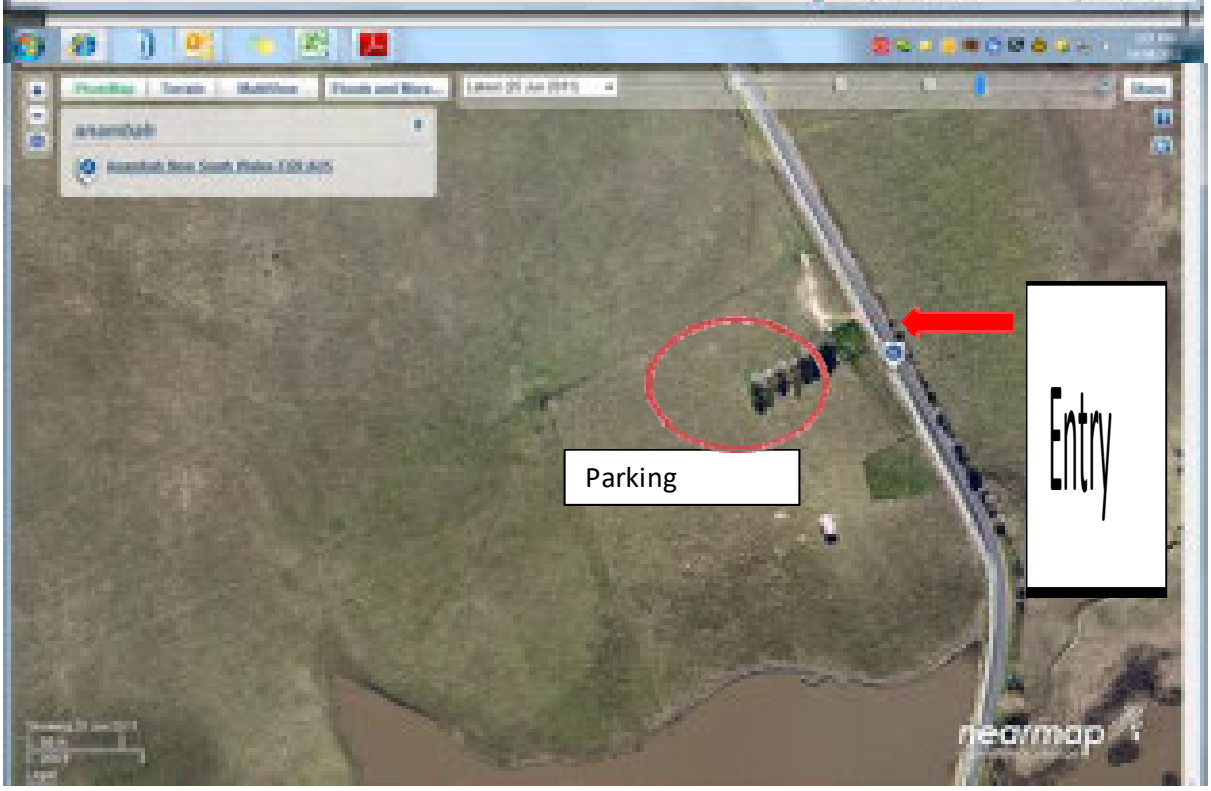
Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 4:04 PM
To: 'Kawul-Culturalservices@hotmail.com'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

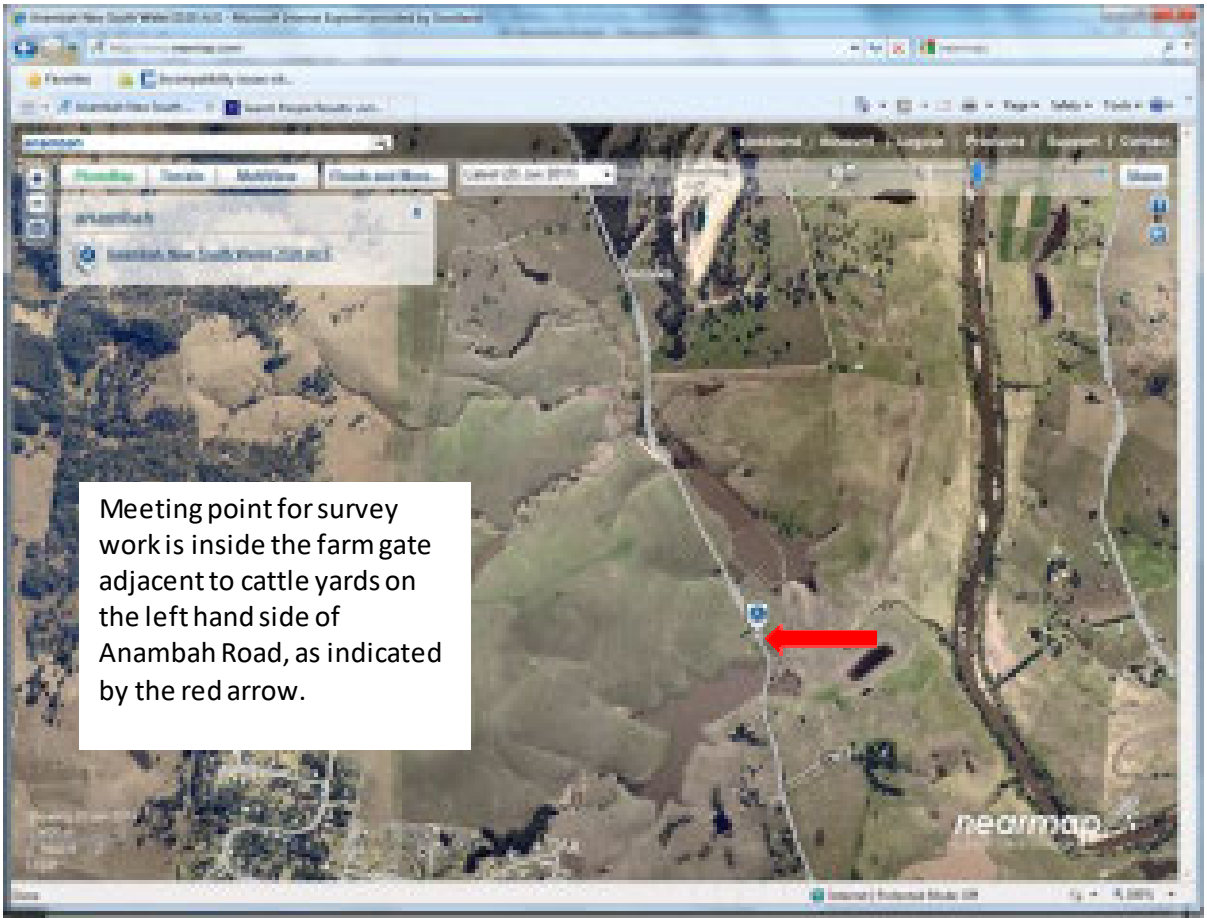
Importance: High

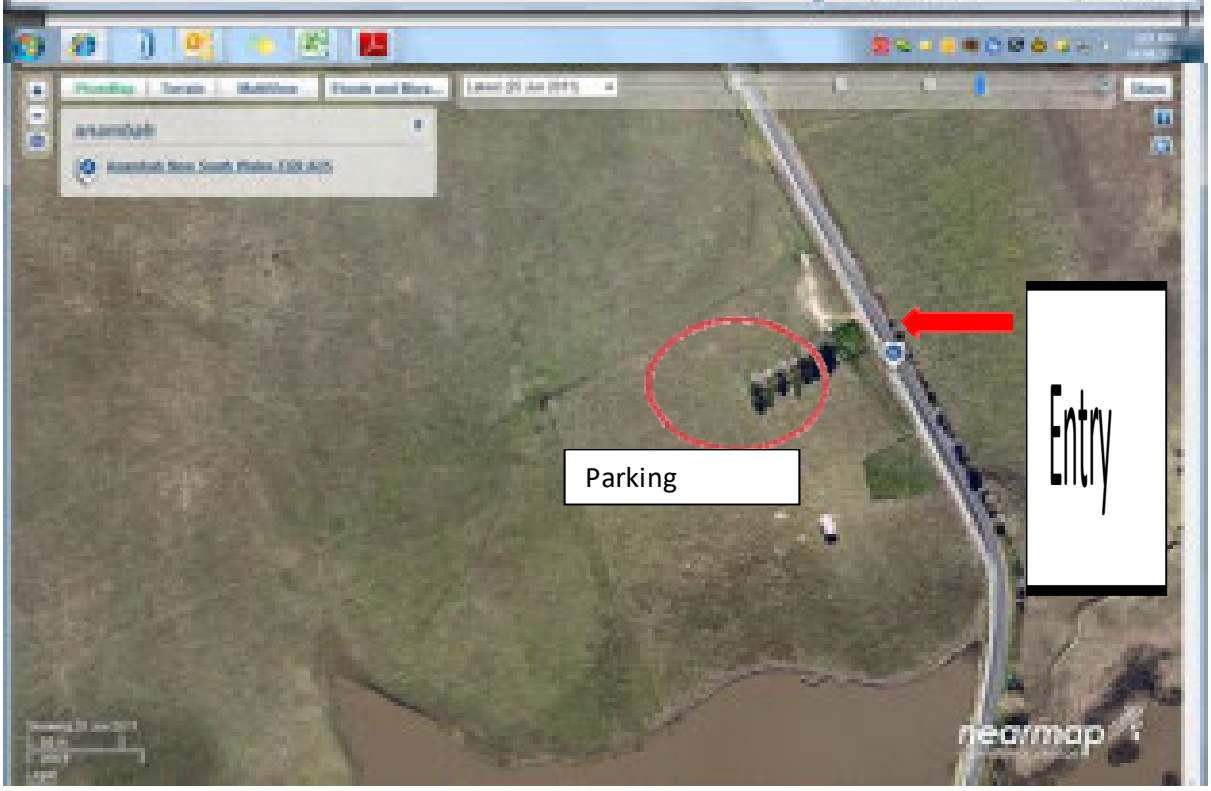
Our Ref: 12-0226fsi

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 4:06 PM
To: 'CEO@mindaribbalalc.org'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

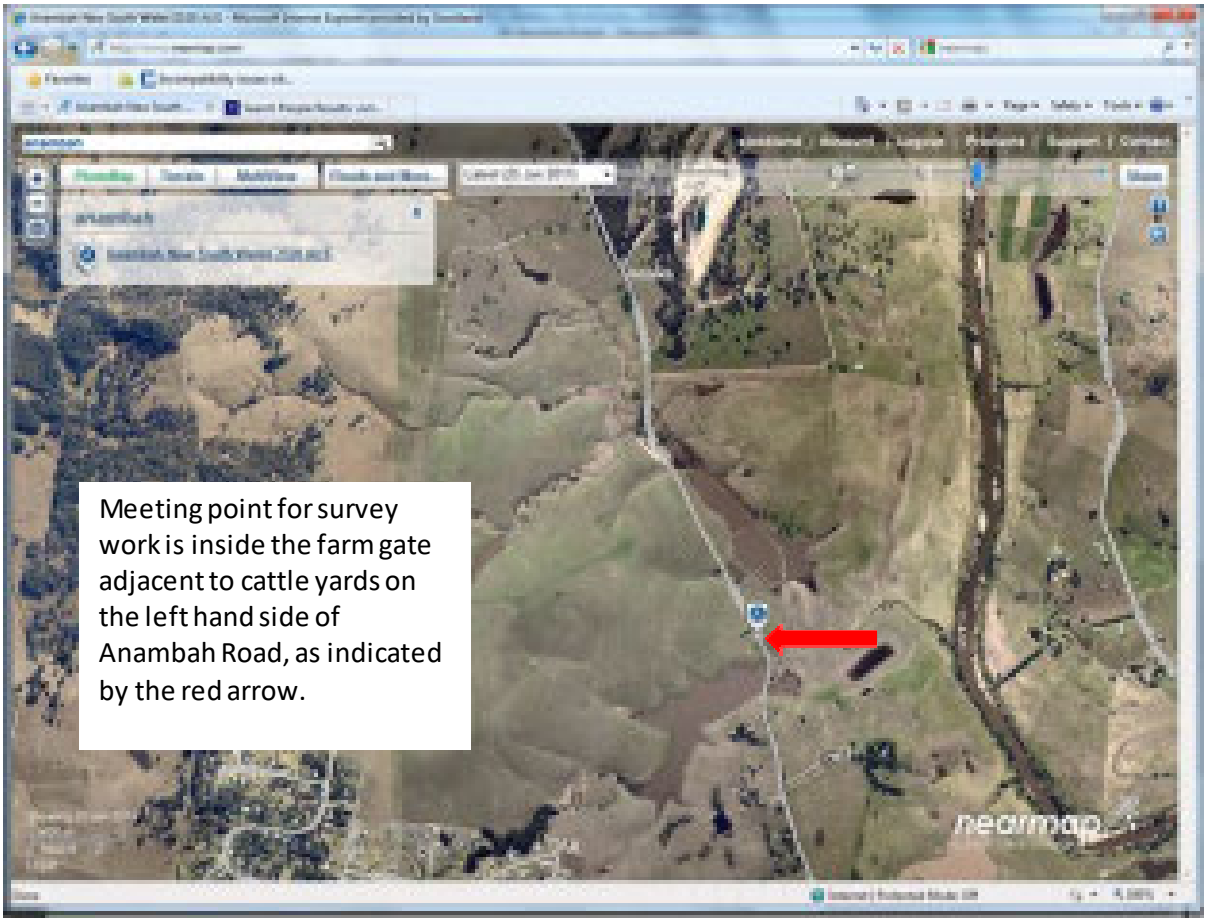
Importance: High

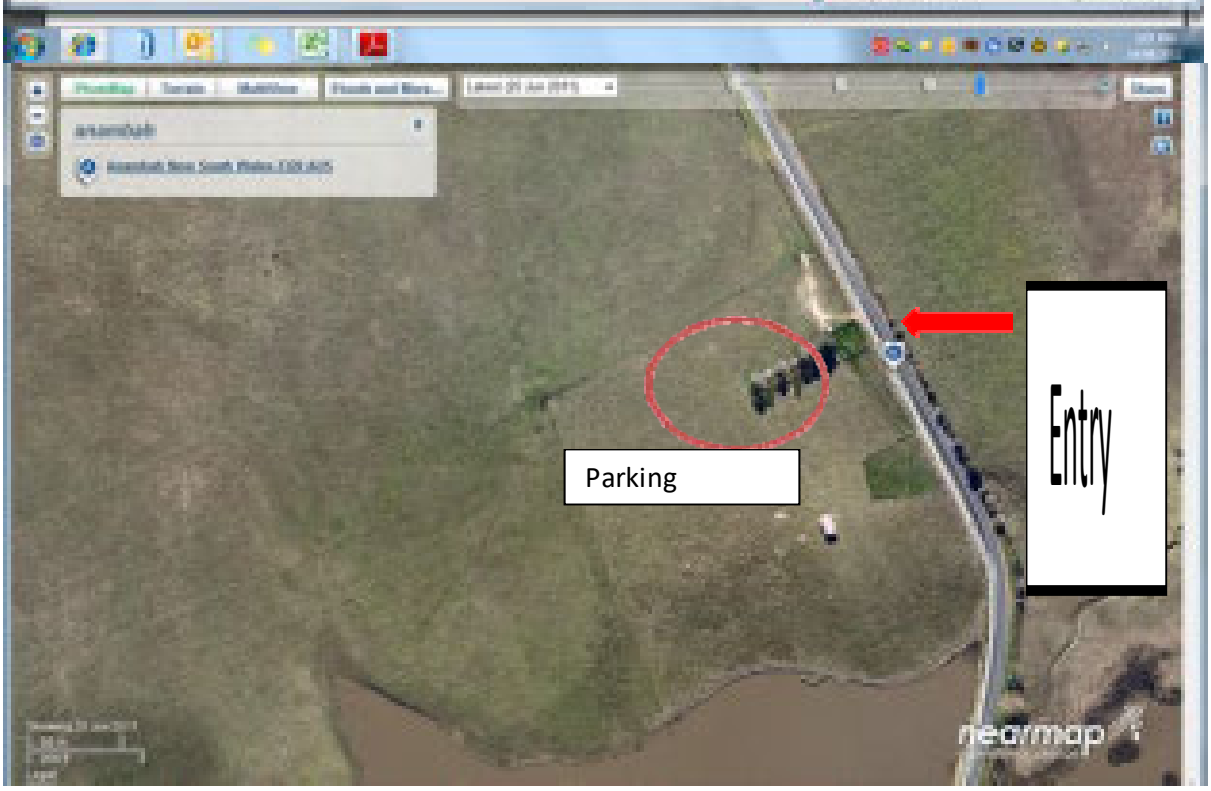
Our Ref: 12-0226fsi

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 4:06 PM
To: 'mareewaugh30@hotmail.com'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

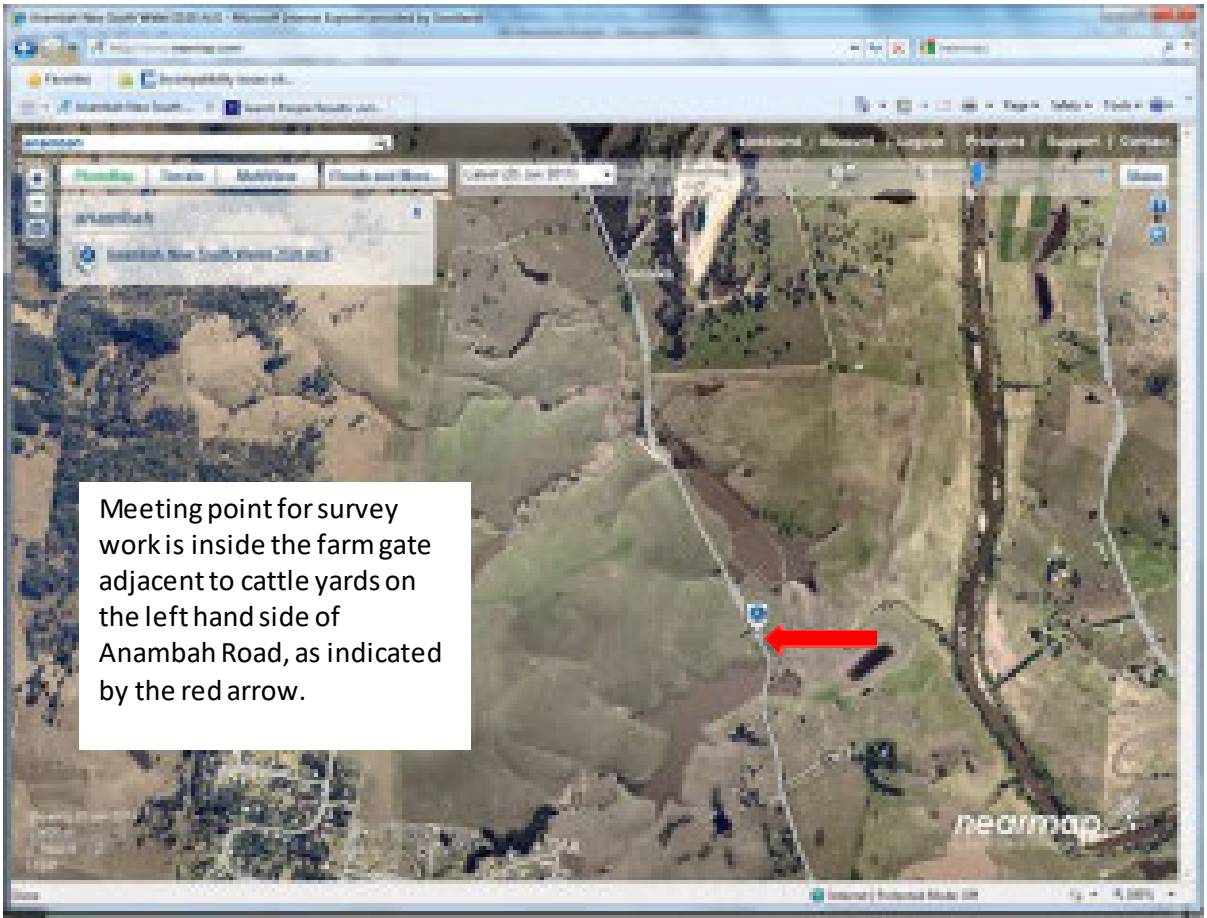
Importance: High

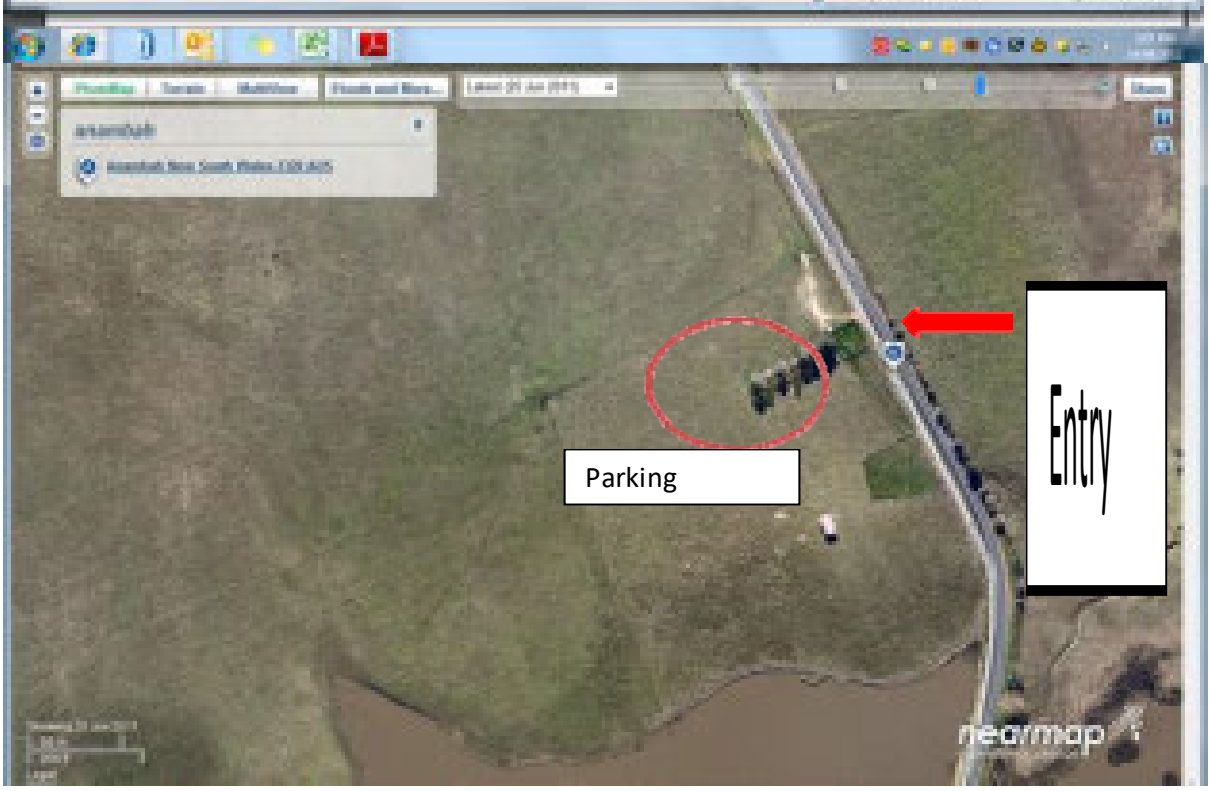
Our Ref: 12-0226fsi

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 4:07 PM
To: 'schillo@yarnteen.com.au'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

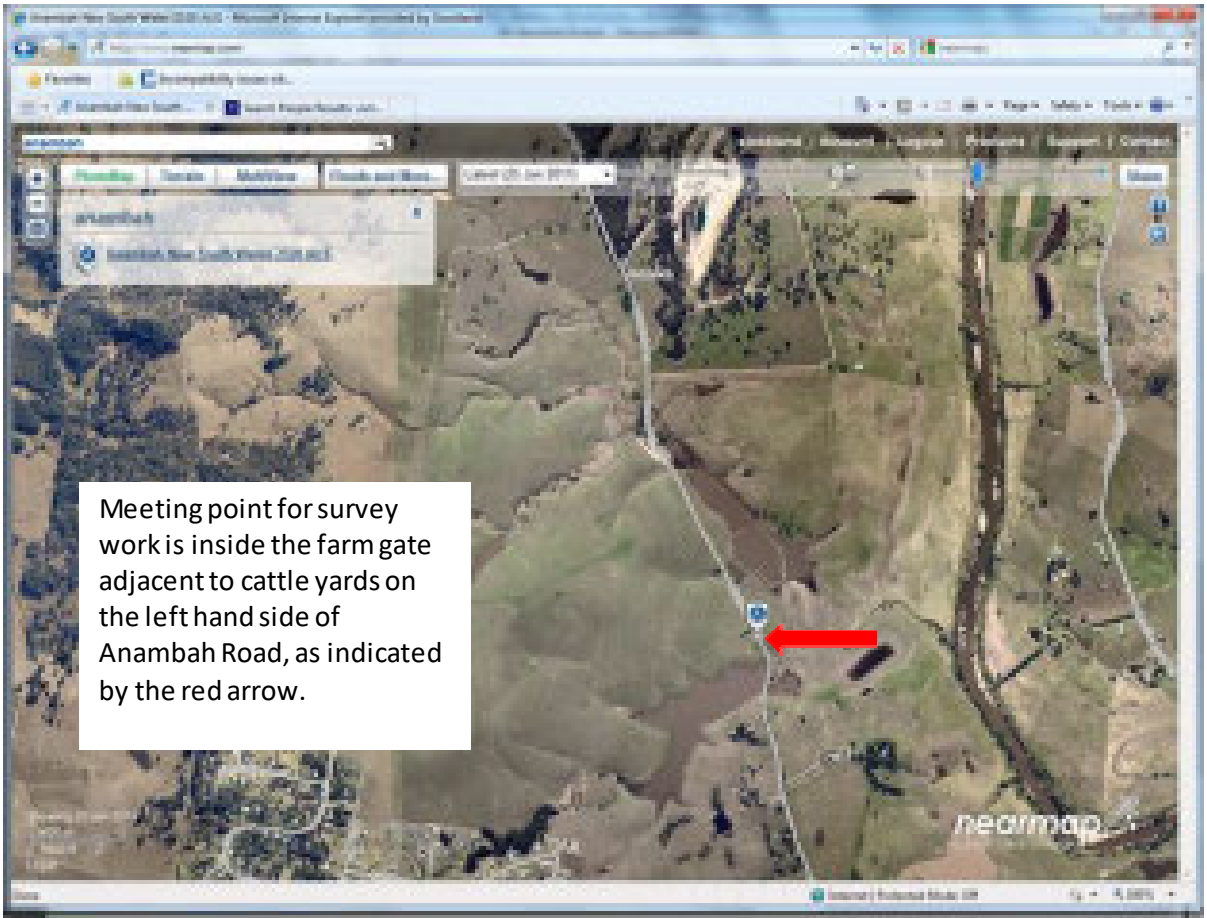
Importance: High

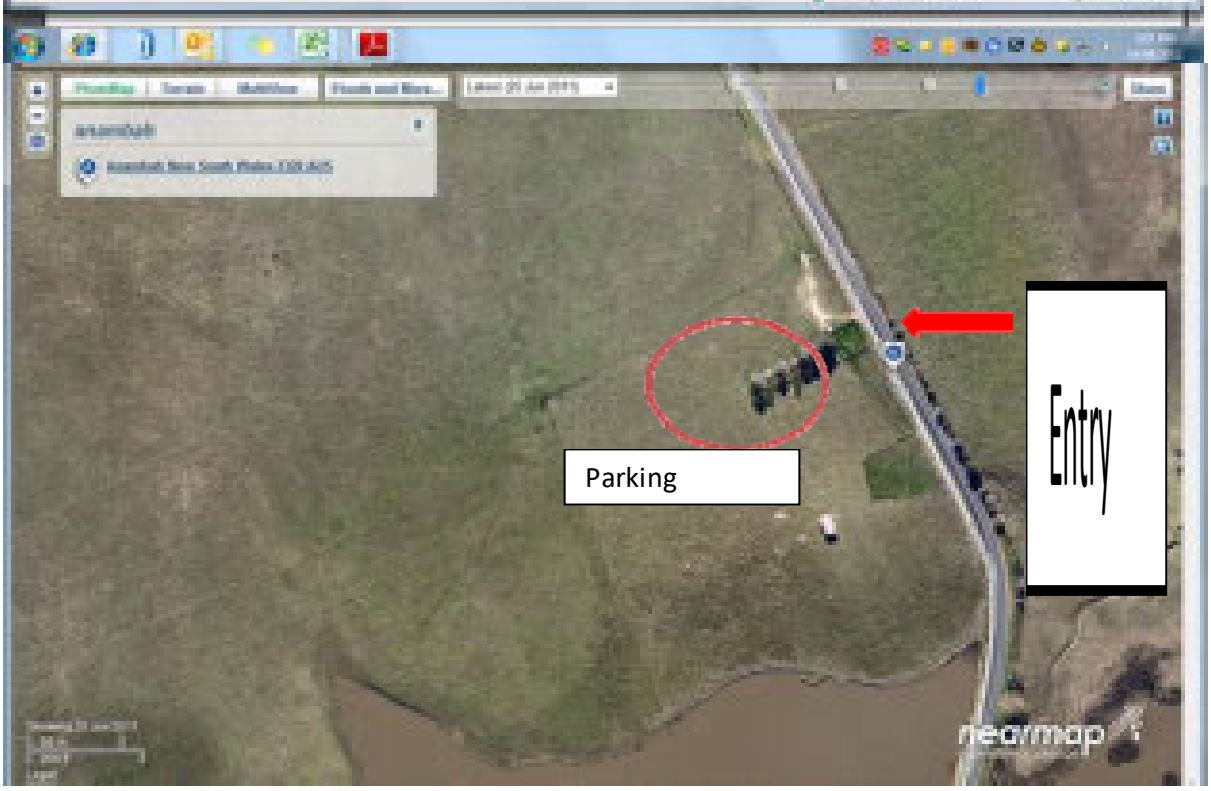
Our Ref: 12-0226fsi

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 4:09 PM
To: 'shannon_griffiths@y7mail.com'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

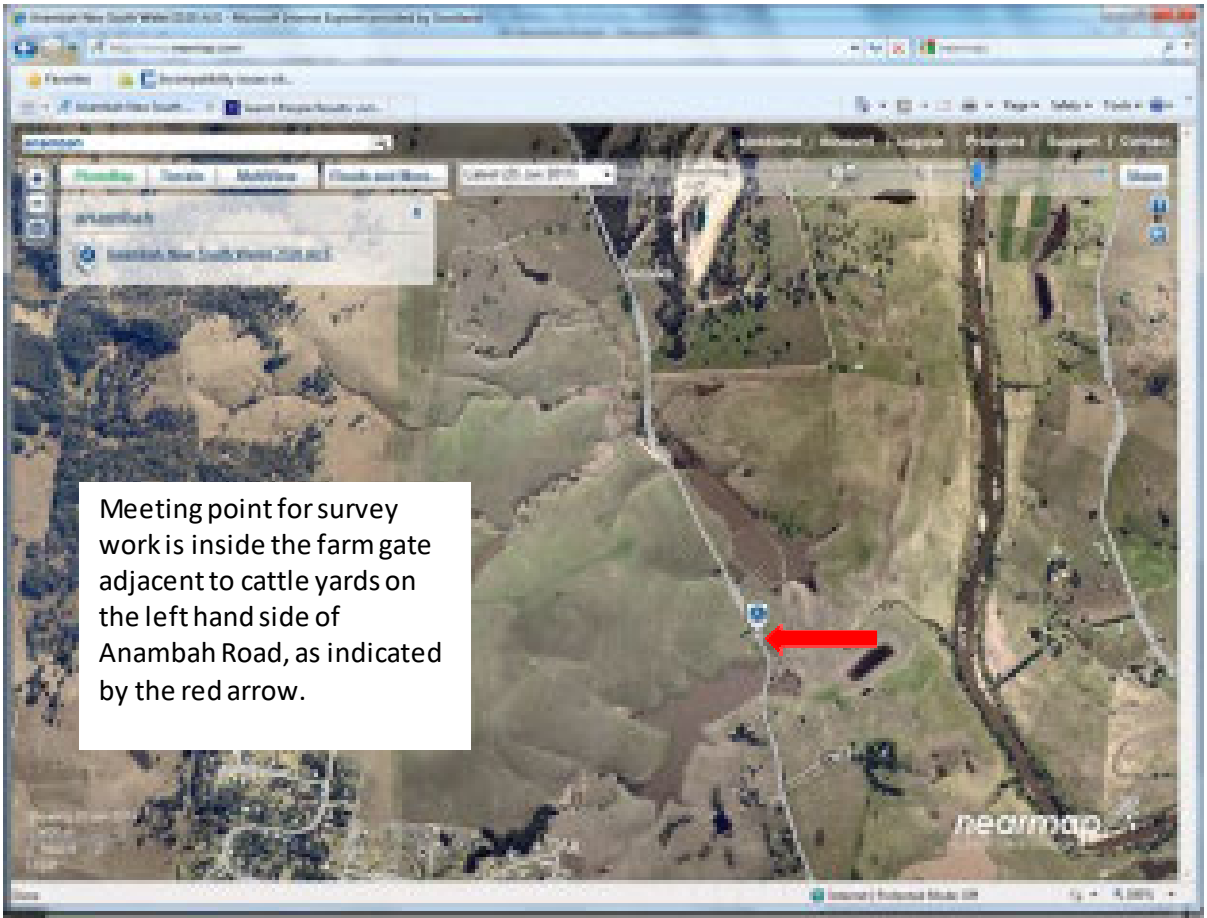
Importance: High

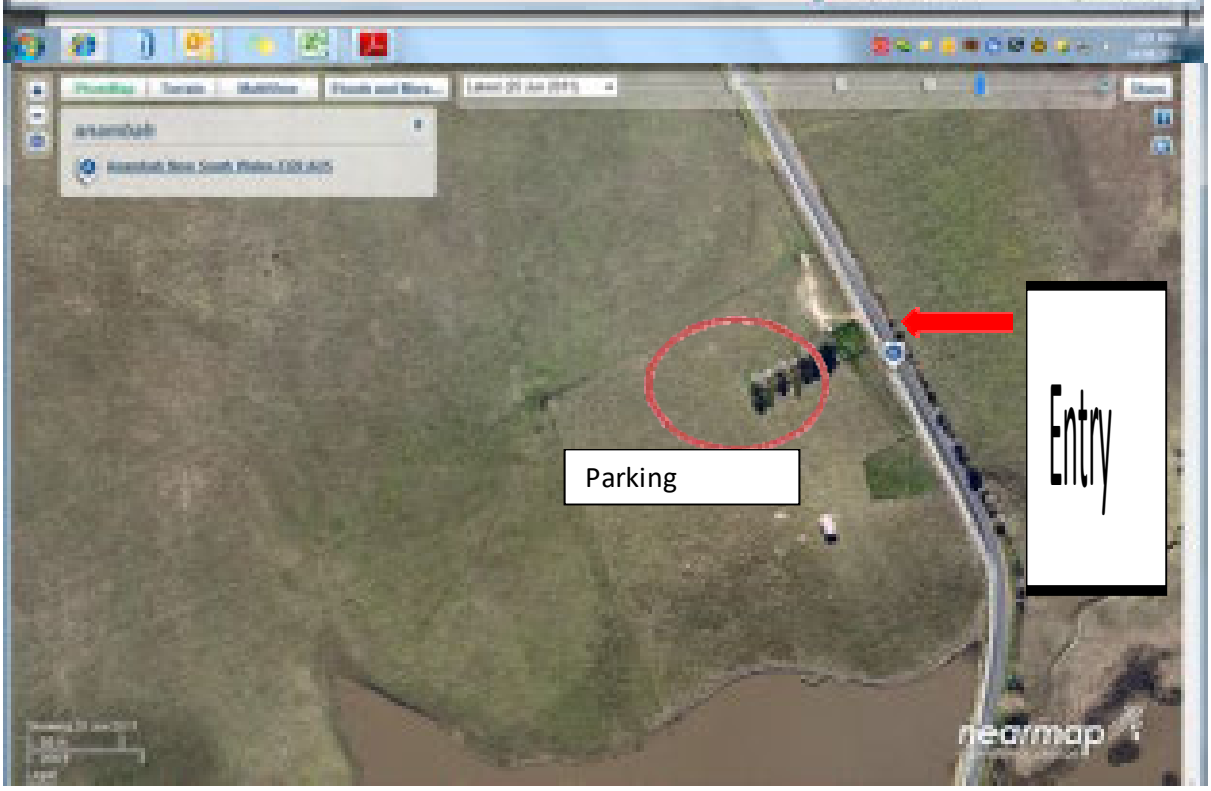
Our Ref: 12-0226fsi

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 4:08 PM
To: 'warragil_c.s@hotmail.com'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

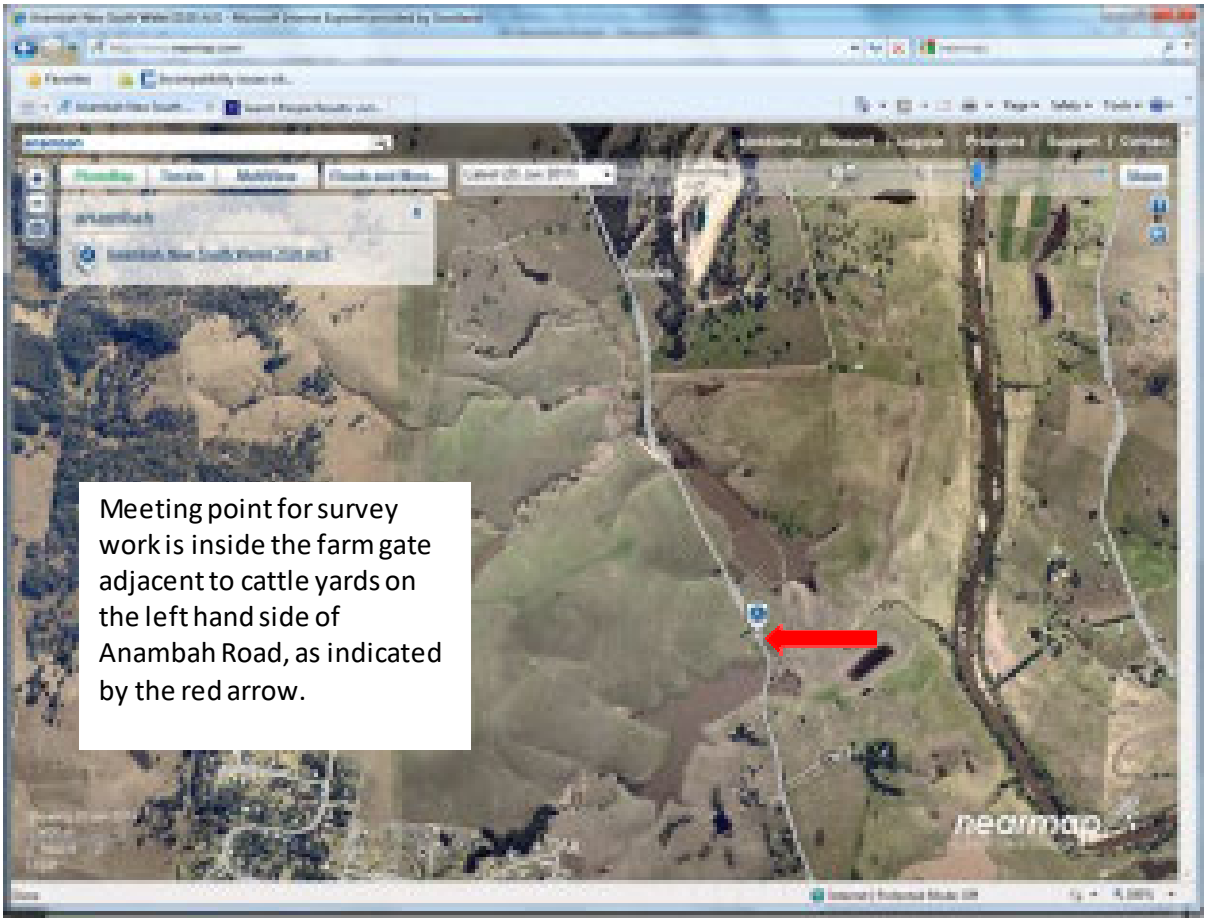
Importance: High

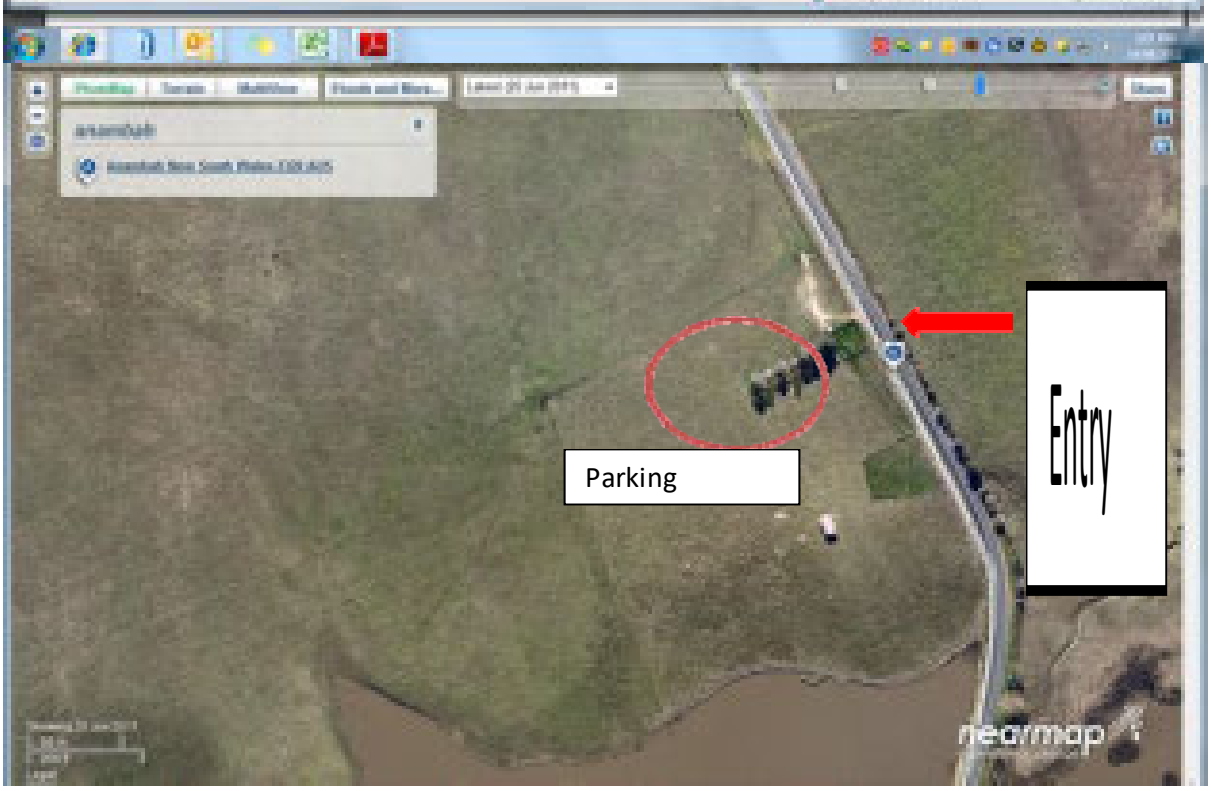
Our Ref: 12-0226fsi

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 4:09 PM
To: 'widescope.group@live.com'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

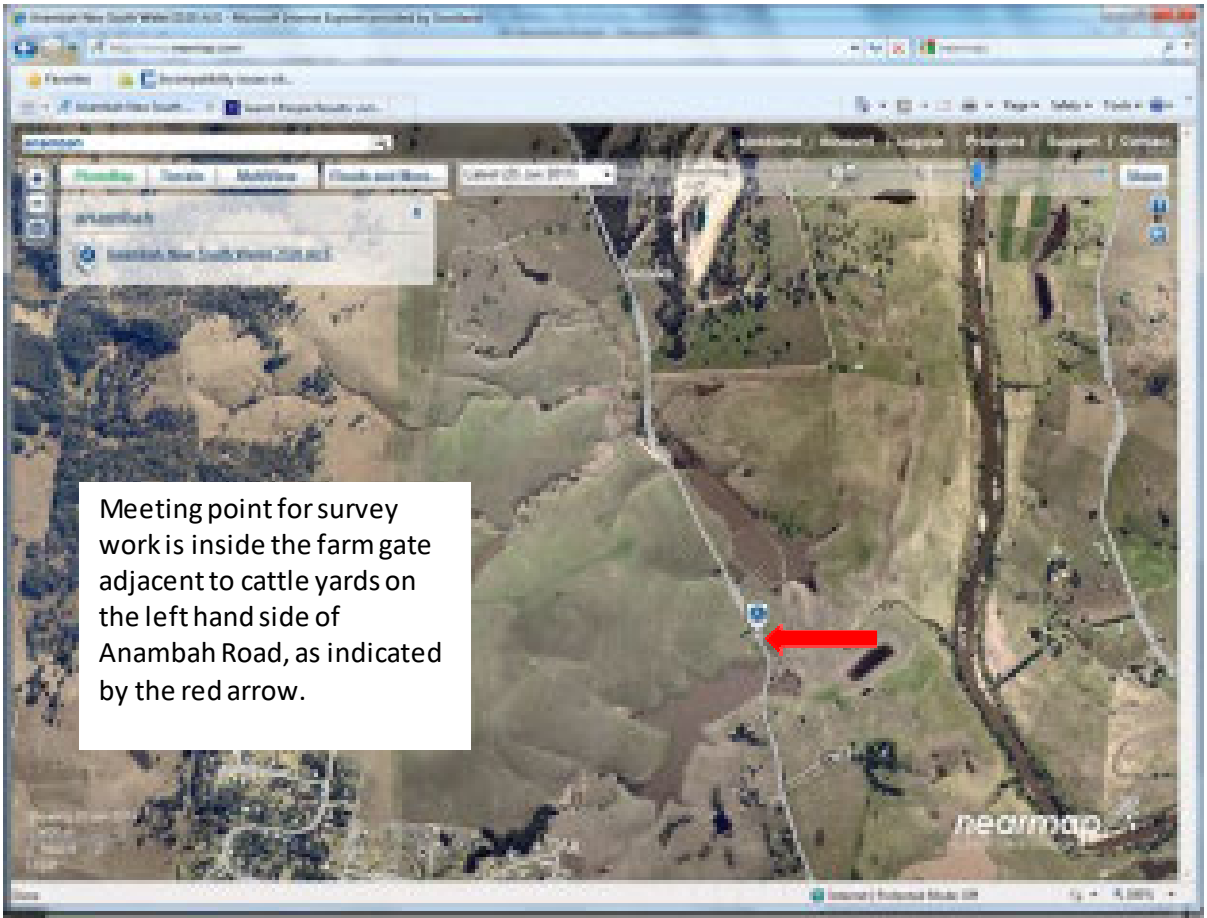
Importance: High

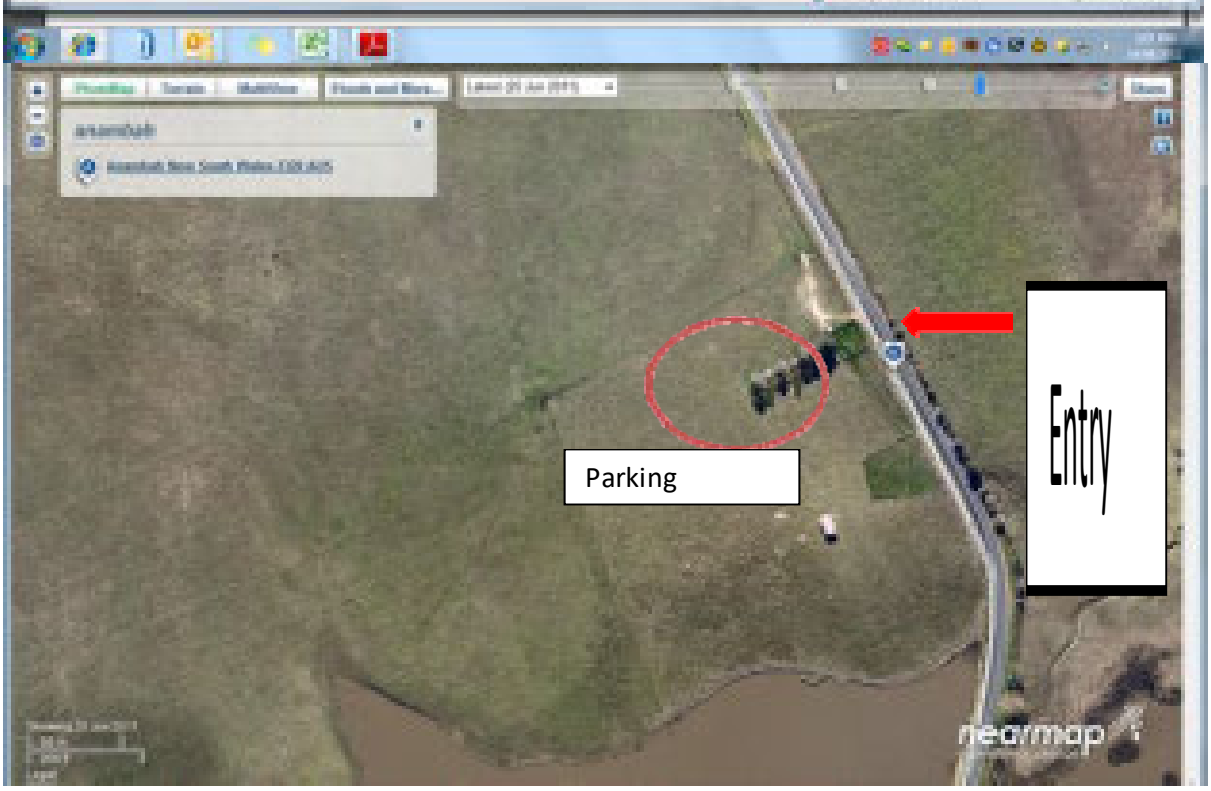
Our Ref: 12-0226fsi

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: Cowie, Diana
Sent: Tuesday, 14 August 2012 4:10 PM
To: 'wonnarua@bigpond.com.au'; 'l.perry@optusnet.com.au'
Subject: Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

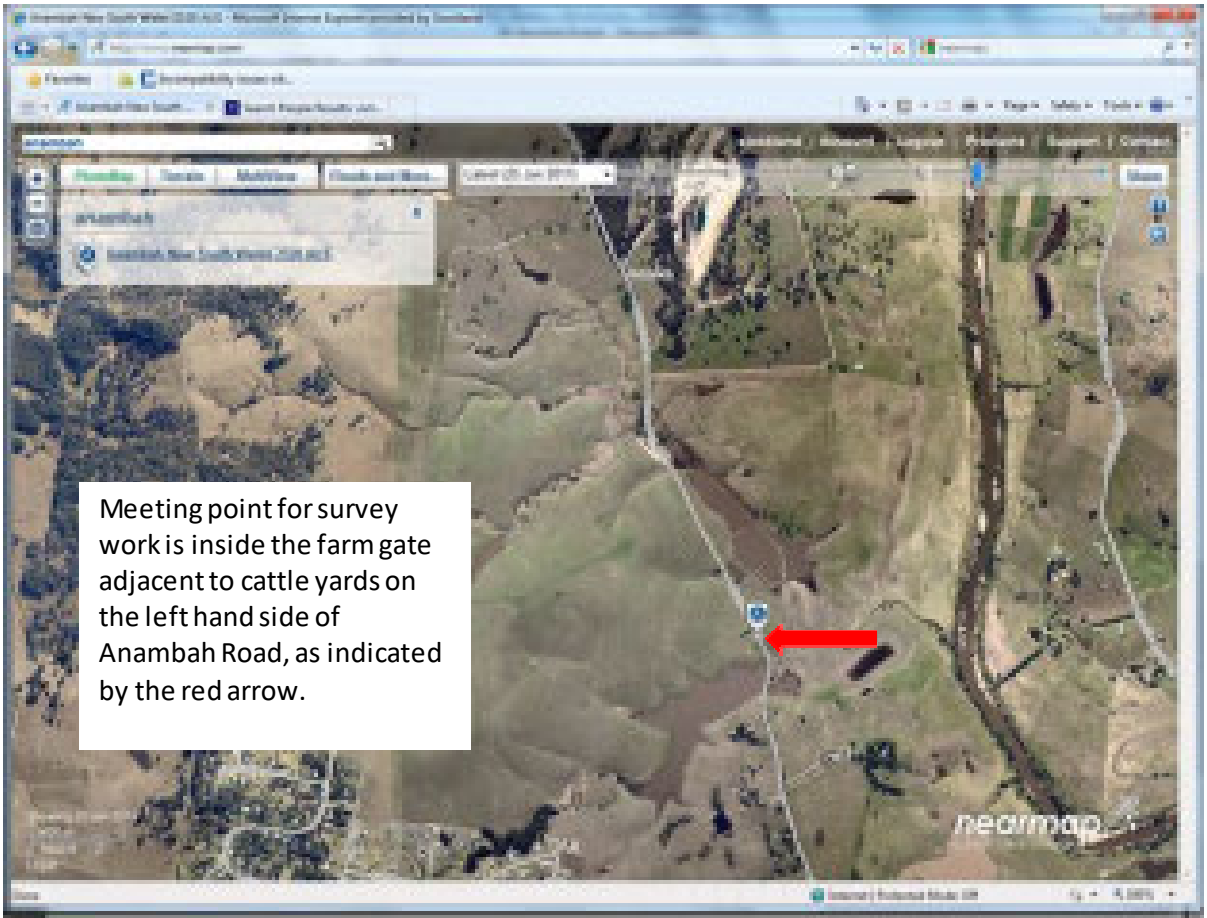
Importance: High

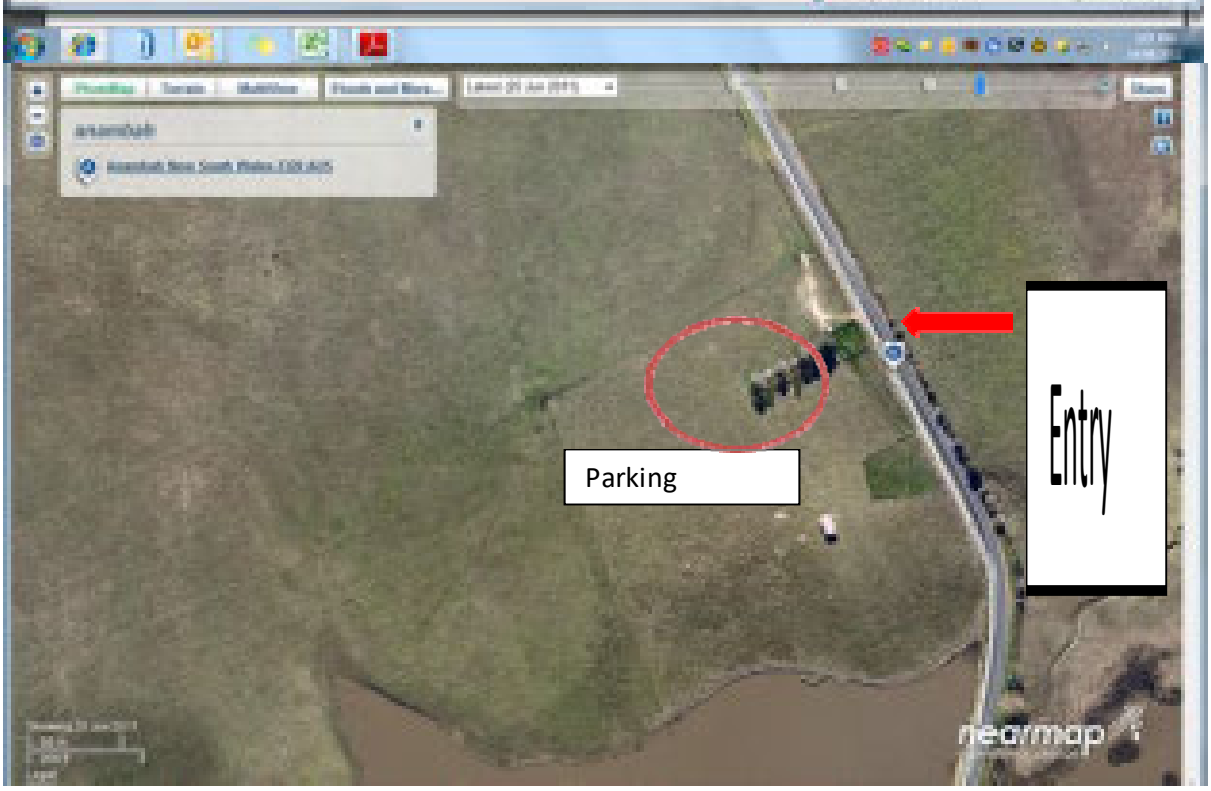
Our Ref: 12-0226fsi

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Roberts, Sian

From: Cowie, Diana
Sent: Thursday, 16 August 2012 4:25 PM
To: talbo.minda@hotmail.com
Subject: Anambah Field Survey Logistical Info

Dear Steve,

Thank you for your details and insurance papers which we successfully received today by fax. Please find the details for the survey below.

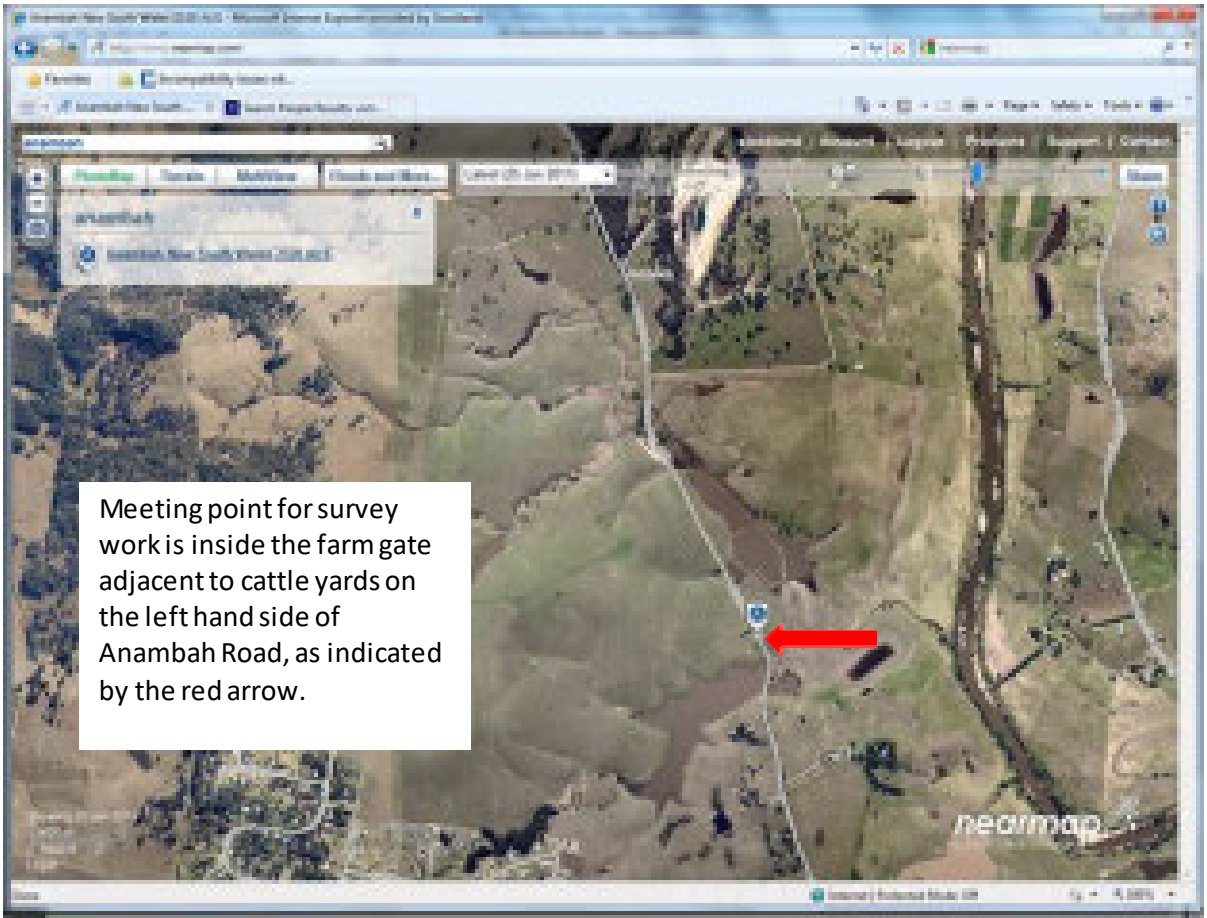
Our Ref: 12-0226fsi

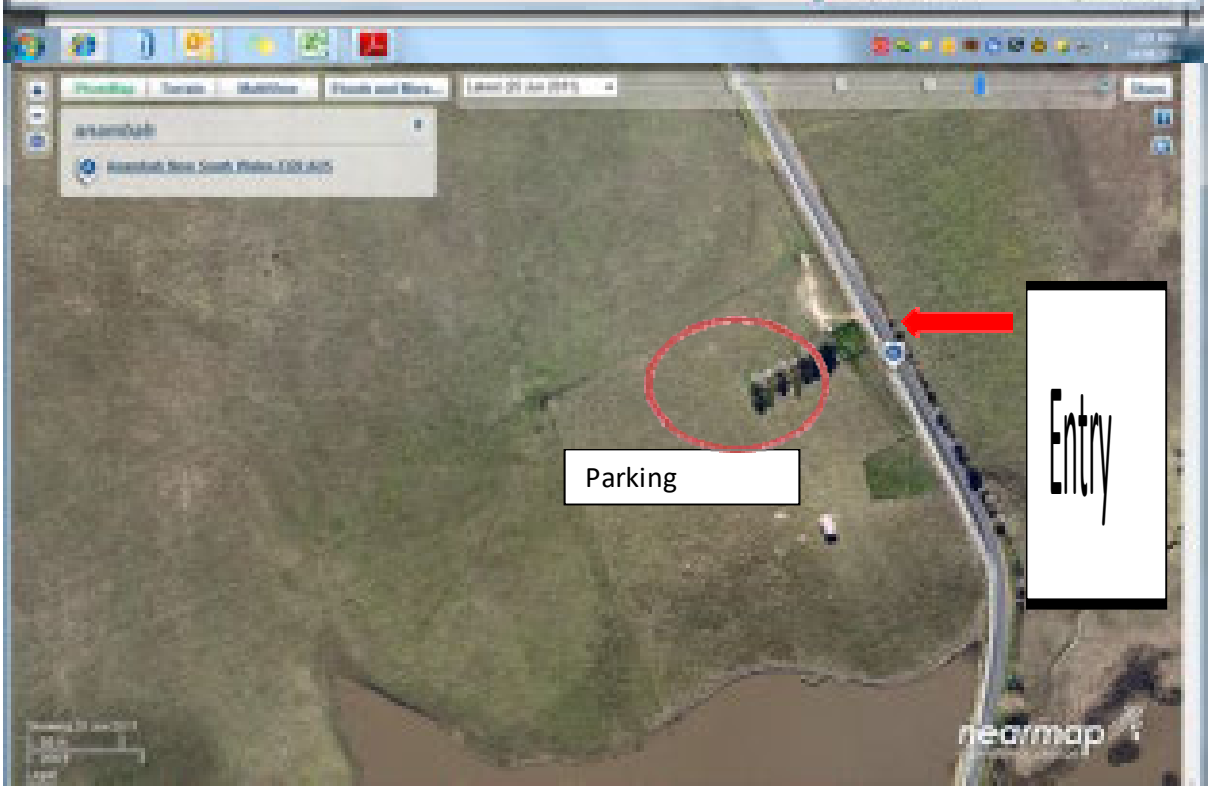
Re: Anambah Investigation Area, Archaeological and Cultural Assessment—Field Survey

Stockland and GML wish to invite one representative from your organisation to participate in the field survey of the Anambah Investigation Area which is to commence on Monday 20 August 2012 and run until approximately Thursday 23 August 2012.

The survey will commence at 7.30am and we will meet on Anambah Road at the point indicated in the below map. The day will conclude by 4pm. Please bring lunch and water for yourself. Appropriate PPE must be worn, including long sleeves, long pants, sturdy walking shoes or boots, and sunhat and sunglasses. High visibility clothing and hard hats are not required. There are no toilet facilities on site, but access to toilets will be facilitated during meal breaks.
Note: the work we will be undertaking will be physically demanding. As such in addition to having experience, the representatives supplied must be capable of physical labour. We will be undertaking a surveying on foot for a 7.5 hour day with two half hour meal breaks not included. Persons under the influence of drugs and/or alcohol will not be permitted on to site. Smoking, alcohol consumption or the use of illicit drugs on site will not be tolerated. Please ensure the person to participate will be able to undertake all these tasks without risk to themselves or other people, and would be willing to comply with all relevant rules and regulations of the site.

Stockland will pay a flat rate of $700 + GST per person, per group for participation. Invoices for this amount should be sent to:
Glyn Richards
Stockland
Level 25, 133 Castlereagh Street
Sydney NSW 2000





Yours sincerely

Diana Cowie | Consultant

Godden Mackay Logan | Heritage Consultants

78 George Street, Redfern NSW 2016

Tel: 02 9319 4811 Fax: 02 9319 4383

www.gml.com.au
ABN: 60-001-179-362
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of Godden Mackay Logan Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by Godden Mackay Logan Pty Ltd.

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 6:04 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: talbo.minda@hotmail.com

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Talbot
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 02, 2012 00:04 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnlYSHlxV2NUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 6:03 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: yinarrculturalservices@gmail.com

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Ms Steward
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 02, 2012 00:03 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnliR0tGa2RVag

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 6:02 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: wonnarua@bigpond.com.au
l.perry@optusnet.com.au

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Perry
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 02, 2012 00:01 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnlveE0wTWRVag

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 6:00 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: shannon_griffiths@y7mail.com

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Griffiths
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 02, 2012 00:00 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnlZY1JMWE1UQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:59 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: widescope.group@live.com

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Hickey
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:59 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnlFd2RFQmNUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:58 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: warragil_c.s@hotmail.com

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Slater
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:57 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnlwaFJ2Zk1UQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:56 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: abie@yarnteen.com.au

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Ms Wright
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:56 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnk5bEIzZU1UQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:55 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: schillo@yarnteen.com.au

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Schilings
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:55 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnl1Yk5EZU1UQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:51 PM
To: Owen, Tim
Subject: File Delivered: Anambah RRP and ARD

To: mareewaugh30@hotmail.com

Subject: Anambah RRP and ARD

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Ms Waugh
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:51 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnlwM2x1a3NUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:50 PM
To: Owen, Tim
Subject: File Delivered: Anambah RRP and ARD

To: tn.miller@southernphone.com.au
lea-anne.ball@bigpond.com

Subject: Anambah RRP and ARD

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Miller
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:49 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnlRR2ZIRHRVag

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:48 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: kawul-culturalservices@hotmail.com

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Hickey and Ms Slater
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:48 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhvQTZiR0tGa2RVag

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:47 PM
To: Owen, Tim
Subject: File Delivered: Anambah RRP and ARD

To: hvcs@optusnet.com.au

Subject: Anambah RRP and ARD

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Hickey
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:47 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhvQTZQb0twSHNUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:46 PM
To: Owen, Tim
Subject: File Delivered: Anambah RRP and ARD

To: drm.cm@hotmail.com

Subject: Anambah RRP and ARD

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Ms Faulkner
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:45 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhvQTZZY1JFQmNUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:44 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: deckavale@hotmail.com

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Vale
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:43 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhvQTZreENVbDhUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:36 PM
To: Owen, Tim
Subject: File Delivered: Anambah RRP and ARD

To: barkumanc@hotmail.com

Subject: Anambah RRP and ARD

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Ms Hickey
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:35 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhvQTZRR2VFTmNUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:34 PM
To: Owen, Tim
Subject: File Delivered: Anambah RRP and ARD

To: anigunya@hotmail.com

Subject: Anambah RRP and ARD

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Ms Faulkner
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:34 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhobEE0b0NHR3NUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:32 PM
To: Owen, Tim
Subject: File Delivered: Anambah RRP and ARD

To: anigunya@hotmail.com

Subject: Anambah RRP and ARD

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Ms Skene
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:31 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhobEFlM1JnRXNUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:26 PM
To: Owen, Tim
Subject: File Delivered: Anambah Rezoning Report

To: timo@gml.com.au
cacatua@resetdsl.net.au
cacatua4service@tpg.com.au

Subject: Anambah Rezoning Report

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr and Ms Sampson
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:26 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhobEFEbUx2WnNUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:53 PM
To: Owen, Tim
Subject: File Delivered: Anambah RRP and ARD

To: ceo@mindaribbalalc.org

Subject: Anambah RRP and ARD

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Riddiford
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:52 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhzNnlRYS9WUThUQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Tuesday, 9 October 2012 4:18 PM
To: Owen, Tim
Subject: File Delivered: RESENT - Anambah Rezoning Report with ARD

To: abie@yarnteen.com.au

Subject: RESENT - Anambah Rezoning Report with ARD

Message: Dear Mr Wright,
Please can you confirm you receive this email and have downloaded the report.

Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until October 21, 2012 22:17 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhYZm1UMGNsamRvZE1UQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Owen, Tim

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:26 PM
To: Owen, Tim
Subject: File Delivered: Anambah Rezoning Report

To: timo@gml.com.au
cacatua@resetdsl.net.au
cacatua4service@tpg.com.au

Subject: Anambah Rezoning Report

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr and Ms Sampson
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 23:26 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhobEFEbUx2WnNUQw

Options: Get a return receipt
You requested a Return Receipt for this transaction.
Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Owen, Tim

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:32 PM
To: Owen, Tim
Subject: File Delivered: Anambah RRP and ARD

To: anigunya@hotmail.com

Subject: Anambah RRP and ARD

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Ms Skene
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf -

16.14 MB

Expires: File will be available for download until November 01, 2012 23:31 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhobEFlM1JnRXNUQw

Options: Get a return receipt
You requested a Return Receipt for this transaction.
Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Owen, Tim

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 5:36 PM
To: Owen, Tim
Subject: File Delivered: Anambah RRP and ARD

To: barkumanc@hotmail.com

Subject: Anambah RRP and ARD

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Ms Hickey
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf -

16.14 MB

Expires: File will be available for download until November 01, 2012 23:35 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhvQTZRR2VFTmNUQw

Options: Get a return receipt
You requested a Return Receipt for this transaction.
Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Cameron, Jodi

From: YouSendIt <delivery@yousendit.com>
Sent: Friday, 5 October 2012 6:05 PM
To: Owen, Tim
Subject: File Delivered: Anambah ARD and RRP

To: deshickey@bigpond.com

Subject: Anambah ARD and RRP

Message: Our Ref: 12-0226
Re: Anambah—Field Survey Results and Archaeological Research Design
Dear Mr Hickey
Please find attached to this email the Anambah Rezoning Report which contains the results of the recent Field Survey and an Archaeological Research Design (ARD) for Test Excavation of the study area, under the OEH Code of Practice.
The proponent, Stockland, has commissioned the rezoning report to accompany their application for the land to be rezoned (initial stage of the development project) in preparation for residential development.
Test excavation will be undertaken to define the nature and extent of Aboriginal archaeology within the study area, prior to an AHIP application for the residential development. You will be invited to provide a participant for this excavation work in a paid capacity. GML anticipates that the test excavation will commence during November 2012 and extend into December 2012—a period of four weeks. We will contact you with further details once we are able to determine a start date.
In accordance with the OEH Aboriginal cultural heritage consultation requirements for proponents 2010, we invite you to review this report, including the ARD, and provide comments (written or verbal) within 28 days of the date of this email. Comments should be received by 2 November 2012.
If you have any specific comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area, we would be more than happy to discuss these with you. GML will respect all requests for comments or discussions to remain confidential, should you specify so.
Submissions should be forwarded to:
Diana Cowie
Godden Mackay Logan
78 George Street
REDFERN NSW 2016
Alternatively, responses can be submitted via email to dianac@gml.com.au, or by fax to (02) 9319 4383. If you have any further queries about this project, please contact Diana Cowie or Tim Owen in the GML Office on (02) 9319 4811.
Yours sincerely
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 02, 2012 00:05 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhWZFhnMm1CMTdxYk1UQw

Options: Get a return receipt

- You requested a Return Receipt for this transaction.
  Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

Owen, Tim

From: YouSendIt <delivery@yousendit.com>
Sent: Monday, 8 October 2012 9:57 AM
To: Owen, Tim
Subject: File Delivered: Anambah Rezoning Report - FS Results and Proposed ARD

To: roger.mehr@environment.nsw.gov.au

Subject: Anambah Rezoning Report - FS Results and Proposed ARD

Message: Dear Roger,
Please find attached to this email the Anambah Rezoning Report which includes the results of the field survey undertaken and the proposed methodology for test excavation under the code of practice. This report was provided to the RAPs on Friday for their review and comment. The RAPs were provided 28 days from Friday to comment on this report - ie 2 November.

Regards,
Godden Mackay Logan Pty Ltd

Diana Cowie
Consultant

File: 12-0465 Anambah Aboriginal Heritage ARD & Rezoning Report.pdf - 16.14 MB

Expires: File will be available for download until November 01, 2012 15:57 PDT

Here's the link to this file:
http://www.yousendit.com/download/TEhVblFFdkc0b0IzZU5Vag

Options: Get a return receipt
You requested a Return Receipt for this transaction.
Learn more

YouSendIt, Inc. | Privacy Policy
1919 S. Bascom Ave., Campbell, CA 95008

Message protected by SpamScreen: e-mail anti-virus, anti-spam and content filtering.
http://www.spamscreen.com.au

Report this message as spam

23 June 2014

Mrs Donna & Mr George Sampson
Cacatua Culture Consultants
Unit 1b/11 Glenwood Drive
THORNTON NSW 2322

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr & Mrs Sampson,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

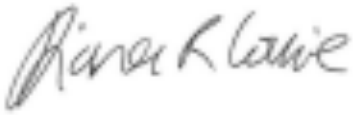
We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely

GML Heritage Pty Ltd

GML HERITAGE



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Ms Tracey Skene
Culturally Aware
7 Crawford Place
MILLFORD NSW 2325

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Skene,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

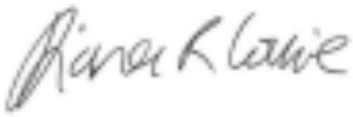
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Derrick Vale Sr
D F T V Enterprises
5 Mountbatten Close
RUTHERFORD NSW 2320

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Vale,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

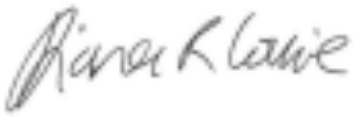
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Ms Helen Faulkner
DRM Cultural Management
81 Wansbeck Valley Rd
CARDIFF NSW 2285

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Faulkner,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

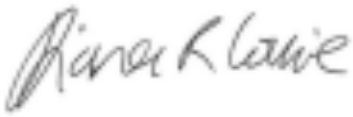
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Ms Ann Hickey
Gidawaa Walang Cultural Heritage Consultancy
76 Lang Street
KURRI KURRI NSW 2327

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Hickey,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

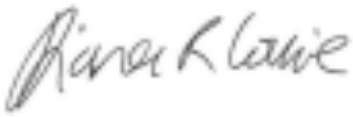
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Stephen Talbott
Gomeroi Namoi Traditional Owners
73 Kiah Road
GILLIESTON HEIGHTS NSW 2321

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Talbott,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

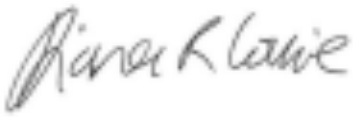
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Luke Hickey
Hunter Valley Cultural Surveying
165 Susan St
SCONE NSW 2337

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Hickey,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

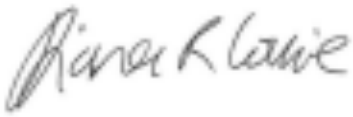
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Rod Hickey & Ms Vicky Slater
Kawul Cultural Services
PO Box 817
SINGLETON NSW 2330

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Hickey & Ms Slater,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

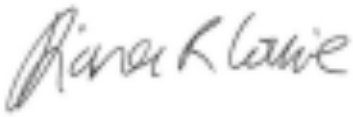
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Tommy Miller
Lower Hunter Wonnarua Council Inc
51 Bowden Street
HEDDON GRETA NSW 2321

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Miller,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

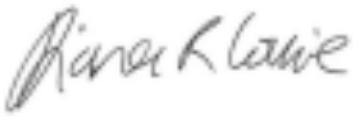
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Ms Maree Waugh
TA Wallangan Cultural Services
29 Anzac Ave
CESSNOCK NSW 2325

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Waugh,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

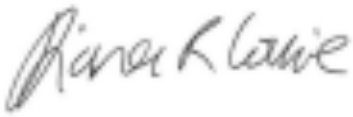
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Ms Leanne Ball
Mindaribba Local Aboriginal Land Council
PO Box 401
EAST MAITLAND NSW 2323

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Ball,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

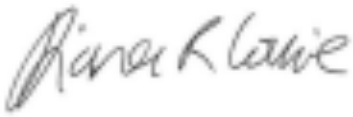
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Warren Schillings
Myland Cultural & Heritage Group
30 Taurus St
ELERMORE VALE NSW 2287

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Schillings,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

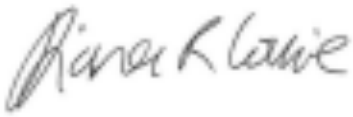
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Abie Wright
Ngarramang-Kuri Aboriginal Culture & Heritage Group
21 Bancroft St
GLENDALE NSW 2285

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Wright,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

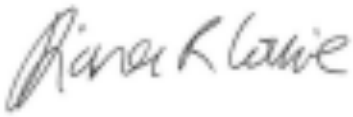
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Ms Rhoda Perry & Ms Georgina Berry
Upper Hunter Wonnarua Council Inc
PO Box 184
SINGLETON NSW 2330

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Perry and Ms Berry,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

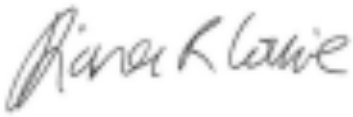
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Tony Griffiths
T & G Culture Consultants
19 O'Donnell Cresent
METFORD NSW 2323

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Griffiths,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

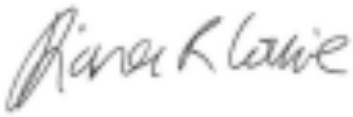
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Aaron Slater
Warragil Cultural Services
PO Box 1095
SINGLETON NSW 2330

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Slater,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

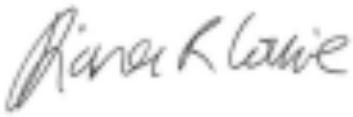
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Des Hickey
Wattaka Wonnarua Cultural Consultancy Services
4 Kennedy Street
SINGLTEON NSW 2330

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Hickey,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd

Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Steven Hickey
Widescope Indigenous Group Pty Ltd
73 Russell St
EMU PLAINS NSW 2750

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Hickey,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

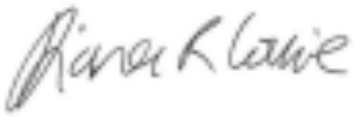
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Arthur Fletcher
Wonn1 Contracting
619 Main Road
GLENDALE NSW 2285

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Fletcher,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

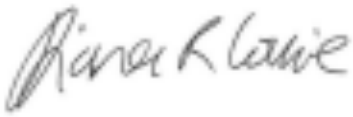
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Shannon Griffiths
Wonnarua Culture Heritage
19 O'Donnell Crescent
METFORD NSW 2323

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Griffiths,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

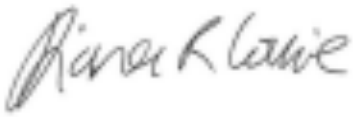
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Mr Laurie Perry
Wonnarua Nation Aboriginal Corporation
PO Box 3066
SINGLETON NSW 2330

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Perry,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

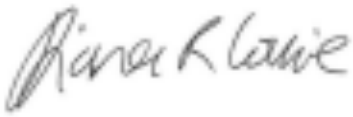
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Ms Kathleen Steward/ Kinchella
Yinarr Cultural Services
111 Westwood Road
GUNGAL NSW 2333

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Steward/ Kinchella,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

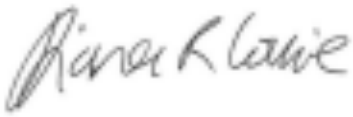
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Ms Margaret Mathews
Aboriginal Native Title Elders Consultants
16a Mahogany Street
MUSWELLBROOK NSW 2333

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Mathews,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

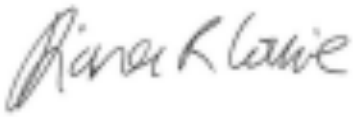
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

23 June 2014

Ms Amanda Hickey
41 Dempsey Street
EMU HEIGHTS NSW 2750

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Hickey,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) will commence shortly at the Mindaribba Local Aboriginal Land Council.

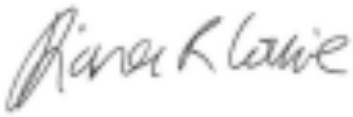
Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely
GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

22 May 2015

Ms Kathleen Steward/ Kinchella
Yinarr Cultural Services
111 Westwood Road
GUNGAL NSW 2333

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Steward/ Kinchella,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) has commenced and is ongoing at the Mindaribba Local Aboriginal Land Council. The cataloguing of all the objects is nearing completion and analysis has been occurring as each area is catalogued.

Here are a few points from the analysis so far:

- It is quite evident that primary reduction of raw stone material is being conducted within the Anambah study area. This is evident in the large cortical flakes, large hertzian cones and many large conesplit flakes which are the result of heavy force, typical of the significant effort required to initially “quarter” a cobble into large fragments, which subsequently serve as the body of cores for small flakes and tools.
- Fine backed blade production is still going on at the Anambah site amongst primary reduction.
- The cortex on many large cobbles is typical of a terrestrial cobble source which supports the view that the primary reduction is taking place at Anambah on cobbles obtained locally from the ground, not sourced from Hunter River cobble beds. While all the cobbles came from near to the creeks (deposited there by flowing water action), the cobbles have not been bounced along a river bed for a very very long time.

Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to

protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely

GML Heritage Pty Ltd

Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

22 May 2015

Ms Margaret Mathews
Aboriginal Native Title Elders Consultants
16a Mahogany Street
MUSWELLBROOK NSW 2333

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Mathews,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) has commenced and is ongoing at the Mindaribba Local Aboriginal Land Council. The cataloguing of all the objects is nearing completion and analysis has been occurring as each area is catalogued.

Here are a few points from the analysis so far:

- It is quite evident that primary reduction of raw stone material is being conducted within the Anambah study area. This is evident in the large cortical flakes, large hertzian cones and many large conesplit flakes which are the result of heavy force, typical of the significant effort required to initially “quarter” a cobble into large fragments, which subsequently serve as the body of cores for small flakes and tools.
- Fine backed blade production is still going on at the Anambah site amongst primary reduction.
- The cortex on many large cobbles is typical of a terrestrial cobble source which supports the view that the primary reduction is taking place at Anambah on cobbles obtained locally from the ground, not sourced from Hunter River cobble beds. While all the cobbles came from near to the creeks (deposited there by flowing water action), the cobbles have not been bounced along a river bed for a very very long time.

Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely

GML Heritage Pty Ltd

Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

22 May 2015

Ms Rhoda Perry & Ms Georgina Berry
Upper Hunter Wonnarua Council Inc
PO Box 184
SINGLETON NSW 2330

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Ms Perry and Ms Berry,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) has commenced and is ongoing at the Mindaribba Local Aboriginal Land Council. The cataloguing of all the objects is nearing completion and analysis has been occurring as each area is catalogued.

Here are a few points from the analysis so far:

- It is quite evident that primary reduction of raw stone material is being conducted within the Anambah study area. This is evident in the large cortical flakes, large hertzian cones and many large conesplit flakes which are the result of heavy force, typical of the significant effort required to initially “quarter” a cobble into large fragments, which subsequently serve as the body of cores for small flakes and tools.
- Fine backed blade production is still going on at the Anambah site amongst primary reduction.
- The cortex on many large cobbles is typical of a terrestrial cobble source which supports the view that the primary reduction is taking place at Anambah on cobbles obtained locally from the ground, not sourced from Hunter River cobble beds. While all the cobbles came from near to the creeks (deposited there by flowing water action), the cobbles have not been bounced along a river bed for a very very long time.

Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal

archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

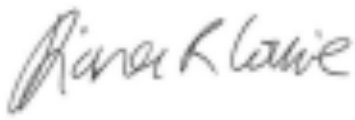
We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely

GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

22 May 2015

Mr Shannon Griffiths
Wonnarua Culture Heritage
19 O'Donnell Crescent
METFORD NSW 2323

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Griffiths,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) has commenced and is ongoing at the Mindaribba Local Aboriginal Land Council. The cataloguing of all the objects is nearing completion and analysis has been occurring as each area is catalogued.

Here are a few points from the analysis so far:

- It is quite evident that primary reduction of raw stone material is being conducted within the Anambah study area. This is evident in the large cortical flakes, large hertzian cones and many large conesplit flakes which are the result of heavy force, typical of the significant effort required to initially “quarter” a cobble into large fragments, which subsequently serve as the body of cores for small flakes and tools.
- Fine backed blade production is still going on at the Anambah site amongst primary reduction.
- The cortex on many large cobbles is typical of a terrestrial cobble source which supports the view that the primary reduction is taking place at Anambah on cobbles obtained locally from the ground, not sourced from Hunter River cobble beds. While all the cobbles came from near to the creeks (deposited there by flowing water action), the cobbles have not been bounced along a river bed for a very very long time.

Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely

GML Heritage Pty Ltd

Diana Cowie
Heritage Consultant, Archaeologist

GML HERITAGE

Sydney Office
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811
F +61 2 9319 4383
E heritage@gml.com.au

Canberra Office
2A Mugga Way Red Hill
ACT Australia 2603
T +61 2 6273 7540
F +61 2 6273 8114
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

22 May 2015

Mr Tony Griffiths
T & G Culture Consultants
19 O'Donnell Cresent
METFORD NSW 2323

Our Ref: 12-0226

Re: Anambah Aboriginal Heritage Assessment Project

Dear Mr Griffiths,

I am writing to you on behalf of Stockland to provide you with an update on the Anambah Aboriginal Heritage Assessment Project and proposed future Aboriginal Heritage Impact Permit.

The artefact analysis of the objects collected during the first and second Anambah test excavation seasons that were completed in accordance with *The Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Department of Environment Climate Change & Water (DECCW) 2010) has commenced and is ongoing at the Mindaribba Local Aboriginal Land Council. The cataloguing of all the objects is nearing completion and analysis has been occurring as each area is catalogued.

Here are a few points from the analysis so far:

- It is quite evident that primary reduction of raw stone material is being conducted within the Anambah study area. This is evident in the large cortical flakes, large hertzian cones and many large conesplit flakes which are the result of heavy force, typical of the significant effort required to initially “quarter” a cobble into large fragments, which subsequently serve as the body of cores for small flakes and tools.
- Fine backed blade production is still going on at the Anambah site amongst primary reduction.
- The cortex on many large cobbles is typical of a terrestrial cobble source which supports the view that the primary reduction is taking place at Anambah on cobbles obtained locally from the ground, not sourced from Hunter River cobble beds. While all the cobbles came from near to the creeks (deposited there by flowing water action), the cobbles have not been bounced along a river bed for a very very long time.

Once the results of this analysis are known, further communication will be provided detailing future management of each of the identified Aboriginal archaeological sites within the Anambah study area. Possible management

options for sites may include leaving sites in situ as is, capping of sites to protect them, community collection as part of a process of top soil stripping (for sites and area which had very low Aboriginal object counts and no site features), two stage salvage excavation and reburial of objects within Country. All of these management strategies will be dependent upon the approval of an Aboriginal Heritage Impact Permit.

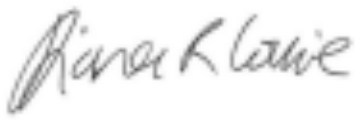
We anticipate that the management strategy for each site will be unique to that site and each strategy for each site will be determined based on cultural values and significance, the opportunity that the site presents for education, and the scientific values of the site.

We look forward to your future input on this and will facilitate opportunities for the discussion of and planning around appropriately managing the Aboriginal heritage within this study area.

Thank you for your patience and assistance during this project so far.

Yours sincerely

GML Heritage Pty Ltd



Diana Cowie
Heritage Consultant, Archaeologist

Appendix C

Consultation Letters and Advertisement 2021

Aboriginal Consultation Log—Anambah Aboriginal Heritage AHIP—21-0037

2012 Consultation

The Anambah project commenced in 2012, adhering to DECCW 2010 guidelines for consultation. In 2012 the project undertook consultation to the end of archaeological test excavation, at which point the project was put on halt. At that point consultation ceased. In 2021 the project was recommenced. We consulted with Heritage NSW on the requirements for consultation (30 April 2021). It was agreed that the project should provide all 2012 consultation (which is presented separate to this consultation log), and that 2021 consultation should re-recommence from Stage 1 Step 1. The registration process resulted in 14 parties registering (termed the Registered Aboriginal Parties [RAPs]).

This process identified that eight 2012 RAPs were not on the current Heritage NSW lists, and had not registered. We contacted each of these eight former RAPs and invited their registrations. One 2012 RAP requested to register for the 2021 process.

The project therefore has 15 RAPs. The following tables provide information on the 2021 and 2022 consultation processes. COVID management has delayed certain aspects of the project, and there have been periods when the project was placed on hold. RAP consultation has occurred during these periods, and is listed at the end of this log, titled 'Stage 4—project updates'.

Stage 1—Notification of Project Proposal and Registration of Interest

Stage 1, Step 1—Contacting relevant authorities

The following statutory authorities were contacted at the commencement of the 2021 consultation.

Body/Group	Contact Information	Date Sent Date Reply	Response/Comment
Heritage NSW	heritagemailbox@environment.nsw.gov.au	16/03/2021 26/03/2021	PDF list provided
Mindaribba Local Aboriginal Land Council (LALC)	admin@mindaribbalalc.org	17/03/2021 16/04/2021	Registered for project
The Registrar, Aboriginal Lands Right Act 1983	jodie.rikiti2@oralra.nsw.gov.au	16/03/2021	
National Native Title Tribunal (NNTT)	GeospatialSearch@NNTT.gov.au	16/03/2021 18/03/2021	No Native Title Applications or Determinations Identified
Native Title Services Corporation (NTSCORP Limited)	information@ntscorp.com.au	16/03/2021	
Maitland City Council	info@maitland.nsw.gov.au	16/03/2021 25/03/2021	Identified 4 groups to contact
Hunter Local Land Services	admin.hunter@lls.nsw.gov.au	16/03/2021	

After a meeting with Heritage NSW, it was determined that a special invitation to register should be sent to those RAPs involved in the 2012 project, but who were not on the 2021 Heritage NSW list. These former RAPs are listed below, and all were invited to register in the project.

One group responded and stated they wanted to remain a RAP in 2021. No response was received from the other groups.

Organisation	Date Sent / Date Reply	Response/Comment
Aboriginal Native Title Elders Consultants	5/05/2021	No response was received. Not registered as a project RAP.
Amanda Hickey Cultural Services	5/05/2021	No response was received. Not registered as a project RAP.
DRM Cultural Management	5/05/2021	No response was received. Not registered as a project RAP.
Gidawaa Walang Cultural Heritage Consultancy	5/05/2021	No response was received. Not registered as a project RAP.
Kawul Cultural Services	5/05/2021	No response was received. Not registered as a project RAP.
Ngarramang-Kuri Aboriginal Culture & Heritage Group	5/05/2021	No response was received. Not registered as a project RAP.
Upper Hunter Wonnarua Council Inc	5/05/2021 12/05/2021	Registered for the project by phone. We sent an email confirming their registration.
Warragil Cultural Services	5/05/2021	No response was received. Not registered as a project RAP.

Stage 1, Step 2—Contacting people identified in Stage1, Step 1 & Newspaper notification

Statutory authority consultation identified the following groups and individuals, who were sent an invitation to register for the project. The invitation was sent on 31 March 2021, with a registration cut-off date of 16 April 2021. This provided 17 days for Aboriginal people to register an interest in the project.

Details of those groups/individuals invited to register, and the 14 responses are detailed in the following table.

Organisation	Contact Information	Date Sent / Date Reply	Response / Comment
A1 Indigenous Services	cazadirect@live.com	31/03/2021	
AGA Services	aga.services@hotmail.com	31/03/2021 01/04/2021	Registered by email
Aliera French Trading	alierafrenchtrading@outlook.com	31/03/2021	
Arwarbukarl Cultural Resource Association, Miromaa Aboriginal Language and Technology Centre	contact@acra.org.au	31/03/2021	
Awabakal & Guringai Pty LTD	tracey@guringai.com.au kerrie@awabakal.com.au	31/03/2021	
Awabakal Descendants Traditional Owners	PO Box 137 BUDGEWOI NSW 2262	31/03/2021	

Organisation	Contact Information	Date Sent / Date Reply	Response / Comment
Awabakal Traditional Owners Aboriginal Corporation	kerrie@awabakal.com.au	31/03/2021 21/04/2021	Late registration by email
Cacatua Culture Consultants	cacatua4service@tpg.com.au	31/03/2021 01/04/2021	Registered by email
Anonymous	XXX	31/03/2021 9/04/2021	Registered by phone – Details to be kept anonymous
Council's Aboriginal Reference Group and RAP Working Group facilitator Emily Livens	emily.livens@maitland.nsw.gov.au	31/03/2021 6/04/2021	Advised that we should contact the Mindaribba LALC Did not register for the project
Crimson-Rosie	6 Eucalypt Avenue MUSWELLBROOKE NSW 2333	31/03/2021	
Culturally Aware	tracey@marrung-pa.com.au	31/03/2021 31/03/2021	Registered by email
D F T V Enterprises	deckavale@hotmail.com	31/03/2021	
Deslee Talbott Consultants	m-desley@hotmail.com	31/03/2021	
Didge Ngunawal Clan	didgengunawalclan@yahoo.com.au	31/03/2021 31/03/2021	Registered by email
Divine Diggers Aboriginal Cultural Consultants	dedemaree3@hotmail.com	31/03/2021	
Gidawaa Walang & Barkuma Neighbourhood Centre Inc	gidawaa.walang@hotmail.com	31/03/2021	
Guraki Aboriginal Advisory Committee	leastwood@ncc.nsw.gov.au	31/03/2021	
Hunter Traditional Owner	hto.paulette@gmail.com	31/03/2021	
Hunter Valley Cultural Surveying	microlith99@gmail.com	31/03/2021	
Hunters & Collecters	tamatthews10@hotmail.com	31/03/2021	
Indigenous Learning	indiglearning@gmail.com	31/03/2021	
Jarban & Mugrebea	les.atkinson@hotmail.com	31/03/2021 31/03/2021	Registered by email
Jumbunna Traffic Management Group PTY LTD	jtmanagement@live.com.au	31/03/2021	
Kauma Pondee Inc.	kaumapondee@live.com.au	31/03/2021	
Kawul Pty Ltd. Trading as Wonn1 Sites	wonn1sites@gmail.com	31/03/2021 31/03/2021	Registered by email
Kevin Duncan	kevin.duncan@bigpond.com	31/03/2021	
Lower Hunter Aboriginal Incorporated	lowerhunterai@gmail.com	31/03/2021	

Organisation	Contact Information	Date Sent / Date Reply	Response / Comment
Lower Hunter Wonnarua Cultural Services	lhwcs.lea@gmail.com	31/03/2021	
Lower Wonnaruah Tribal Consultancy Pty Ltd	156 The Inlet Road BULGA NSW 2330	31/03/2021	
Mayaroo	rara02@bigpond.com	31/03/2021	
Michael Green Cultural Heritage Constultant	bunyipnick50@gmail.com	31/03/2021	
Mindaribba Local Aboriginal Land Council	ceo@mindaribbalalc.org	31/03/2021 16/04/2021	Registered by email
Murra Bidgee Mullangari Aboriginal Corporation	murrabidgeemullangari@yahoo.com.au	31/03/2021	
Myland Cultural & Heritage Group	warren@yarnteen.com.au	31/03/2021	
Roger Matthews Consultancy	105 View Street GUNNEDAH NSW 2388	31/03/2021	
Steve Talbott	gomeroi.namoi@outlook.com	31/03/2021	
Ungooroo Aboriginal Corporation	admin@ungooroo.com.au	31/03/2021	
Wallagan Cultural Services	wallangan@outlook.com	31/03/2021 01/04/2021	Registered by email
Wattaka Wonnarua CC Service	deshickey@bigpond.com	31/03/2021	
Widescope Indigenous Group	widescope.group@live.com	31/03/2021 07/02/2021	Registered by email
Wollotuka Institute (University of Newcastle)	wollotuka@newcastle.edu.au	31/03/2021	
Wonnarua Cultural Heritage	19 O'Donnell Cresent METFORD NSW 2323	31/03/2021	
Wonnarua Elders Council	PO Box 844 CESSNOCK NSW 2325 dawnrichard@bigpond.com	31/03/2021 21/04/2021	Late registration by email
Wonnarua Nation Aboriginal Corporation	l.perry@optusnet.com.au	31/03/2021 16/04/2021	Registered be email
Worimi Local Aboriginal Land Council	andrew@worimi.org.au	31/03/2021	
Yarrawalk	scott@tocomwall.com.au	31/03/2021 31/03/2021	Registered by phone
Yinarr Cultural Services	yinarculturalservices@bigpond.com dontminemeay@gmail.com	31/03/2021	

A newspaper advertisement was placed in the Maitland Mercury on 2 April 2021. This invited local Aboriginal persons/groups to register for consultation by 16 April 2021. There were no responses to the newspaper advertisement.

Newspaper	Date Published
Maitland Mercury	2 April 2021

Stage 1, Step 3—Registered Aboriginal Parties (RAPs) and LALC/Heritage NSW Notification

Following the formal registration process in 2021 (including adhering to the Heritage NSW requirement to offers the 2012 RAPs registration) the project has 15 Registered Aboriginal Parties (RAPs). These groups are detailed in the following table.

All groups have active email addresses, and all future project correspondence will be sent by email to these groups.

Registered Aboriginal Party	Contact Information
AGA Services	Gregory Sampson, Ashley Sampson and Adam Sampson aga.services@hotmail.com
Anonymous RAP	XXX
Awabakal Traditional Owners Aboriginal Corporation	Kerrie Brauer kerrie@awabakal.com.au
Cacatua Culture Consultants	George Sampson cacatua4service@tpg.com.au
Culturally Aware	Tracey Skene tracey@marrung-pa.com.au
Didge Ngunawal Clan	Paul Boyd and Lilly Carroll didgengunawalclan@yahoo.com.au 0426823944
Jarban & Mugrebea	Les Atkinson les.atkinson@hotmail.com
Kawul Pty Ltd. Trading as Wonn1 Sites	Arthur Fletcher wonn1sites@gmail.com
Mindaribba LALC	ceo@mindaribbalalc.org
Upper Hunter Wonnarua Council Inc	Rhonda yunaga1@bigpond.com
Wallangan Cultural Services	Maree Waugh wallangan@outlook.com 0439813078
Widescope Indigenous Group	Steven Hickey widescope.group@live.com
Wonnarua Elders Council	Richard Edwards dawnrichard@bigpond.com
Wonnarua Nation Aboriginal Corporation	laurie.perry2020@outlook.com 0412 593 020

Registered Aboriginal Party	Contact Information
Yarrawalk (Tocomwall)	Scott Franks scott@tocomwall.com.au

A copy of the registered Aboriginal parties, invitation to register and newspaper notice have been provided to the Mindaribba LALC and Heritage NSW within 28 days of the closing data for registering an interest.

Organisation	Date Sent
Mindaribba LALC	30/04/2021
Heritage NSW	30/04/2021

Stage 2—Project Presentation and Gathering Information about Cultural Significance of the Proposed Project

Stage 2, Step 1—RAP Review of ARD/Methodology

Information on the project and the proposed research methodology for continuing the work was issued to all RAPs on 30 April 2021. Responses were requested by 30 May 2021.

Due to the alterative registration method of the Upper Hunter Wonnarua Council Inc, they were provided the methodology on 5 May, and provided one month to respond. They both registered and responded to the requests on 12 May, providing a verbal submission.

Registered Aboriginal Party	Date Sent/Date Reply	Response/Comment
AGA Services	30/04/2021	No response
Anonymous RAP	30/04/2021 13/05/2021	Email response. Approves ARD and request to attend site visit
Awabakal Traditional Owners Aboriginal Corporation	30/04/2021	No response
Cacatua Culture Consultants	30/04/2021	No response
Culturally Aware	30/04/2021	No response
Didge Ngunawal Clan	30/04/2021 30/04/2021	Email response. Request to attend site visit
Jarban & Mugrebea	30/04/2021	No response
Kawul Pty Ltd. Trading as Wonn1 Sites	30/04/2021	No response
Mindaribba LALC	30/04/2021	No response
Upper Hunter Wonnarua Council Inc	05/05/0201 12/05/2021	Verbal response. Approves ARD and request to attend site visit
Wallangan Cultural Services	30/04/2021	No response
Widescope Indigenous Group	30/04/2021 2/05/2021	Email response. Approves ARD and request to attend site visit
Wonnarua Elders Council	30/04/2021	No response
Wonnarua Nation Aboriginal Corporation	30/04/2021	No response

Registered Aboriginal Party	Date Sent/Date Reply	Response/Comment
Yarrawalk (Tocomwall)	30/04/2021 10/05/2021	Email response. Approves ARD and request to attend site visit

Stage 2, Step 2—Site Inspection

Given that the formal archaeological survey and test excavation were undertaken in 2012, the project sought to reengage with the RAPs through an alternative process. Initially we proposed all RAPs would be able to inspect the study area for re-familiarization and discussion of the project's heritage results, outcomes and proposed management. The invitation was sent on 17 June, and the inspection was planned for 5 July 2021. Responses confirming attendance were received from six of the Raps. These register of invitation and response is shown in the table below.

However, NSW government COVID measures prevented this inspection occurring. An alternative date for the site inspection with RAPs was proposed for 19 July 2021, however this also had to be cancelled due to further COVID restrictions.

Due to issues associated with COVID, a site inspection could not be undertaken in August to September 2021. An alternative proposal was developed in the form of an online workshop, and all RAPs were asked to attend an online workshop event. An invitation to register and nominate a date was send on 1 September 2021. Only one response was received to this invitation (anonymous RAP, 1 September), and in discussion with Roche, it was determined that this was probably not a suitable forum for development of ACH management.

At this point a decision was made to postpone the site inspection until NSW COVID regulations and restrictions changed.

Registered Aboriginal Party	Date Sent/Date Reply	Response/Comment/Representative
AGA Services	17/06/2021	Invitation sent. No response
Anonymous RAP	17/06/2021	Invitation sent, confirmed site attendance
Awabakal Traditional Owners Aboriginal Corporation	17/06/2021	Invitation sent. No response
Cacatua Culture Consultants	17/06/2021	Invitation sent. No response
Culturally Aware	17/06/2021	Invitation sent, confirmed site attendance
Didge Ngunawal Clan	17/06/2021	Invitation sent, confirmed site attendance
Jarban & Mugrebea	17/06/2021	Invitation sent. No response
Kawul Pty Ltd. Trading as Wonn1 Sites	17/06/2021	Invitation sent, confirmed site attendance
Mindaribba LALC	17/06/2021	Invitation sent. No response
Upper Hunter Wonnarua Council Inc	17/06/2021 23/06/2021	Invitation sent. Confirmed site attendance
Wallangan Cultural Services	17/06/2021	Invitation sent. No response
Widescope Indigenous Group	17/06/2021	Invitation sent. No response
Wonnarua Elders Council	17/06/2021	Invitation sent. No response
Wonnarua Nation Aboriginal Corporation	17/06/2021	Invitation sent. No response
Yarrawalk (Tocomwall)	17/06/2021 21/06/2021	Invitation sent Confirmed site attendance

Stage 2—Project Updates

Following the proposal for a site inspection, and the inability to hold this due to COVID, Roche place the project on a temporary hold. A series of updates have been provided to the RAPs which are listed below.

These project updates are dated 1 March 2022, 18 July 2022, and 25 November 2022. In 2023 the project recommenced assessment and further updates to the RAPs were sent on 15 May and 13 November.

Limited responses have been received from the RAPs. No email bounce backs occurred. Responses if received are detailed below.

Organisation	Update 1 1 March 2022	Update 2 18 July 2022	Update 3 25 November 2022	Update 4 15 May 2023	Update 5 13 Nov 2023
AGA Services	—	—	—	—	
Awabakal Traditional Owners Aboriginal Corporation	—	—	Email response 28.11.23	—	
Cacatua Culture Consultants	—	—	—	—	
Corroboree Aboriginal Corporation	—	—	—	—	
Culturally Aware	—	—	Email response 26.11.22	—	
Didge Ngunawal Clan	—	—	—	—	
Jarban & Mugrebea	—	—	—	—	
Kawul Pty Ltd. Trading as Wonn1 Sites	—	—	Email response 25.11.22	—	
Mindaribba Local Aboriginal Land Council	—	—	—	—	
Wallagan Cultural Services	—	—	—	—	
Widescope Indigenous Group	—	—	—	—	
Wonnarua Elders Council	—	—	—	—	
Wonnarua Nation Aboriginal Corporation	—	—	—	—	
Yarrawalk	—	—	—	—	
Upper Hunter Wonnarua Council Inc	—	—	—	—	

Stage 3—Review of draft Aboriginal Cultural Heritage Assessment Report

Stage 3, Step 1—RAP Review of draft ACHAR

The ACHAR and ATR were supplied to the RAPs for review on 16 November 2023. To facilitate the review process and provide all RAPs an opportunity to ask questions, and inspect any part of the site, a site visit day (in a paid capacity) was provided on 7 December. This was attended by Arthur Fletcher and Paul Boyd, with apologies from the MLALC and Tracey Skene. At this meeting a request was made to extent the review period. It was agreed that a further two weeks could be allowed, which provided a response date of 25 January 2024.

On 7 December, following the site visit, an update advising all RAPs of the review, providing the links to the report, and the new date for review return to GML was provided.

On 8 December, GML provided a 'summary of the site visit' document. This provided an overview of key questions RAPs needed to address in their response (arising from the inspection), photographs of key locations inside Anambah (showing current conditions), and a summary of test excavation units (as requested by one RAP).

A further week until 1 February 2024 was allowed for RAPs to provide any responses, at which point all responses were filed and addressed under this log, and through the ACHAR.

In total 12 written responses were issued to GML, from 6 of the RAP groups. The key points from each response is provided in the following table. No responses were received which require modification to the ACHAR

Registered Aboriginal Party	Date Sent/Date Reply	Response/Comment
AGA Services	Sent: 16/11/23 Reply:	No response received.
Awabakal Traditional Owners Aboriginal Corporation	Sent: 16/11/23 Reply: 4/12/23	4.12: Hi Andie, Thank you for your email and unfortunately our Site Officers are not available week. Many thanks, Karrie Brauer. This response was to the invitation to visit the site. No further response or comment on the ACHAR was received.
Cacatua Culture Consultants	Sent: 16/11/23 Reply:	No response received.
Corroboree Aboriginal Corporation	Sent: 16/11/23 Reply:	No response received.
Culturally Aware	Sent: 16/11/23 Reply: 1/12/23; 7/12/23	1.12.23.TS confirmed she would attendance at site inspection. 7.12.23 At the site meeting, TS provided an apology (through AF) for not being able to attending the site inspection. She requested another link to the reports be provided. This link was sent on 7.12.23 and the following response was received: 7.12.23: 'Thank You for a better link to Reports, I will review and send feedback by due Date.' No further response or comment on the ACHAR was received.
Didge Ngunawal Clan	Sent: 16/11/23 Reply: 23/11/23; 1/12/23; 8/12/23	23.11: Asked for clarification re details of proposed site inspection. We responded to provide details of the site survey. 1.12: Confirmed attendance by PB at the site inspection. 7.12: Attended the site inspection and provided input on management of Aboriginal objects, and future excavation work. 8.12: PB responded by email 'DNC is Happy with the ACHAR, as job is progressing well, everything was discussed on site and is pleased with you guys, GML, and hope to be a part of the salvage!'. 8.12: PB emails 'Will believe that Artefact should be returned in a 1.5m deposit in a hard case with labelled bags and CD'. No further response or comment on the ACHAR was received.
Jarban & Mugrebea	Sent: 16/11/23 Reply:	No response received.

Registered Aboriginal Party	Date Sent/Date Reply	Response/Comment
Kawul Pty Ltd. Trading as Wonn1 Sites	Sent: 16/11/23 Reply: 16/11/23; 2/12/23; 5/12/23; 7/12/23; 8/12/23	16.11: 'Looks good to me! Ala Andie. We hope all's well with you. Thanks for the update with this project. Nginuwa Arthur - Kauwul Wonnarua Elder and Aunty Lynne and their families. 😊'. 2.12: Confirmed attendance at site inspection, and asked for the site documents to be sent again by email. 5.12: Flagged difficulties opening the ACHAR, ATR and site inspection documents. Asked for a digital copy of the documentation on USB to be handed over at the site inspection. 7.12: AF attended the site inspection. AF was provided the ACHAR and ATR on a USB. Also provided the reports digitally by email, and acknowledged their receipt by email. 8/12/23: email acknowledging receipt of summary document. No further response or comment on the ACHAR was received.
Mindaribba Local Aboriginal Land Council	Sent: 16/11/23 Reply: 7/12/23	None 7.12.23 Provided an apology for not attending the site inspection through AF. No further response or comment on the ACHAR was received.
Wallagan Cultural Services	Sent: 16/11/23 Reply: 7/12/23	7.12.23: email 'Thanks Tim was unable to attend sites inspection yesterday sorry for not getting back to you.' No further response or comment on the ACHAR was received.
Widescope Indigenous Group	Sent: 16/11/23 Reply:	No response received.
Wonnarua Elders Council	Sent: 16/11/23 Reply:	No response received.
Wonnarua Nation Aboriginal Corporation	Sent: 16/11/23 Reply: 9/12/23	9.12.23 Acknowledged email from GML. No further response or comment on the ACHAR was received.
Yarrawalk	Sent: 16/11/23 Reply:	No response received.
Upper Hunter Wonnarua Council Inc	Sent: 16/11/23 Reply:	No response received.

Stage 3, Step 2–AHIP submission

Organisation	Date Sent
Heritage NSW	

RAPs and LALC (whether or not they registered for the project) must be provided with a copy of the final ACHAR and the AHIP application within 14 days of submission.

Stage 3, Step 3—RAP notification of AHIP submission

Registered Aboriginal Party	Date Sent

Registered Aboriginal Party	Date Sent

Talei Holm

From: Aboriginal Heritage
Sent: Tuesday, 16 March 2021 5:33 PM
To: information@ntscorp.com.au
Subject: Aboriginal Community Consultation- request for information
Attachments: 21-0037wml1.pdf

Dear Warren

The opportunity has arisen for archaeological works in Anambah. These works will involve Aboriginal consultation.

Please find attached a request for any information you may have in relation to potentially interest Aboriginal parties.

Best,
Talei

Talei Holm

From: Aboriginal Heritage
Sent: Tuesday, 16 March 2021 5:33 PM
To: info@maitland.nsw.gov.au
Subject: Aboriginal Community Consultation- request for information
Attachments: 21-0037mlgal1.pdf

Dear Sir/Madam

The opportunity has arisen for archaeological works in Anambah. These works will involve Aboriginal consultation.

Please find attached a request for any information you may have in relation to potentially interest Aboriginal parties.

Best,
Talei

Talei Holm

From: Aboriginal Heritage
Sent: Tuesday, 16 March 2021 5:33 PM
To: admin.hunter@lls.nsw.gov.au
Subject: Aboriginal Community Consultation- request for information
Attachments: 21-0037hllsl1.pdf

Dear Sir/Madam

The opportunity has arisen for archaeological works in Anambah. These works will involve Aboriginal consultation.

Please find attached a request for any information you may have in relation to potentially interest Aboriginal parties.

Best,
Talei

Talei Holm

From: Aboriginal Heritage
Sent: Tuesday, 16 March 2021 5:33 PM
To: jodie.rikiti2@oralra.nsw.gov.au
Subject: Aboriginal Community Consultation- request for information
Attachments: 21-0037jrl1.pdf

Dear Jodie

The opportunity has arisen for archaeological works in Anambah. These works will involve Aboriginal consultation.

Please find attached a request for any information you may have in relation to potentially interest Aboriginal parties.

Best,
Talei

Talei Holm

From: Aboriginal Heritage
Sent: Tuesday, 16 March 2021 5:32 PM
To: GeospatialSearch@NNTT.gov.au
Subject: Aboriginal Community Consultation- request for information
Attachments: Request for Spatial Search of Tribunal Registers.pdf; 21-0037nnttl1.pdf

Dear Sir/Madam

I am writing to request a search of the National Native Title Tribunal register with regard to Aboriginal community consultation for a project in NSW.

Please find attached the search form and a letter outlining the reason for our request.

Best,
Talei

Talei Holm

From: Aboriginal Heritage
Sent: Tuesday, 16 March 2021 5:32 PM
To: heritagemailbox@environment.nsw.gov.au
Subject: Aboriginal Community Consultation- request for information
Attachments: 21-0037hnswl1.pdf

Dear Sir/Madam,

The opportunity has arisen for archaeological works in Anambah. These works will involve Aboriginal consultation.

Please find attached a request for any information you may have in relation to potentially interest Aboriginal parties.

Best,
Talei

Sydney Office
Level 6
372 Elizabeth Street
SURRY HILLS NSW Australia 2010
T +61 2 9319 4811
E heritage@gml.com.au

Canberra Office
2A Mugga Way
RED HILL ACT Australia 2603
T +61 2 6273 7540
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

16 March 2021

Warren Mundine
Native Title Service Corporation
PO Box 2105
STRAWBERRY HILLS NSW 2012

Our Ref: 21-0037wml1

Re: Aboriginal Registration for Community Consultation—Anambah Project

Dear Warren,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage Pty Ltd (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 110433;
- Lot 2, DP 110433;
- Lot 6, DP 1992;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

Would you please provide in writing (a letter or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
SURRY HILLS NSW 2010

Alternatively, the list can be emailed to ach@gml.com.au.

If you have any questions about this project, please call me on 9319 4811.

Yours sincerely,
GML Heritage Pty Ltd

Talei Holm
Graduate Consultant

Figure 1 Location of the study area. (Source: SIXMaps 2016, with GML additions 2021)

Sydney Office
Level 6
372 Elizabeth Street
SURRY HILLS NSW Australia 2010
T +61 2 9319 4811
E heritage@gml.com.au

Canberra Office
2A Mugga Way
RED HILL ACT Australia 2603
T +61 2 6273 7540
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

15 March 2021

Maitland City Council
285–287 High Street
MAITLAND NSW 2320

Our Ref: 21-0037mlgal1

Re: Aboriginal Registration for Community Consultation—Anambah Project

Dear Sir/Madam,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage Pty Ltd (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 110433;
- Lot 2, DP 110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

Would you please provide in writing (a letter or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
SURRY HILLS NSW 2010

Alternatively, the list can be emailed to ach@gml.com.au.

If you have any questions about this project, please call me on 9319 4811.

Yours sincerely,
GML Heritage Pty Ltd

Talei Holm
Graduate Consultant

Figure 1 Location of the study area. (Source: SIXMaps 2016, with GML additions 2021)

Sydney Office
Level 6
372 Elizabeth Street
SURRY HILLS NSW Australia 2010
T +61 2 9319 4811
E heritage@gml.com.au

Canberra Office
2A Mugga Way
RED HILL ACT Australia 2603
T +61 2 6273 7540
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

16 March 2021

Hunter Local Land Service
816 Tocal Road
TOCAL NSW 2421

admin.hunter@lls.nsw.gov.au

Our Ref: 21-0037hllsl1

Re: Aboriginal Registration for Community Consultation—Anambah Project

Dear Sir/Madam,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage Pty Ltd (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 110433;
- Lot 2, DP 110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

Would you please provide in writing (a letter or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
SURRY HILLS NSW 2010

Alternatively, the list can be emailed to ach@gml.com.au.

If you have any questions about this project, please call me on 9319 4811.

Yours sincerely,
GML Heritage Pty Ltd

Talei Holm
Graduate Consultant

Figure 1 Location of the study area. (Source: SIXMaps 2016, with GML additions 2021)

Sydney Office
Level 6
372 Elizabeth Street
SURRY HILLS NSW Australia 2010
T +61 2 9319 4811
E heritage@gml.com.au

Canberra Office
2A Mugga Way
RED HILL ACT Australia 2603
T +61 2 6273 7540
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

15 March 2021

Jodie Ritiki
The Registrar, Aboriginal Land Rights 1983
PO Box 5068
PARRAMATTA NSW 2320

Our Ref: 21-0037jrl1

Re: Aboriginal Registration for Community Consultation—Anambah Project

Dear Jodie,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 110433;
- Lot 2, DP 110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

Would you please provide in writing (a letter or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
SURRY HILLS NSW 2010

Alternatively, the list can be emailed to ach@gml.com.au.

If you have any questions about this project, please call me on 9319 4811.

Yours sincerely,
GML Heritage Pty Ltd

Talei Holm
Graduate Consultant

Figure 1 Location of the study area. (Source: SIXMaps 2016, with GML additions 2021)

Sydney Office
Level 6
372 Elizabeth Street
SURRY HILLS NSW Australia 2010
T +61 2 9319 4811
E heritage@gml.com.au

Canberra Office
2A Mugga Way
RED HILL ACT Australia 2603
T +61 2 6273 7540
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

15 March 2021

National Native Title Tribunal
PO Box 9973
SYDNEY NSW 2000

Our Ref: 21-0037nnttl1

Re: Aboriginal Registration for Community Consultation—Anambah Project

Dear Sir/Madam,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage Pty Ltd (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 110433;
- Lot 2, DP 110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

Would you please provide in writing (a letter or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
SURRY HILLS NSW 2010

Alternatively, the list can be emailed to ach@gml.com.au.

If you have any questions about this project, please call me on 9319 4811.

Yours sincerely,
GML Heritage Pty Ltd

Talei Holm
Graduate Consultant

Figure 1 Location of the study area. (Source: SIXMaps 2016, with GML additions 2021)

National Native Title Tribunal

Request for Spatial Search of Tribunal Registers

1: Your details

Your name:	*Talei Holm*		
Your company:	*GML Heritage*		
E-mail address:	*ach@gml.com.au*	Phone:	*02 9319 4811*
Your reference:	*21-0037*	Your state:	*New South Wales*
☒	*I have read and acknowledge the terms and conditions on the next page.*		

2: Areas to be searched

Jurisdiction to be searched:	*New South Wales*	Tenure to be searched:	*Non freehold parcel*

Non freehold parcel or tenement identifiers (add up to 20 separate identifiers)

Parcel 1:	Lot A, DP 431640	Parcel 2:	Lot 1, DP 110433
Parcel 3:	Lot 2, DP 110433	Parcel 4:	Lot 6, DP 19925
Parcel 5:	Lot 178, DP 874171	Parcel 6:	Lot 56, DP 874170
Parcel 7:	*Click or tap here to enter text.*	Parcel 8:	*Click or tap here to enter text.*
Parcel 9:	*Click or tap here to enter text.*	Parcel 10:	*Click or tap here to enter text.*
Parcel 11:	*Click or tap here to enter text.*	Parcel 12:	*Click or tap here to enter text.*
Parcel 13:	*Click or tap here to enter text.*	Parcel 14:	*Click or tap here to enter text.*
Parcel 15:	*Click or tap here to enter text.*	Parcel 16:	*Click or tap here to enter text.*
Parcel 17:	*Click or tap here to enter text.*	Parcel 18:	*Click or tap here to enter text.*
Parcel 19:	*Click or tap here to enter text.*	Parcel 20:	*Click or tap here to enter text.*

If your search area is not a non-freehold parcel or mining or petroleum tenement, you can enter other tenure or administrative regions here (e.g. local government area, townsite or county). Please provide as much detail as you can.

A list of registered native title claimants, native title holders and registered Indgenous Land Use Agreements.

E-mail the completed form to GeospatialSearch@NNTT.gov.au

Terms and Conditions

1. Specify only one jurisdiction (e.g. Queensland) and one type of tenure (e.g. mining tenement) per form. You can add up to 20 separate tenements or parcels per search request. For more than 20 parcels or tenements please submit additional search requests or contact GeospatialSearch@NNTT.gov.au to discuss your requirements.

   Note: if your area of interest cannot be clearly identified from the search form, or is not held in NNTT datasets, we may instead provide search results for a surrounding local government area, or other suitable regional area.

2. The NNTT does not conduct searches over freehold land (other than freehold land identified as aboriginal freehold)

   Under the Native Title Act 1993 (Cth), the valid grant of a freehold estate (other than certain types of Aboriginal and Torres Strait Islander land) on or before 23 December 1996 is known as a 'previous exclusive possession act'. This means that native title has been extinguished over the area. Native title claimants are not allowed to include land and waters covered by previous exclusive possession acts in their applications; therefore they would normally exclude freehold areas. A native title application may, however, be made over freehold land on the basis that freehold was invalidly granted, but the chances of this happening are very low.

   The NNTT is not the custodian of the data for freehold estates. To determine whether a particular parcel of land is freehold land, you may wish to seek such information from the relevant state government custodian.

3. Cultural Heritage in NSW.

   The National Native Title Tribunal has undertaken steps to remove itself from the formal list of sources for information about indigenous groups in development areas. The existence or otherwise of native title is quite separate to any matters relating to Aboriginal cultural heritage. Information on native title claims, native title determinations and Indigenous Land Use Agreements is available on the Tribunal's website.

4. Spatial searches rely on data obtained from the relevant custodian. Whilst efforts are taken to update such datasets on a regular basis, the collection and interpretation of such datasets may be influenced by a number of factors that can impact of the completeness and accuracy of your search results.

Disclaimer

While the National Native Title Tribunal (NNTT) and the Native Title Registrar (Registrar) have exercised due care in ensuring the accuracy of the information provided, it is provided for general information only and on the understanding that neither the NNTT, the Registrar nor the Commonwealth of Australia is providing professional advice. Appropriate professional advice relevant to your circumstances should be sought rather than relying on the information provided. In addition, you must exercise your own judgment and carefully evaluate the information provided for accuracy, currency, completeness and relevance for the purpose for which it is to be used.

The information provided is often supplied by, or based on, data and information from external sources, therefore the NNTT and Registrar cannot guarantee that the information is accurate or up-to-date.

The NNTT and Registrar expressly disclaim any liability arising from the use of this information.

This information should not be relied upon in relation to any matters associated with cultural heritage.

Sydney Office
Level 6
372 Elizabeth Street
SURRY HILLS NSW Australia 2010
T +61 2 9319 4811
E heritage@gml.com.au

Canberra Office
2A Mugga Way
RED HILL ACT Australia 2603
T +61 2 6273 7540
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

16 March 2021

Heritage NSW
Locked Bag 5020
PARRAMATTA NSW 2124

Our Ref: 21-0037hnswl1

Re: Aboriginal Registration for Community Consultation—Anambah Project

Dear Sir/Madam,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage Pty Ltd (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 110433;
- Lot 2, DP 110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

Would you please provide in writing (a letter or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
SURRY HILLS NSW 2010

Alternatively, the list can be emailed to ach@gml.com.au.

If you have any questions about this project, please call me on 9319 4811.

Yours sincerely,
GML Heritage Pty Ltd

Talei Holm
Graduate Consultant

Figure 1 Location of the study area. (Source: SIXMaps 2016, with GML additions 2021)

Talei Holm

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 17 March 2021 9:49 AM
To: admin@mindaribbalalc.org
Subject: Aboriginal Community Consultation- request for information
Attachments: 21-0037mlalc1.pdf

Dear Sir/Madam

The opportunity has arisen for archaeological works in Anambah. These works will involve Aboriginal consultation.

Please find attached a request for any information you may have in relation to potentially interest Aboriginal parties.

Best,
Talei

Sydney Office
Level 6
372 Elizabeth Street
SURRY HILLS NSW Australia 2010
T +61 2 9319 4811
E heritage@gml.com.au

Canberra Office
2A Mugga Way
RED HILL ACT Australia 2603
T +61 2 6273 7540
E heritage@gml.com.au

GML Heritage Pty Ltd
ABN 60 001 179 362

15 March 2021

Mindaribba Local Aboriginal Land Council
PO Box 401
EAST MAITLAND NSW 2323

Our Ref: 21-0037mlalcl1

Re: Aboriginal Registration for Community Consultation—Anambah Project

Dear Sir/Madam,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage Pty Ltd (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 110433;
- Lot 2, DP 110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

Would you please provide in writing (a letter or email) a list of any relevant Aboriginal people/groups who should be consulted with respect to this project. Your earliest attention to this matter would be appreciated.

The list of Aboriginal people/groups should be sent to:

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
SURRY HILLS NSW 2010

Alternatively, the list can be emailed to ach@gml.com.au.

If you have any questions about this project, please call me on 9319 4811.

Yours sincerely,
GML Heritage Pty Ltd

Talei Holm
Graduate Consultant

Figure 1 Location of the study area. (Source: SIXMaps 2016, with GML additions 2021)

Talei Holm

From: Rosalie Neve <Rosalie.Neve@environment.nsw.gov.au>
Sent: Friday, 26 March 2021 11:49 AM
To: Aboriginal Heritage
Subject: HNSW CR response - Anambah Project
Attachments: Heritage NSW CR response Anambah Project GML.PDF

Response attached

Rosalie Neve | Aboriginal Heritage Planning Officer
Heritage NSW, Community Engagement, Department of Premier and Cabinet
T: 0472 828 864 | rosalie.neve@environment.nsw.gov.au

This email is intended for the addressee(s) named and may contain confidential and/or privileged information.
If you are not the intended recipient, please notify the sender and then delete it immediately.
Any views expressed in this email are those of the individual sender except where the sender expressly and with authority states them to be the views of the NSW Office of Environment and Heritage.

PLEASE CONSIDER THE ENVIRONMENT BEFORE PRINTING THIS EMAIL

NSW GOVERNMENT | Premier & Cabinet

Reference: DOC21/232221

Ms Talei Holm
GML Heritage
ach@gml.com.au

RE: Request for information on Aboriginal stakeholders for Aboriginal Cultural Heritage Assessment Anambah Project

Dear Ms Holm

Thank you for your letter of 16 March 2021 about Aboriginal cultural heritage consultation for the proposed above matter within the Maitland local government area. I appreciate the opportunity to provide input.

Please find enclosed a list of known Aboriginal parties for the Maitland government area (Attachment 1) that we consider likely to have an interest in the proposal. Note this is not an exhaustive list of all interested Aboriginal parties. Receipt of this list does not remove the requirement for a proponent/consultant to advertise the proposal in the local print media and contact other bodies and community groups seeking interested Aboriginal parties, in accordance with the '*Aboriginal cultural heritage consultation requirements for proponents 2010*' (the CRs).

We would also like to take this opportunity to remind the proponent and consultant to ensure that consultation is fair, equitable and transparent. If the Aboriginal parties express concern or are opposed to parts of or the entire project, we expect that evidence will be provided to demonstrate the efforts made to find common ground between the opponents and the proponent.

If you have any questions about this advice, please do not hesitate to contact me via rosalie.neve@environment.nsw.gov.au or 02 6659 8221.

Yours sincerely

Rosalie Neve
Aboriginal Heritage Planning Officer
Aboriginal Cultural Heritage Regulation - Northern
Heritage NSW
Department of Premier and Cabinet

26 March 2021

Attachment 1: Aboriginal Cultural Heritage Regulation North - Aboriginal Stakeholder List for Maitland LGA

Organisation	First name	Surname	Address 1	City	State	Post code	Landline	Mobile	Email
Organisation	First name	Surname	Address 1	City	State	Post code	Landline	Mobile	Email
A1 Indigenous Services	Carolyn	Hickey	10 Marie Pitt Place	GLENMORE PARK	NSW	2745		0411 650 057	Cazadirect@live.com
AGA Services	Ashley, Gregory & Adam	Sampson	22 Ibis Parade	WOODBERRY	NSW	2322	Donna Sampson 0403 765 018	Ashley Sampson 0401 958 050	aga.services@hotmail.com
Allera French Trading	Allera	French	17 Kalinda St	BLACKSMITHS	NSW	2281		0421 299 963	allerafrenchtrading@outlook.com
Arwarbukari Cultural Resource Association, Miromae Aboriginal Language and Technology Centre	Darren	McKenny	840 Hunter St	NEWCASTLE WEST	NSW	2302	02 4940 9100		contact@acra.org.au
Awabakal & Guringai Pty Ltd	Tracey Howie	& Kerrie Brauer	PO Box 122	RUTHERFORD NSW 2320	NSW	2259	Tracey Howie 0404 182 049	Kerrie Brauer 0412 866 357	tracey@guringai.com.au, kerrie@awabakal.com.au
Awabakal Descendants Traditional Owners	Peter	Leven	PO Box 137	BUDGEWOI	NSW	2262		0405 149 684	awabakal.to@gmail.com
Awabakal Traditional Owners Aboriginal Corporation	Kerrie	Brauer	PO Box 122	RUTHERFORD	NSW	2320		0412 866 357	Kerrie@awabakal.com.au
Cacatua Culture Consultants	Donna & George	Sampson	22 Ibis Parade	WOODBERRY	NSW	2322		0403 765 019, 0434 877 036	cacatua4service@tpg.com.au
Corrobaree Aboriginal Corporation	Carroll-Johnson	Marilyn	PO Box 3340	ROUSE HILL	NSW	2155	0288 244 324	0415 911 159	corrobareecorp@bigpond.com
Crimson-Rosie	Jeffery	Matthews	6 Eucalypt Avenue	MUSWELLBROOK	NSW	2333	02 6543 4791		
Culturally Aware	Tracey	Skene	7 Crawford Place	MILFIELD	NSW	2325		0474 106 537	tracey@marrung-pa.com.au
D F T V Enterprises	Derrick	Vale Snr	5 Mountbatten Close	RUTHERFORD	NSW	2320		0438 812 197	deckavale@hotmail.com
Deslee Talbott Consultants	Deslee	Matthews	Unit 2 / 19 South Street	GUNNEDAH	NSW	2380		0431 205 336	m-deslee@hotmail.com
Didge Ngunawal Clan	Paul Boyd	& Lilly Carroll	33 Carlyle Crescent	CAMBRIDGE GARDENS	NSW	2747		0426 823 944	didgengunawalclan@yahoo.com.au
Divine Diggers Aboriginal Cultural Consultants	Deidre	Perkins	6 Ashleigh Street	HEDDON GRETA	NSW	2321	02 4937 4573	0425 654 290 (preferred)	dedemarco1@hotmail.com
Gidawaa Walang & Barkama Neighbourhood Centre Inc.	Craig Horne	Debbie Dacey-Sullivan	76 Lang Street	KURRI KURRI	NSW	2327	02 4937 1094	Craig 0432 336 168	gidawaa.walang@hotmail.com
Hunter Traditional Owner	Paulette	Ryan	165 Susan Street	SCONE	NSW	2337		0431 109 001	hto.paulette@gmail.com

Organisation	First name	Surname	Address 1	City	State	Post code	Landline	Mobile	Email
Hunter Valley Cultural Surveying	Luke	Hickey	165 Susan Street	SCONE	NSW	2337		0435 911 820	Microlith09@gmail.com
Hunters & Collectors	Tania	Matthews	Unit 1/19 South Street	Gunnedah	NSW	2320		407348384	Tamatthews10@hotmail.com
Indigenous Learning	Craig	Archibald	2 Victoria Street	BELLBIRD HEIGHTS	NSW	2325	0455 550 549	0467 229 507	indiglearning@gmail.com
Jarban & Mugrebea	Les	Atkinson	11 Nelson Street	CESSNOCK	NSW	2325		0466 316 069	Les.atkinson@hotmail.com
Jumbunna Traffic Management Group Pty Ltd	Norm	Archibald	17 Flobern Ave	WAUCHOPE	NSW	2446		0413 718 149	jtmanagement@live.com.au
Kauma Pondee Inc.	Jill	Green	Unit 6/1 Central Street	LAMBTON	NSW	2305		0434 210 190	kaumapondee@live.com.au
Kawul Pty Ltd trading as Wonn1 Sites	Arthur	Fletcher	619 Main Road	GLENDALE	NSW	2285	02 4954 7751	0402 146 193	Wonn1sites@gmail.com
Lower Hunter Aboriginal Incorporated	David	Ahoy	5 Killara Drive	CARDIFF SOUTH	NSW	2285		0421 329 520	lowerhunteral@gmail.com
Lower Hunter Wonnarua Cultural Services	Lea-Anne Ball		712 Maitland Street	KURRI KURRI	NSW	2327		0472 698 659	lhwcs.lea@gmail.com
Lower Wonnaruah Tribal Consultancy Pty Ltd	Barry	Anderson	156 The Inlet Road	BULGA	NSW	2330	02 6574 5303	0417 403 153	
Mayaroo	Tracey	White	PO Box 188	KURRI KURRI	NSW	2327		0438 909 797	rara02@bigpond.com
Michael Green Cultural Heritage Consultant	Michael	Green	115A Lakeview Parade	BLACKSMITHS	NSW	2281		0497120032	bunyonick50@gmail.com
Mindaribba Local Aboriginal Land Council	CEO		1A Chelmsford Drive	METFORD	NSW	2323	02 4934 8511		ceo@mindaribbalalc.org
Murra Bidgee Mullangari Aboriginal Corporation	Ryan Johnson	& Darleen Johnson-Carroll	PO Box 246	SEVEN HILLS	NSW	2147		0497 983 332	murrabidgeemullangari@yahoo.com.au
Myland Cultural & Heritage Group	Warren	Schillings	30 Taurus Street	ELERMORE VALE	NSW	2287		0431 392 554	warren@yarnteen.com.au
Roger Matthews Consultancy	Roger	Matthews	105 View Street	GUNNEDAH	NSW	2380		0455 671 288	
Ungooroo Aboriginal Corporation	Alan	Paget	PO Box 3095	SINGLETON	NSW	2330	02 6571 5111		admin@ungooroo.com.au
Wallagan Cultural Services	Maree	Waugh	PO Box 40	CESSNOCK	NSW	2325		0439 813 078	wallangan@outlook.com
Wattaka Wonnarua CC Service	Des	Hickey	4 Kennedy Street	SINGLETON	NSW	2330	02 6573 3786	0432 977 178	deshickey@bigpond.com
Widescope Indigenous Group	Steven	Hickey	73 Russell Street	EMU PLAINS	NSW	2750		0425 230 681, 0425 232 056	Widescope.group@live.com
Wonnarua Culture Heritage	Gordon	Griffiths	19 O'Donnell Crescent	METFORD	NSW	2323	02 4934 6437	0401 028 807	
Wonnarua Elders Council	Richard	Edwards	PO Box 844	CESSNOCK	NSW	2325			
Wonnarua Nation Aboriginal Corporation	Laurie	Perry	254 John St	SINGLETON	NSW	2330	02 6571 5419	0412 599 020	l.perry@optusnet.com.au

Organisation	First name	Surname	Address 1	City	State	Post code	Landline	Mobile	Email
Worimi Local Aboriginal Land Council	CEO		2163 Nelson Bay Road	WILLIAMTOWN	NSW	2318	02 4965 1500		andrew@worimi.org.au
Yarrawalk (A division of Tocomwall Pty Ltd), Tocomwall Pty Ltd on behalf of Scott Franks and Anor on behalf of the Plains Clans of the Wonnarua People NSD1680/2013	Scott	Franks	PO Box 76	CARRINGBAH	NSW	1495		0404 171 544	scott@tocomwall.com.au
Yinarr Cultural Services	Kathleen	Steward Kinchela	Lot 5 Westwood Estate	MERRIWA	NSW	2329		0475 436 589	yinarculturalservices@bigpond.com dontminemway@gmail.com
	Kevin	Duncan	95 Moala Parade	CHARMHAVEN	NSW	2263	02 4382 9346	0431 224 099	kevin.duncan@bigpond.com
	Steve	Talbott	73 Kiah Road	GILLIESTON HEIGHTS	NSW	2321		0429 662 911	gomeroi.namoi@outlook.com

Talei Holm

From: Jessica Stockham <Jessica.Stockham@maitland.nsw.gov.au>
Sent: Thursday, 25 March 2021 11:29 AM
To: Aboriginal Heritage
Subject: Response to query - Aboriginal archaeology consultation

To Talei,

In response to your question regarding consultation regarding Aboriginal archaeology and cultural heritage at Anambah Rd, Council recommends that you contact:

- the Wollotuka Institute at the University of Newcastle
  Phone: +61 2 4921 6863 **Email:** wollotuka@newcastle.edu.au

- Council's Aboriginal Reference Group and RAP Working Group facilitator Emily Livens (co-ordinator Community Planning)
  Phone: 4939 1041 **Mob:** 0427 157242 **Email:** emily.livens@maitland.nsw.gov.au

- Lillian Eastwood - Resource Coordinator - Guraki Committee - Guraki Aboriginal Advisory Committee
  Email: leastwood@ncc.nsw.gov.au

Besides the above and the Mindaribba ALC there are no other parties that come to mind.

If we can provide further assistance, please get in touch.

Thank you,

Jessica Stockham
Senior Development Planner
Planning and Environment | Maitland City Council
t 02 4939 1018
f 02 4934 8469
m 0474 958 967
Jessica.Stockham@maitland.nsw.gov.au

****
The views expressed in this email are not necessarily those of the Maitland City Council unless otherwise stated. The organisation does not warrant that this message is free of viruses or any other defect or error. This message and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this message in error please contact the author.
****

Talei Holm

From: Emily Livens <Emily.Livens@maitland.nsw.gov.au>
Sent: Tuesday, 6 April 2021 2:48 PM
To: Aboriginal Heritage
Subject: RE: Aboriginal Registration for Community Consultation—Anambah Project

Hi

Unfortunately we are unable to pass on this list. However you are able to get a copy by contacting heritage NSW. Alternatively you could contact the Mindaribba Local Aboriginal Land Council.

Cheers

Emily Livens
Coordinator Recreation & Community Planning
Culture, Community and Recreation | Maitland City Council
t 02 4939 1041
f 02 4933 6091
m 0427 157242
Emily.Livens@maitland.nsw.gov.au

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:24 PM
To: Emily Livens <Emily.Livens@maitland.nsw.gov.au>
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Emily Livens,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

****
The views expressed in this email are not necessarily those of the Maitland City Council unless otherwise stated. The organisation does not warrant that this message is free of viruses or any other defect or error. This message and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this message in error please contact the author.
****

Cameron, Jodi

From: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>
Sent: Thursday, 18 March 2021 3:28 PM
To: Aboriginal Heritage
Subject: RE: SR21/413 - Aboriginal Community Consultation- request for information - SR21/413

UNCLASSIFIED

Native title search – *NSW Parcels – Lots 1 & 2 on DP1110433*
Your ref: *21-0037* - **Our ref:** *SR21/413*

Dear Talei Holm**,**

Thank you for your search request received on 17 March 2021 in relation to the above area. Based on the records held by the National Native Title Tribunal as at 17 March 2021 it would appear that there are no Native Title Determination Applications, Determinations of Native Title, or Indigenous Land Use Agreements over the identified area.

Search Results
The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

- Schedule of Native Title Determination Applications
- Register of Native Title Claims
- Native Title Determinations
- Indigenous Land Use Agreements (Registered and notified)

At the time this search was carried out, there were **no relevant entries** in the above databases.

Cadastral data as at: 01/02/2021

Parcel ID	Feature Area SqKm	Tenure	NNTT file number	Name	Category	Pe
1//DP1110433	0.3427	FREEHOLD	No overlap			
2//DP1110433	1.4750	FREEHOLD	No overlap			

For more information about the Tribunal's registers or to search the registers yourself and obtain copies of relevant register extracts, please visit our website.

Information on native title claims and freehold land can also be found on the Tribunal's website here: Native title claims and freehold land .

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

The search results are based on analysis against external boundaries of applications only. Native title applications commonly contain exclusions clauses which remove areas from within the external boundary. To determine

whether the areas described are in fact subject to claim, you need to refer to the "Area covered by claim" section of the relevant Register Extract or Schedule Extract and any maps attached.

Search results and the existence of native title
Please note that the enclosed information from the Register of Native Title Claims and/or the Schedule of Applications is **not** confirmation of the existence of native title in this area. This cannot be confirmed until the Federal Court makes a determination that native title does or does not exist in relation to the area. Such determinations are registered on the National Native Title Register.

The Tribunal accepts no liability for reliance placed on enclosed information
The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact us via GeospatialSearch@NNTT.gov.au

Regards,

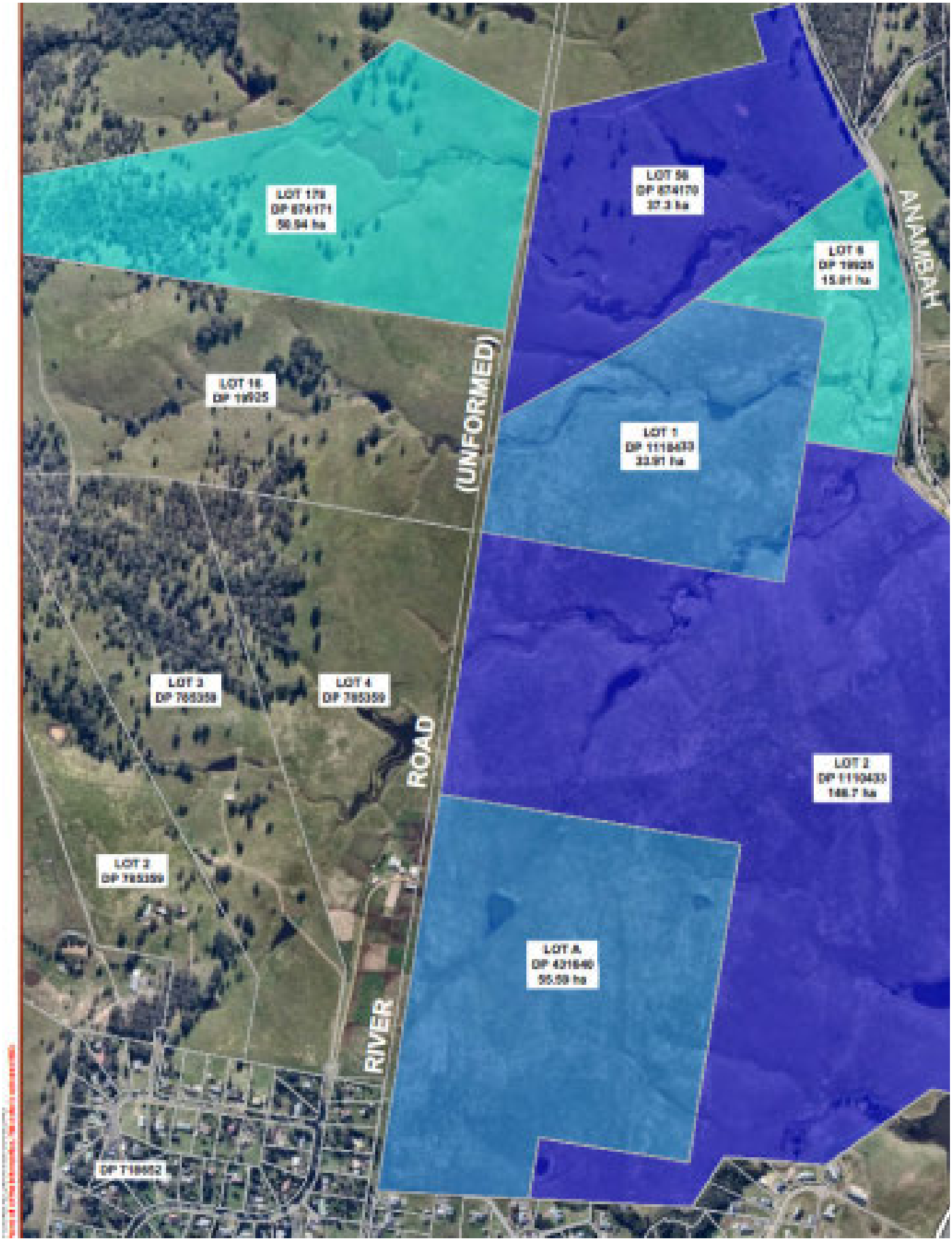
Geospatial Searches
National Native Title Tribunal | Perth
Email: GeospatialSearch@nntt.gov.au | **www.nntt.gov.au**

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 17 March 2021 11:49 AM
To: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>
Subject: RE: SR21/413 - Aboriginal Community Consultation- request for information - SR21/413

Caution: This is an external email. DO NOT click links or open attachments unless you recognise the sender and know the content is safe.

Hi

Thank you for your assistance so far. I apologise for the error, it should be 1//DP1110433 and 1//DP1110433. See attached.


LOT 179
DP 874171
56.94 ha
LOT 56
DP 874170
37.3 ha
LOT 6
DP 19925
15.91 ha
ANAMBAH
LOT 16
DP 19925
(UNFORMED)
LOT 1
DP 1110433
33.91 ha
LOT 3
DP 785359
LOT 4
DP 785359
ROAD
LOT 2
DP 1110433
146.7 ha
LOT 2
DP 785359
LOT A
DP 431640
55.59 ha
RIVER

Best,
Talei

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

From: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>
Sent: Wednesday, 17 March 2021 2:39 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: RE: SR21/413 - Aboriginal Community Consultation- request for information - SR21/413

UNCLASSIFIED

Native title search – *NSW Parcels – Multiple*
Your ref: *21-0037* - **Our ref:** *SR21/413*

Dear Talei Holm**,**

Thank you for your search request received on 16 March 2021 in relation to the above area. Based on the records held by the National Native Title Tribunal as at 17 March 2021 it would appear that there are no Native Title Determination Applications, Determinations of Native Title, or Indigenous Land Use Agreements over the identified area.

Please note: The following parcels listed in your correspondence were not found on the National Native Title Tribunal's records as 17 March 2021 : *Lots 1 & 2 on DP110433.* To enable us to complete the search appropriately and adequately please provide us with additional details e.g. **DETAILED** map, plan or shape file.

Search Results
The results provided are based on the information you supplied and are derived from a search of the following Tribunal databases:

- Schedule of Native Title Determination Applications
- Register of Native Title Claims
- Native Title Determinations
- Indigenous Land Use Agreements (Registered and notified)

At the time this search was carried out, there were **no relevant entries** in the above databases.

Cadastral data as at: 01/02/2021

Parcel ID	Feature Area SqKm	Tenure	NNTT file number	Name	Category
178//DP874171	0.5093	FREEHOLD	No overlap		
56//DP874170	0.3727	FREEHOLD	No overlap		
6//DP19925	0.1533	FREEHOLD	No overlap		
A//DP431640	0.5505	FREEHOLD	No overlap		

These items not found in NNTT Cadastral data:

Parcel ID
2//DP110433
1//DP110433

For more information about the Tribunal's registers or to search the registers yourself and obtain copies of relevant register extracts, please visit our website.

Information on native title claims and freehold land can also be found on the Tribunal's website here: Native title claims and freehold land .

Please note: There may be a delay between a native title determination application being lodged in the Federal Court and its transfer to the Tribunal. As a result, some native title determination applications recently filed with the Federal Court may not appear on the Tribunal's databases.

The search results are based on analysis against external boundaries of applications only. Native title applications commonly contain exclusions clauses which remove areas from within the external boundary. To determine whether the areas described are in fact subject to claim, you need to refer to the "Area covered by claim" section of the relevant Register Extract or Schedule Extract and any maps attached.

Search results and the existence of native title
Please note that the enclosed information from the Register of Native Title Claims and/or the Schedule of Applications is **not** confirmation of the existence of native title in this area. This cannot be confirmed until the Federal Court makes a determination that native title does or does not exist in relation to the area. Such determinations are registered on the National Native Title Register.

The Tribunal accepts no liability for reliance placed on enclosed information
The enclosed information has been provided in good faith. Use of this information is at your sole risk. The National Native Title Tribunal makes no representation, either express or implied, as to the accuracy or suitability of the information enclosed for any particular purpose and accepts no liability for use of the information or reliance placed on it.

If you have any further queries, please do not hesitate to contact us via GeospatialSearch@NNTT.gov.au

Regards,

Geospatial Searches
National Native Title Tribunal | Perth
Email: GeospatialSearch@nntt.gov.au | **www.nntt.gov.au**

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Tuesday, 16 March 2021 2:32 PM

To: Geospatial Search Requests <GeospatialSearch@NNTT.gov.au>
Subject: SR21/413 - Aboriginal Community Consultation- request for information

Caution: This is an external email. DO NOT click links or open attachments unless you recognise the sender and know the content is safe.

Dear Sir/Madam

I am writing to request a search of the National Native Title Tribunal register with regard to Aboriginal community consultation for a project in NSW.

Please find attached the search form and a letter outlining the reason for our request.

Best,
Talei

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:28 PM
To: wonn1sites@gmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Arthur Fletcher,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:28 PM
To: yinarculturalservices@bigpond.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Kathleen Steward Kinchela,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:28 PM
To: wollotuka@newcastle.edu.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Sir or Madam,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:28 PM
To: widescope.group@live.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Steven Hickey,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:28 PM
To: warren@yarnteen.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Warren Schillings,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:27 PM
To: wallangan@outlook.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Maree Waugh,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:27 PM
To: tracey@marrung-pa.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Tracey Skene,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:27 PM
To: tracey@guringai.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Tracey Howie,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:27 PM
To: tamatthews10@hotmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Tania Mathews,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:27 PM
To: Scott Franks
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Scott Franks,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:27 PM
To: rara02@bigpond.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Tracey White,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:27 PM
To: murrabidgeemullangari@yahoo.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Ryan Johnson,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:27 PM
To: microlith99@gmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Luke Hickey,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:26 PM
To: m-desley@hotmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Deslee Matthews,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:26 PM
To: lowerhunterai@gmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear David Ahoy,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:26 PM
To: lhwcs.lea@gmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Lea-Anne Ball,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:26 PM
To: les.atkinson@hotmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Les Atkinson,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:26 PM
To: leastwood@ncc.nsw.gov.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Sir or Madam,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:26 PM
To: l.perry@optusnet.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Laurie Perry,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:26 PM
To: kevin.duncan@bigpond.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Kevin Duncan,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:25 PM
To: kerrie@awabakal.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Kerrie Brauer,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:25 PM
To: kaumapondee@live.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Jill Green,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:25 PM
To: jtmanagement@live.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Norm Archibald,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:25 PM
To: indiglearning@gmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Craig Archibald,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:25 PM
To: hto.paulette@gmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Paulette Ryan,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:25 PM
To: gomeroi.namoi@outlook.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Steve Talbott,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:25 PM
To: gidawaa.walang@hotmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Carig Horne,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:24 PM
To: dontminemeay@gmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Kathleen Steward Kinchela,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:24 PM
To: emily.livens@maitland.nsw.gov.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Emily Livens,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:24 PM
To: didgengunawalclan@yahoo.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Lillie Carroll,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:24 PM
To: deshickey@bigpond.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Des Hickey,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:24 PM
To: dedemaree3@hotmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Deidre Perkins,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:23 PM
To: deckavale@hotmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Derrick Vale Snr,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:23 PM
To: corroboreecorp@bigpond.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Marilyn Carroll Johnson,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:23 PM
To: contact@acra.org.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Darren McKenny,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:23 PM
To: ceo@mindaribbalalc.org
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Sir or Madam,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:22 PM
To: cazadirect@live.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Carolyn Hickey,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:22 PM
To: cacatua4service@tpg.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Donna Sampson,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:22 PM
To: bunyipnick50@gmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Michael Green,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:22 PM
To: andrew@worimi.org.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Sir or Madam,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:22 PM
To: alierafrenchtrading@outlook.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Aliera French,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:21 PM
To: aga.services@hotmail.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Ashley Sampson,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:21 PM
To: admin@ungooroo.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Alan Paget,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:19 PM
To: kerrie@awabakal.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Kerrie Brauer,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Express Post | Prepaid

within Aust

Recipient mob

Company nam

Contact name

Street addres
PO Box numb

Suburb or tow
State, Postco

Attn: Mr Roger Matthews

Roger Matthews Consultancy

105 View Street

GUNNEDAH NSW 2380

GML HERITAGE

Level 5
312 Elizabeth Street
Surry Hills NSW 2010
Australia

Download our app to scan and track your article or visit **auspost.com.au/track**

02 01000 86790 70060 40994

Official use
02 01000 86790 70060 40994

Sender to keep
02 01000 86790 70060 40994

Australia Post

Medium
Up to 500g

Express Post | Prepaid

Within Australia | Tracking | Next business | Documents only

Recipient mobil

Company name

Contact name

Street address · PO Box number

Suburb or town, State, Postcode

Attn: Mr Richard Edwards
Wonnarua Elders Council

Po Box 844
CESSNOCK NSW 2325

GML HERITAGE

Level 5
372 Elizabeth Street
Surry Hills NSW 2010
Australia

Download our app to scan and track your article or visit auspost.com.au/track

02 01000 88790 80060 40991

Official use
02 01000 88790 80060 40991

Sender to keep
02 01000 88790 80060 40991

Australia Post

Medium

Express Post | Prepaid

Within Austra

Recipient mobil

GML HERITAGE

Company name Attn: Mr Peter Leven

Contact name Awakbal Descendants Traditional Owners

Street address / PO Box number PO Box 137

Suburb or town, State, Postcode BUDGEWOI NSW 2262

Level 6
312 Elizabeth Street
Surry Hills NSW 2010
Australia

Download our app to scan and track your article or visit auspost.com.au/track

02 01000 88790 90060 40998

Official use
02 01000 88790 90060 40998

Sender to keep
02 01000 88790 90060 40998

Australia Post

Medium

Express Post | Prepaid

Within Australia

Recipient mobile

GML HERITAGE

Company name: Attn: Mr Michael Green

Contact name: Michael Green Cultural Heritage Consultant

Street address o PO Box number: 115A Lakeview Parade

Suburb or town, State, Postcode: BLACKSMITHS NSW 2281

Level 6
372 Elizabeth Street
Surry Hills NSW 2010
Australia

Download our app to scan and track your article or visit auspost.com.au/track

02 01003 01058 20060 40990

Official use
02 01003 01058 20060 40990

Sender to keep
02 01003 01058 20060 40990

Australia Post

Medium
Up to 500g

Express Post | Prepaid

Within Austr

Documents only

Recipient mob

Company nam

Contact name

Street addres
PO Box numb

Suburb or tow
State, Postco

GML HERITAGE

Attn: Mr Laurie Perry

Wonnarua Nation Aboriginal Corporation

254 John Street

SINGLETON NSW 2330

Level 6
373 Elizabeth Street
Surry Hills NSW 2010
Australia

Article or visit auspost.com.au/track

02 01003 01058 30060 40997

Official use

02 01003 01058 30060 40997

Sender to keep

02 01003 01058 30060 40997

Australia Post

Medium

Up to 500g

Express Post | Prepaid

Within Australia

Recipient mobile

GML HERITAGE

Company name: Attn: Ms Kathleen Steward Kinchela

Contact name: Yinarr Cultural Services

Street address or PO Box number: Lot 5, Westwood Avenue

Suburb or town, State, Postcode: MERRIWA NSW 2329

Level 5
372 Elizabeth Street
Surry Hills NSW 2010
Australia

Download our app to scan and track your article or visit auspost.com.au/track

02 01003 01058 40060 40994

Official use
02 01003 01058 40060 40994

Sender to keep
02 01003 01058 40060 40994

Australia Post

Medium
Up to 500g

Express Post | Prepaid

Within Austr

Recipient mob

Company nam

Contact name

Street addres
PO Box numbe

Suburb or tow
State, Postcod

Attn: Mr Jeffrey Matthews

Crimson Rosie

6 Eucalypt Avenue

MUSSELLBROOKE NSW 2333

GML HERITAGE

Level 6
372 Elizabeth Street
Surry Hills NSW 2010
Australia

Download our app to scan and track your article or visit **auspost.com.au/track**

02 01003 01058 50060 40991

Official use
02 01003 01058 50060 40991

Sender to keep
02 01003 01058 50060 40991

Australia Post

Medium

Up to 500g

Express Post | Prepaid

Within Australia | Tracking* | Next business day* | Documents only Max. thickness

Recipient mobil

Company name

Contact name

Street address
PO Box number

Suburb or town
State, Postcode

GML HERITAGE

Attn: Mr Gordon Griffiths

Wonnarua Cultural Heritage

19 O'Donnell Crescent

METFORD NSW 2323

Level 6
372 Elizabeth Street
Surry Hills NSW 2010
Australia

02 01003 01058 60060 40998

Official use
02 01003 01058 60060 40998

Sender to keep
02 01003 01058 60060 40998

Australia Post

Medium
Up to 500g

Express Post | Prepaid

Within Australia

Recipient mobil

Company name

Contact name

Street address
PO Box number

Suburb or town
State, Postcode

Attn: Mr Barry Anderson

Lower Wonnaruah Tribal Consultancy

156 Inlet Road

BULGA NSW 2330

GML HERITAGE

Level 5
303 Elizabeth Street
Surry Hills NSW 2010
Australia

Download our app to scan and track your article or visit auspost.com.au/track

02 01003 01058 70060 40995

Official use

02 01003 01058 70060 40995

Sender to keep

02 01003 01058 70060 40995

Australia Post

Up to 5kg Medium

Aboriginal Registration for Community Consultation - Anambah Project.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au, the proponent), GML Heritage (heritage consultants) seek registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974*. The land subject to an AHIP is located in the Maitland LGA. The study area comprises of Lot A, DP 431640; Lot 1, DP 110433; Lot 2, DP 110433; Lot 8, DP 10605; Lot 178, DP 874171; and Lot 66, DP 874170, marked on the map below. The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16 April 2021.

Talei Holm, at ach@gml.com.au.

GML Heritage, Level 6, 372 Elizabeth St, Surry Hills NSW 2010

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

Aboriginal Registration for Community Consultation - Anambah Project.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au, the proponent), GML Heritage (heritage consultants) seek registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974*. The land subject to an AHIP is located in the Maitland LGA. The study area comprises of Lot A, DP 431640; Lot 1, DP 110433; Lot 2, DP 110433; Lot 8, DP 10605; Lot 178, DP 874171; and Lot 66, DP 874170, marked on the map below. The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16 April 2021.

Talei Holm, at ach@gml.com.au.

GML Heritage, Level 6, 372 Elizabeth St, Surry Hills NSW 2010

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

Talei Holm

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Tuesday, 6 April 2021 8:40 AM
To: Maree Waugh
Subject: RE: Aboriginal Registration for Community Consultation—Anambah Project

Dear Maree

Thank you for your email. We have registered you for the project.

Best,
Talei

From: Maree Waugh <wallangan@outlook.com>
Sent: Thursday, 1 April 2021 11:37 AM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Re: Aboriginal Registration for Community Consultation—Anambah Project

Wallangan Cultural Services would like to register my interest in the Roche Group
Glyn Richards
Lot A,DP 431640
Lot 1, DP 1110433
Lot 2,DP 1110433
Lot 6, DP 19925
Lot 178, DP 874171
Lot 56, DP 874170.

Maree Waugh
0439813078

Sent from Outlook Mobile

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, March 31, 2021 12:27:26 PM
To: wallangan@outlook.com <wallangan@outlook.com>
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Maree Waugh,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and

- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Talei Holm

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Tuesday, 6 April 2021 8:39 AM
To: cacatua4service@tpg.com.au
Subject: RE: Re:AGA Services EOI Aboriginal Community Consultation—Anambah Project

Dear Ashley, Gregory and Adam,

Thank you for your email. We have registered AGA Service for the project.

Best,
Talei

From: cacatua4service@tpg.com.au <cacatua4service@tpg.com.au>
Sent: Thursday, 1 April 2021 8:58 AM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Re:AGA Services EOI Aboriginal Community Consultation—Anambah Project

Talei,

AGA Service would like to express our interest in being registered for Aboriginal Community Consultation Anambah Project.

AGA Services is an Aboriginal owned partnership business that aims to assist proponents in undertaking cultural heritage work according to all processes and approved conditions, while ensuring compliance to work specific practices.

Our Organisation is fully insured and registered with D.P.I.E. We have undertaken work on all types of sites. Please do not hesitate to contact us if you require more information.

Yours truly

A Sampson G Sampson A Sampson

Ashley Sampson Gregory Sampson Adam Sampson

Talei Holm

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Tuesday, 6 April 2021 8:37 AM
To: cacatua4service@tpg.com.au
Subject: RE: Re:Cacatua EOI Aboriginal Community Consultation—Anambah Project

Dear George,

Thank you for your email. We have registered Cacatua for the project.

Best,
Talei

From: cacatua4service@tpg.com.au <cacatua4service@tpg.com.au>
Sent: Thursday, 1 April 2021 8:55 AM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Re:Cacatua EOI Aboriginal Community Consultation—Anambah Project

Talei,

Cacatua would like to express our interest in being involved in Aboriginal Community Consultation for the Anambah Project.

Cacatua is an Aboriginal owned business created to assist proponents and Archaeologists to undertake cultural heritage archaeological assessment according to all processes and approved conditions. Our aim is to provide quality Aboriginal cultural heritage works, while ensuring compliance to work specific practices.

Our Organisation is fully insured and registered with D.P.I.E. The staffs of Cacatua have undertaken work on all types of sites.

Please do not hesitate to contact us if you require more information.

Yours truly

G Sampson
George Sampson

Manager

Talei Holm

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Tuesday, 6 April 2021 8:37 AM
To: lilly carroll
Subject: RE: Register an interest

Dear Paul and Lilly,

Thank you for your email. We have registered you for the project.

Best,
Talei

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Wednesday, 31 March 2021 10:20 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Register an interest

Hi

DNC would like to register an interest into theses lots at Maitland

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

Kind regards DNC

Paul Boyd & Lilly Carroll

0426823944

Sent from Yahoo Mail for iPhone

Talei Holm

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Tuesday, 6 April 2021 8:36 AM
To: Arthur Fletcher
Subject: RE: Aboriginal Registration for Community Consultation—Anambah Project

Dear Arthur,

Thank you for your email. We have registered you for the project.

Best,

Talei

From: Arthur Fletcher <wonn1sites@gmail.com>
Sent: Wednesday, 31 March 2021 4:20 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Re: Aboriginal Registration for Community Consultation—Anambah Project

Ala Talie.
Thanks for the opportunity to respond to register for this project. We hope all is well with you guys. Firstly as a Wonnarua Elder and knowledge holder of Country we would like to be consulted in all ways. Ps Stay Safe all. Regards Arthur - Kauwul and Aunty Lynne and Families.

Sent from my iPad

> On 31 Mar 2021, at 12:28 pm, Aboriginal Heritage <ach@gml.com.au> wrote:
>
> Dear Arthur Fletcher,
>
> On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*
>
> The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:
>
> - Lot A, DP 431640;
> - Lot 1, DP 1110433;
> - Lot 2, DP 1110433;
> - Lot 6, DP 19925;
> - Lot 178, DP 874171; and
> - Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

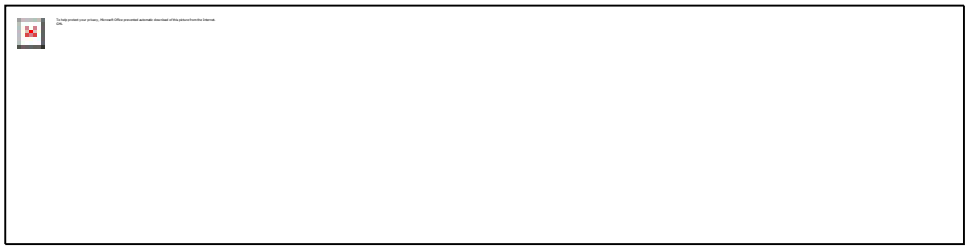
If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

<image001.jpg>
Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au



GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check

them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Talei Holm

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Tuesday, 6 April 2021 8:34 AM
To: Leslie Atkinson
Subject: RE: Aboriginal Registration for Community Consultation—Anambah Project

Dear Les,

Thank you for your email. We have registered you for the project.

Best,
Talei

From: Leslie Atkinson <les.atkinson@hotmail.com>
Sent: Wednesday, 31 March 2021 1:49 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Re: Aboriginal Registration for Community Consultation—Anambah Project

Hi Jarban + Mugrebea , would like to be consulted on this project , we would also like to be considered for any site work which may be involved in this project . we have CoC's public liability and Workers' comp . copies are available on request
Many thanks
les (Jarban)

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:26 PM
To: les.atkinson@hotmail.com <les.atkinson@hotmail.com>
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Les Atkinson,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

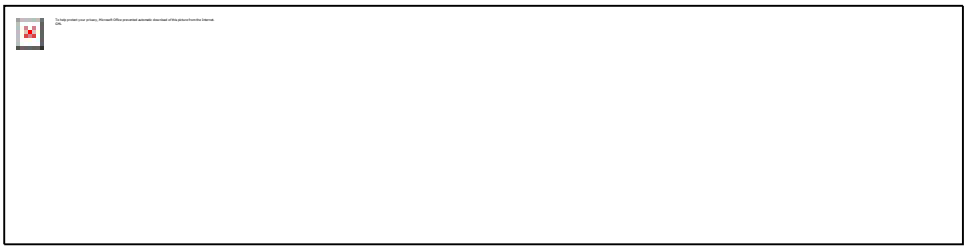
If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au



GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Talei Holm

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Tuesday, 6 April 2021 8:33 AM
To: Tracey Skene
Subject: RE: Aboriginal Registration for Community Consultation—Anambah Project

Dear Tracey,

Thank you for your email. We have registered you for the project.

Best,
Talei

From: Tracey Skene <tracey@marrung-pa.com.au>
Sent: Wednesday, 31 March 2021 1:03 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Re: Aboriginal Registration for Community Consultation—Anambah Project

Good Afternoon,

Culturally Aware would like to put an Expression of Interest for the above project.

I am familiar with my Cultural Landscape and have walked the land with these Assessment for over 28 yrs and will continue to do so as these Assessments build onto the surrounding Cultural Landscapes and tell our Cultural values and Stories.

Tracey

On Wed, 31 Mar 2021 at 12:27 pm, Aboriginal Heritage <ach@gml.com.au> wrote:

> Dear Tracey Skene,
>
> On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*
>
> The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:
>
> - Lot A, DP 431640;
> - Lot 1, DP 1110433;
> - Lot 2, DP 1110433;
> - Lot 6, DP 19925;
> - Lot 178, DP 874171; and
> - Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

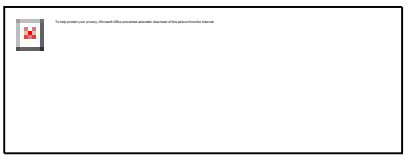
The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

--

Kind regards
Tracey Skene
7 Crawford Place,Millfield NSW 2325

Mobile 0474106537



Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 21 April 2021 3:12 PM
To: Kerrie Brauer
Subject: RE: Aboriginal Registration for Community Consultation—Anambah Project

Hi Kerrie,

Thank you for the email, we have registered you for the project.

Regards,

From: Kerrie Brauer <kerrie@awabakal.com.au>
Sent: Wednesday, 21 April 2021 6:12 AM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: RE: Aboriginal Registration for Community Consultation—Anambah Project

Dear Talei,

Apologies for the late response as we have been a bit flat out at the moment, and would like to register our interest for the propose Anambah Project.

Kind regards,

Kerrie Brauer

ATOAC
Kerrie Brauer | Director | Administration | Awabakal Traditional Owners Aboriginal Corporation
M: 04 12 86 63 57 | E: kerrie@awabakal.com.au | www.awabakal.com.au
PO Box 127 Rutherford NSW 2320 Australia

CONFIDENTIALITY NOTICE: This e-mail is confidential and intended for the addressee only. The use, copying or distribution of this message or any information it contains, by anyone other than the addressee is prohibited by the sender. If you have received this e-mail in error, please delete it and notify the original author immediately. Every reasonable precaution has been taken to ensure that this e-mail, including attachments, does not contain any viruses. However, no liability can be accepted for any damage sustained as a result of such viruses, and recipients are advised to carry out their own checks. Please consider the environment before printing this correspondence.

From: Aboriginal Heritage [mailto:ach@gml.com.au]
Sent: Wednesday, 31 March 2021 12:19 PM
To: kerrie@awabakal.com.au
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Kerrie Brauer,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

WINNER
BEST HERITAGE CONSULTING FIRM
GML HERITAGE

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Cameron, Jodi

From: Emily Livens <Emily.Livens@maitland.nsw.gov.au>
Sent: Tuesday, 6 April 2021 2:48 PM
To: Aboriginal Heritage
Subject: RE: Aboriginal Registration for Community Consultation—Anambah Project

Hi

Unfortunately we are unable to pass on this list. However you are able to get a copy by contacting heritage NSW. Alternatively you could contact the Mindaribba Local Aboriginal Land Council.

Cheers

Emily Livens
Coordinator Recreation & Community Planning
Culture, Community and Recreation | Maitland City Council
t 02 4939 1041
f 02 4933 6091
m 0427 157242
Emily.Livens@maitland.nsw.gov.au

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 31 March 2021 12:24 PM
To: Emily Livens <Emily.Livens@maitland.nsw.gov.au>
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Emily Livens,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

****
The views expressed in this email are not necessarily those of the Maitland City Council unless otherwise stated. The organisation does not warrant that this message is free of viruses or any other defect or error. This message and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this message in error please contact the author.
****

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Friday, 16 April 2021 5:00 PM
To: Tara Dever; Aboriginal Heritage
Subject: RE: Aboriginal Community Consultation- request for information
Attachments: 240145-PSK-004-A-Layout1.pdf

Dear Tara,
Thank you for the email we have registered Mindaibba LALC for the project.
Please find detailed map attached.
Kind regards,
Jodi

From: Tara Dever <ceo@mindaribbalalc.org>
Sent: Friday, 16 April 2021 3:53 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: FW: Aboriginal Community Consultation- request for information
Importance: High

Good afternoon Talei,

The Mindaribba LALC would like to register for any works and to be consulted in relation to the attached development at Anambah. We would also like to request that a map be sent through identifying the Lots and DPs for the potential sites to be developed.

Further to this the Wonnarua groups that we endorse for further consultation are-
Murrung-pa – Tracey Skeen - tracey@marrung-pa.com.au
Kuwal Cultural Services – Arthur Fletcher - arthur.c.fletcher@gmail.com
Wonnarua Elders Council – Uncle Richard Edwards - dawnrichard@bigpond.com

Warm regards Tara

Tara Dever
Chief Executive Officer
Mindaribba Local Aboriginal Land Council
PO Box 401, East Maitland, NSW 2323
Ph: +6102 4015 7000
M: 0423 770 173

I acknowledge the Traditional Owners and Custodians of the land I work on, the Wonnarua People.
I pay my respect to all Aboriginal Elders Past, Present and Emerging.

" Aboriginal and Torres Strait Islander women are not just the backbone of communities; they are the blood that circulates through a system of culture and identity. They get up and do the work each day to build better. It is time we listen, acknowledge and support them in that fight." Dr Tess Ryan Biripi

From: Admin <admin@mindaribbalalc.org>
Sent: Friday, 16 April 2021 1:58 PM
To: Tara Dever <ceo@mindaribbalalc.org>
Subject: FW: Aboriginal Community Consultation- request for information

From: Aboriginal Heritage [mailto:ach@gml.com.au]
Sent: Friday, 16 April 2021 1:15 PM
To: Aboriginal Heritage <ach@gml.com.au>; Admin <admin@mindaribbalalc.org>
Subject: RE: Aboriginal Community Consultation- request for information

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 17 March 2021 9:49 AM
To: admin@mindaribbalalc.org
Subject: Aboriginal Community Consultation- request for information

Dear Sir/Madam

The opportunity has arisen for archaeological works in Anambah. These works will involve Aboriginal consultation.

Please find attached a request for any information you may have in relation to potentially interest Aboriginal parties.

Best,
Talei

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 7 April 2021 9:21 AM
To: WIDESCOPE .
Subject: RE: Aboriginal Registration for Community Consultation—Anambah Project

Hi Steven,

Thank you for your email. You have been registered for the project.

Best,
Talei

From: WIDESCOPE . <widescope.group@live.com>
Sent: Wednesday, 7 April 2021 8:30 AM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: RE: Aboriginal Registration for Community Consultation—Anambah Project

Hi Talei,

Thank you for the invitation to register. Please register my interest for community consultation in the Anambah project

Regards
Steven Hickey

From: Aboriginal Heritage
Sent: Wednesday, 31 March 2021 12:28 PM
To: widescope.group@live.com
Subject: Aboriginal Registration for Community Consultation—Anambah Project

Dear Steven Hickey,

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places.

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity. If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land.

All registrations should be received by GML no later than 16/04/2021.

Talei Holm
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

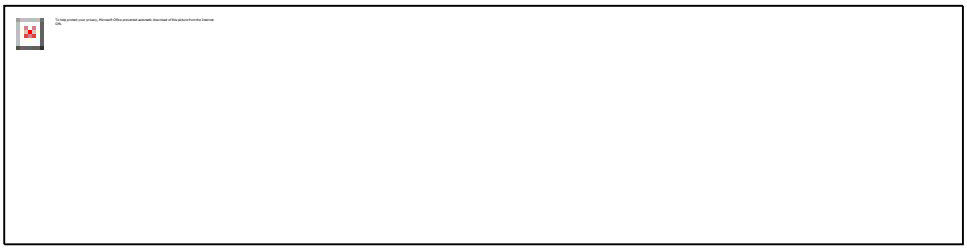
If you have any questions about this project please call me on 9319 4811.

Kind regards,

Talei

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au



GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 21 April 2021 3:08 PM
To: Dawn Edwards; Aboriginal Heritage
Subject: RE: Wonnarua Elders Council Inc.

Hi Richard,

Thank you for your email, we have registered you for the project.

Regards,

GML Heritage
T Reception: 02 9319 4811 | www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past, present and emerging.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

From: Dawn Edwards <dawnrichard@bigpond.com>
Sent: Monday, 19 April 2021 3:21 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Wonnarua Elders Council Inc.

Hi Talei

Wonnarua Elders Council is registering their interest in the Anambah Project - Aboriginal Registration for Community Consultation.

Your Reference 21-003711.

Thank You

Regards
Richard Edwards
Treasurer
Wonnarua Elders Council Inc.

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Friday, 16 April 2021 10:02 AM
To: Lawrence Perry
Subject: RE: ANAMBAH PROJECT

Hi Laurie,

Thank you for the email. We have registered you for the project.

Have a great weekend,

From: Lawrence Perry <laurie.perry2020@outlook.com>
Sent: Friday, 16 April 2021 9:48 AM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: ANAMBAH PROJECT

Hi Talei

Thank you for the letter we would like to be consulted for this project

cheers

Laurie Perry
Chief Executive Officer
Wonnarua Nation Aboriginal Corporation
T 02 6571 8595 **M** 0412 593 020 **E** laurie.perry2020@outlook.com
Ground Floor 254 John St Singleton NSW 2330
PO BOX 3066 Singleton Delivery Centre 2330

Cameron, Jodi

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Friday, 30 April 2021 1:56 PM
To: OEH HD Heritage Mailbox; rosalie.neve@environment.nsw.gov.au; admin@mindaribbalalc.org; Tara Dever
Subject: Anambah Aboriginal Heritage Project—Notification of Aboriginal Registration for Community Consultation
Attachments: 21-0037l1 Letter.docx; 21-0037 Published newspaper notice.JPG; Consultation Responses Combined.pdf

To Whom It May Concern,

In accordance with Section 4.1.6 of the *Aboriginal cultural heritage consultation requirements for proponents 2010*, I write to inform you of those Aboriginal people and organisations that have registered an interest in being consulted regarding the Anambah Aboriginal Heritage project. The registered parties are listed in the table below.

Invitations to register an interest by Aboriginal people with cultural knowledge relevant to the project area were sent 31 March 2021 and a notification was also placed in Maitland Mercury on 2 April 2021. Registration closed on the 16 April 2021. Two registrations were accepted after the 16 April 2021.

Copies of the invitation to register and newspaper notice are attached.

Please don't hesitate to contact me if you require any further information.

Kind regards,

Jodi

Table 1 Registered Aboriginal Parties (RAPs)

Organisation	Contact Information
AGA Services	Gregory Sampson, Ashley Sampson and Adam Sampson, cacatua4service@tpg.com.au
Anonymous RAP	
Awabakal Traditional Owners Aboriginal Corporation	Kerrie Brauer kerrie@awabakal.com.au
Cacatua Culture Consultants	George Sampson, cacatua4service@tpg.com.au
Culturally Aware	Tracey Skene, tracey@marrung-pa.com.au
Didge Ngunawal Clan	Paul Boyd and Lilly Carroll, didgengunawalclan@yahoo.com.au, 0426823944
Jarban & Mugrebea	Les Atkinson, les.atkinson@hotmail.com
Kawul Pty Ltd. Trading as Wonn1 Sites	Arthur Fletcher, wonn1sites@gmail.com
Mindaribba LALC	ceo@mindaribbalalc.org
Wallangan Cultural Services	Maree Waugh, wallangan@outlook.com, 0439813078
Widescope Indigenous Group	Steven Hickey, widescope.group@live.com
Wonnarua Elders Council	Richard Edwards dawnrichard@bigpond.com
Wonnarua Nation Aboriginal Corporation	laurie.perry2020@outlook.com 0412 593 020
Yarrawalk (Tocomwall)	Scott Franks, scott@tocomwall.com.au

Cameron, Jodi

From: Aboriginal Heritage
Sent: Friday, 30 April 2021 4:51 PM
To: laurie.perry2020@outlook.com
Subject: Anambah Project ARD

Dear Laurie Perry,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Aboriginal Heritage
Sent: Friday, 30 April 2021 4:50 PM
To: dawnrichard@bigpond.com
Subject: Anambah Project ARD

Dear Richard Edwards,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Cameron, Jodi
Sent: Friday, 30 April 2021 4:49 PM
To: 'WIDESCOPE . (widescope.group@live.com)'
Subject: Anambah Project ARD

Dear Steven Hickey,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Cameron, Jodi
Sent: Friday, 30 April 2021 4:49 PM
To: wallangan@outlook.com
Subject: Anambah Project ARD

Dear Maree Waugh,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Aboriginal Heritage
Sent: Friday, 30 April 2021 4:48 PM
To: ceo@mindaribbalalc.org; admin@mindaribbalalc.org
Subject: Anambah Project ARD

Dear Sir or Madam,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Aboriginal Heritage
Sent: Friday, 30 April 2021 4:46 PM
To: wonn1sites@gmail.com
Subject: Anambah Project ARD

Dear Arthur Fletcher,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Aboriginal Heritage
Sent: Friday, 30 April 2021 4:45 PM
To: les.atkinson@hotmail.com
Subject: Anambah Project ARD

Dear Les Atkinson,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Cameron, Jodi
Sent: Friday, 30 April 2021 4:38 PM
To: didgengunawalclan@yahoo.com.au
Subject: Anambah Project ARD

Dear Lillie Carroll,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Cameron, Jodi
Sent: Friday, 30 April 2021 4:38 PM
To: tracey@marrung-pa.com.au
Subject: Anambah Project ARD

Dear Tracey Skene,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Cameron, Jodi
Sent: Friday, 30 April 2021 4:37 PM
To: [redacted]
Subject: Anambah Project ARD

[redacted]

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Aboriginal Heritage
Sent: Friday, 30 April 2021 4:36 PM
To: cacatua4service@tpg.com.au
Subject: Anambah Project ARD

Dear Donna Sampson,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Cameron, Jodi
Sent: Friday, 30 April 2021 4:36 PM
To: kerrie@awabakal.com.au
Subject: Anambah Project ARD

Dear Kerrie Brauer,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Aboriginal Heritage
Sent: Friday, 30 April 2021 4:35 PM
To: aga.services@hotmail.com
Subject: Anambah Project ARD

Dear Ashley Sampson,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Aboriginal Heritage
Sent: Friday, 30 April 2021 4:34 PM
To: 'scott@tocomwall.com.au'
Subject: Anambah Project ARD

Dear Scott Franks,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Cameron, Jodi

From: Cameron, Jodi
Sent: Monday, 3 May 2021 12:53 PM
To: WIDESCOPE .
Cc: Aboriginal Heritage
Subject: RE: Anambah Project ARD

Hi Steven,

Thank you for your email.
We will be in contact when we organise the site visit.

Kind regards,
Jodi

From: WIDESCOPE . <widescope.group@live.com>
Sent: Sunday, 2 May 2021 11:35 AM
To: Cameron, Jodi <jodic@gml.com.au>
Subject: RE: Anambah Project ARD

Hi Jodi,

Thank you for providing me with the Report for Anambah Project

I have reviewed the report (ARD) and support the recommendations out lined in the Methodology

I would like to participate in the site visit, I am a traditional owner and a recognised cultural Knowledge holder and able to speak on country. I have over 20 years experience in Cultural and heritage work. I hold cultural knowledge relevant in determining the significance of Aboriginal objects and places in the vicinity of the study area. I hold a cultural connection to the area of the project and surrounding areas

Please see Insurance attachments
Widescope Indigenous Group
ABN: 85 534 438 671

Regards
Steven Hickey

From: Cameron, Jodi
Sent: Friday, 30 April 2021 4:49 PM
To: 'WIDESCOPE . (widescope.group@live.com)'
Subject: Anambah Project ARD

Dear Steven Hickey,

Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.

https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

> ***3.3.1 Who can provide this information?***
>
> *Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:*
>
> - *continue to maintain a deep respect for their ancestral belief system, traditional lore and custom*
> - *recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country*
> - *have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.*

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Jodi Cameron
Senior Heritage Consultant
(she/her)

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Direct: 02 9318 7579 | T Reception: 02 9319 4811
Availability: Monday - Wednesday
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the

sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Cameron, Jodi

From: Cameron, Jodi
Sent: Monday, 3 May 2021 12:55 PM
To: lilly carroll
Subject: RE: Anambah Project ARD

Hi Paul and Lilly,

Thank you for your email.

Please let me know if you have any questions or feedback on the ARD
https://spaces.hightail.com/receive/eYnl9JusAQ

Kind regards,
Jodi

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Friday, 30 April 2021 7:04 PM
To: Cameron, Jodi <jodic@gml.com.au>
Subject: Re: Anambah Project ARD

Hi Jodi

DNC would like to register an interest into the Anambah project and would love to participate in the site visit

Our ABN is 83857193147
Didge Ngunawal Clan Aboriginal Organisation ICN : 8241

DNC has always maintained a connection with the Hunter region as our Grandmother was born and bred @Pokolbin

Experienced site Officers
Fully insured and respected
Previous experience recently/ currently working with Hannah, Tahlay, Andie, Richard, Peter and Tim Owen as a reference

Kind regards
Paul Boyd & Lilly Carroll
Directors DNC
0426823944

Sent from Yahoo Mail for iPhone

On Friday, April 30, 2021, 4:38 pm, Cameron, Jodi <jodic@gml.com.au> wrote:

> Dear Lillie Carroll,
>
> Please find below the link for the Archaeological Research Design (ARD) proposed for the Anambah Project.
>
> https://spaces.hightail.com/receive/eYnl9JusAQ

This link will expire in six months.

This methodology has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.2.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final methodology for the project.

Registered Aboriginal parties have a statutory 28 days from the date of this email to provide written or oral comment on the methodology. In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021.

A site visit as outlined in the above methodology, will be undertaken after the review period has closed. If you would like a representative from your organisation to participate in the site visit, please provide an expression of interest, including copies of your organisation's ABN and insurances along with a short statement addressing the Heritage NSW's criteria for Aboriginal representatives (Section 3.3.1):

3.3.1 Who can provide this information?

Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, the traditional owners or custodians of the land that is the subject of the proposed project. Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register their interest as an Aboriginal party are those people who:

- continue to maintain a deep respect for their ancestral belief system, traditional lore and custom

- recognise their responsibilities and obligations to protect and conserve their culture and heritage and care for their traditional lands or Country

- have the trust of their community, knowledge and understanding of their culture, and permission to speak about it.

Should you have any questions in relation to the methodology please do not hesitate to call or email me on (02) 9319 4811 or ach@gml.com.au

We look forward to hearing from you.

Kind regards,

Jodi

Jodi Cameron
Senior Heritage Consultant
(she/her)

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Direct: 02 9318 7579 | T Reception: 02 9319 4811
Availability: Monday - Wednesday
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 12 May 2021 10:14 AM
To: Danny Franks; Aboriginal Heritage
Cc: Scott Franks
Subject: RE: Anambah Project ARD

Hi Danny,

Thank you for the email.
We will keep you updated when we organise the site visit.

Kind regards,
Jodi

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

From: Danny Franks <danny@tocomwall.com.au>
Sent: Monday, 10 May 2021 3:09 PM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Scott Franks <scott@tocomwall.com.au>
Subject: Anambah Project ARD

Hi Jodi,

Tocomwall has no objections to the ARD for this project. Tocomwall can assist GML staff by providing field staff with years of experience on the ground.

regards,

Danny Franks

Cultural Heritage Manager

Tocomwall Pty Ltd

M: 0415226725

Breach of Confidentiality

This email and any files transmitted with it are confidential and intended solely for the use of the individual to whom they are addressed. If you have received this email in error please notify the sender. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited. *Although the company has taken reasonable precautions to ensure no viruses are present in this email, the company cannot accept responsibility for any loss or damage arising from the use of this email or attachments*.

Position: Site Officer

Attention: Jodi

Applying for : Site Officer- Anambah – Corroboree Aboriginal Corporation ,
Our organisation's ABN: 17569793106

Our insurances attached.
Our statement addressing the Heritage NSW's criteria for Aboriginal representatives.
As Aboriginal people we are nomadic as documented in history as such we and our ancestors have lived all over the lands in Australia.(Section 3.3.1): We are aboriginal people whom are registered with the OEH. I am an indigenous person and I can provide the required information. I have a wealth of knowledge and history past down by our Elders, and our ancestors. Also many years of experience on field with Archeologists. Our RAPS can survey, mark out test pits, dig and label, soil test, record info from site test and sieve. We can identify artefacts and write reports,
3.3.1 We are Aboriginal people who can provide the information outlined in 3.3 above are, based on Aboriginal lore and custom, we are the traditional owners or custodians of the land that is the subject of the proposed project. We as aboriginal are the Traditional owners or custodians with appropriate cultural heritage knowledge to inform decision making who seek to register as such have registered our interest as an Aboriginal party, we are people who:
continue to maintain a deep respect for their ancestral belief system, traditional lore and custom
We recognise our responsibilities and obligations to protect and conserve our culture and heritage and care for our traditional lands or Country
We at Corroboree Aboriginal Corporation have worked on ancestral lands to peer preserve our culture and heritage to share with our future generations as such we have the trust of community, knowledge and understanding of Aboriginal culture and the knowledge to speak about it as Aboriginal people as defined by government for the preservation of Aboriginal culture and heritage.

Cameron, Jodi

From: Cameron, Jodi
Sent: Wednesday, 19 May 2021 11:50 AM
To: Corrroboree Aboriginal Corporation
Subject: RE: Site Officer

Hi Marilyn,

Thank you, we will keep you updated on the project.

Regards,
Jodi

From: Corrroboree Aboriginal Corporation <corroboreecorp@bigpond.com>
Sent: Wednesday, 19 May 2021 10:57 AM
To: Cameron, Jodi <jodic@gml.com.au>
Subject: Re: Site Officer

Hi Jodi
We agree with methodology. No further questions.

Kind regards
Marilyn Carroll-Johnson
Director
Corroboree Aboriginal Corporation
Mob: 0415911159
Ph: 0288244324
E: corroboreecorp@bigpond.com
Address: PO Box 3340
ROUSE HILL NSW 2155

> On 19 May 2021, at 10:48 am, Cameron, Jodi <jodic@gml.com.au> wrote:
>
> Hi Marilyn,
>
> Thanks for your email.
> Did you have any questions or feedback on the project methodology?
> https://spaces.hightail.com/receive/eYnl9JusAQ
>
> Kind regards,
> Jodi
>
> **Jodi Cameron**
> Senior Heritage Consultant
> (she/her)
>
> **GML Heritage**
> Level 6 372 Elizabeth St, Surry Hills NSW 2010
> T Direct: 02 9318 7579 | T Reception: 02 9319 4811
> Availability: Monday - Wednesday
> www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

From: Corrroboree Aboriginal Corporation <corroboreecorp@bigpond.com>
Sent: Thursday, 13 May 2021 2:21 PM
To: Cameron, Jodi <jodic@gml.com.au>
Subject: Site Officer

Kind regards
Marilyn Carroll-Johnson
Director
Corroboree Aboriginal Corporation
Mob: 0415911159
Ph: 0288244324
E: corroboreecorp@bigpond.com
Address: PO Box 3340
ROUSE HILL NSW 2155

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:24 PM
To: uhsdc@bigpond.com
Subject: Anambah Aboriginal Archaeology Project

Dear Rhonda Perry,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:24 PM
To: abie@yarnteen.com.au
Subject: Anambah Aboriginal Archaeology Project

Dear Abie Wright,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:24 PM
To: Vicki.slater@hotmail.com
Subject: Anambah Aboriginal Archaeology Project

Dear Vicki Slater,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:24 PM
To: barkumanc@hotmail.com
Subject: Anambah Aboriginal Archaeology Project

Dear Ann Hickey,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:23 PM
To: drm.cm@hotmail.com
Subject: Anambah Aboriginal Archaeology Project

Dear Helen Faulkner,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:23 PM
To: amandahickey@live.com.au
Subject: Anambah Aboriginal Archaeology Project

Dear Amanda Hickey,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:22 PM
To: warragil_c.s@hotmail.com
Subject: Anambah Aboriginal Archaeology Project

Dear Aaron Slater,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:24 PM
To: uhsdc@bigpond.com
Subject: Anambah Aboriginal Archaeology Project

Dear Rhonda Perry,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:24 PM
To: abie@yarnteen.com.au
Subject: Anambah Aboriginal Archaeology Project

Dear Abie Wright,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:24 PM
To: Vicki.slater@hotmail.com
Subject: Anambah Aboriginal Archaeology Project

Dear Vicki Slater,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:24 PM
To: barkumanc@hotmail.com
Subject: Anambah Aboriginal Archaeology Project

Dear Ann Hickey,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:23 PM
To: drm.cm@hotmail.com
Subject: Anambah Aboriginal Archaeology Project

Dear Helen Faulkner,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:23 PM
To: amandahickey@live.com.au
Subject: Anambah Aboriginal Archaeology Project

Dear Amanda Hickey,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Cameron, Jodi

From: Aboriginal Heritage
Sent: Wednesday, 5 May 2021 3:22 PM
To: warragil_c.s@hotmail.com
Subject: Anambah Aboriginal Archaeology Project

Dear Aaron Slater,

In 2012 your organisation was a Registered Aboriginal Party (RAP) for the Anambah Aboriginal Archaeology Project. The project was put on hold and the land sold to Roche Group. The project has been restarted in 2021, including restarting Aboriginal Community Consultation.

Heritage NSW did not include your organisation in their list of potential stakeholders, however, as a 2012 RAP we would like to offer you the opportunity to register for the project in 2021.

On behalf of Roche Group (Glyn Richards: grichards@rochegroup.com.au), GML Heritage (GML) seeks registration from local Aboriginal groups and people with respect to the future application for an Aboriginal Heritage Impact Permit (AHIP) under *Part 6 of the National Parks and Wildlife Act 1974.*

The land subject to an AHIP is located in Maitland LGA. The study area is marked on the map below, the Lot and DPs are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

The proposed development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre.

Please follow the following link to the 2021 archaeological research design (ARD) for the project (https://spaces.hightail.com/receive/eYnI9JusAQ) this link will expire in six months.

The purpose of community consultation with Aboriginal people is to assist Roche Group in the preparation of an application for an AHIP and to assist the Director General of Heritage NSW in their consideration and determination of the application.

In accordance with the DECCW's *Aboriginal cultural heritage consultation requirements for proponents 2010* GML is required to compile a list of Aboriginal people who may have an interest in the proposed project area and hold knowledge relevant to determining cultural significance of Aboriginal objects and/or places**.**

GML invite local Aboriginal people who hold cultural knowledge relevant to determining the significance of Aboriginal object(s) and/or place(s) in the study area to register an interest in community consultation regarding the proposed activity.

If you wish to register please provide in writing (a letter or email) a brief statement clarifying that you wish to be involved in future Aboriginal community consultation and how you will assist with the assessment of cultural significance associated with the subject land. Secondly, please review the ARD (https://spaces.hightail.com/receive/eYnI9JusAQ) and provide any comments or feedback on the 2021 methodology.

All registrations and comments should be received by GML no later than 3/05/2021.

Jodi Cameron
GML Heritage
Level 6, 372 Elizabeth Street
Surry Hills NSW 2010

ach@gml.com.au

Please be advised that the details of all parties who register an interest will be forwarded to Heritage NSW and the Local Aboriginal Land Council unless it is specified that these details should not be released.

If you have any questions about this project please call me on 9319 4811.

Kind regards,

Jodi

Figure 1 Location of the study area (Source: SIXMaps, 2016 with GML additions, 2021.)

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: 'tracey@marrung-pa.com.au'
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Tracey Skene,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: [redacted]
Subject: Anambah Aboriginal Heritage—Site Visit

[redacted]

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: 'cacatua4service@tpg.com.au'
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Donna Sampson,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: kerrie@awabakal.com.au
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Kerrie Brauer,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: 'aga.services@hotmail.com'
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Ashley Sampson,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: 'didgengunawalclan@yahoo.com.au'
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Lillie Carroll,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: 'les.atkinson@hotmail.com'
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Les Atkinson,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: wonn1sites@gmail.com
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Arthur Fletcher,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: ceo@mindaribbalalc.org
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Sir or Madam,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: wallangan@outlook.com
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Maree Waugh,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: widescope.group@live.com
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Steven Hickey,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: dawnrichard@bigpond.com
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Richard Edwards,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: laurie.perry2020@outlook.com
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Laurie Perry,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: scott@tocomwall.com.au
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Scott Franks,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:02 PM
To: yunaga1@bigpond.com
Subject: Anambah Aboriginal Heritage—Site Visit

Dear Rhonda Perry,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Cameron, Jodi

From: Cameron, Jodi
Sent: Friday, 27 August 2021 10:59 AM
To: rosalie.neve@environment.nsw.gov.au
Subject: Anambah Aboriginal Heritage Project update

Dear Rosalie

I hope this finds you well.

I wanted to provide an update on the Anambah Aboriginal heritage project.

The project was put on hold due to the Covid outbreak in Sydney, we were waiting to undertake the site visit with the RAPs. It has become clear that we won't be able to meet on site for some time yet. Therefore, we have looked into other ways to continue with the project in a Covid safe way. We believe an online workshop is the best way to undertake consultation in the current circumstances.

GML will issue the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Repot (ATR) for RAP review. As per the Heritage NSW requirements, there will be a 28 day review period. During this review period, we will host the online workshop.

Online Workshop

Rather than having an onsite meeting, we will hold an online workshop to discuss the results of the 2012 test excavation and the proposed development.

Two GML archaeologist will undertake a site visit to document the current conditions on site and present in the workshop. A team member from Roche will present the proposed development. GML will provide an impact assessment and proposed mitigation measures for the development.

Roche will be remunerating the groups who attend the workshop and provide written feedback to the draft ACHAR and ATR. Details will be provided when the draft reports and workshop invitation are issued.

Would you like to attend the workshop?

If you have any questions or comments, please do not hesitate to contact me.

Kind regards,

Jodi

Talei Holm

From: Aboriginal Heritage
Sent: Monday, 21 June 2021 11:49 AM
To: [redacted] Aboriginal Heritage
Subject: RE: Anambah Aboriginal Heritage—Site Visit - RAP available

[redacted]

Thank you for your email. We look forwards to working with [redacted] again on this project.

Best,

Talei

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

From: [redacted]
Sent: Thursday, 17 June 2021 6:37 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Re: Anambah Aboriginal Heritage—Site Visit - RAP available

Hi

Yes we have a RAP available for Monday 5 July.

Kind regards

[redacted]

[redacted]

On 17 Jun 2021, at 5:02 pm, Aboriginal Heritage <ach@gml.com.au> wrote:

[redacted]

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

<image001.jpg>
Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:21 PM
To: Tracey Skene; Aboriginal Heritage
Subject: RE: Anambah Aboriginal Heritage—Site Visit

Hi Tracey

Thank you for your fast response, we look forwards to working with you.

Best,
Talei

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

From: Tracey Skene <tracey@marrung-pa.com.au>
Sent: Thursday, 17 June 2021 5:04 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Re: Anambah Aboriginal Heritage—Site Visit

Good Afternoon Culturally Aware will be attending this Site visit.
Thanks
Tracey

On Thu, 17 Jun 2021 at 5:02 pm, Aboriginal Heritage <ach@gml.com.au> wrote:

> Dear Tracey Skene,
>
> GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.
>
> The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

--

Kind regards
Tracey Skene
7 Crawford Place,Millfield NSW 2325
Mobile 0474106537

MARRUNG-TA
INDIGENOUS TRAINING

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:22 PM
To: lilly carroll; Aboriginal Heritage
Subject: RE: Anambah Aboriginal Heritage—Site Visit

Hi Paul,

Thank you for your fast response. We are looking forwards to working with Jolene.

Best
Talei

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Thursday, 17 June 2021 5:15 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Re: Anambah Aboriginal Heritage—Site Visit

Hi guys,

The contact details for this project will be Jolene Smith and a phone number is 0481158821

Thanks for the inclusion cheers Paul director of DNC

Sent from Yahoo Mail for iPhone

On Thursday, June 17, 2021, 5:02 pm, Aboriginal Heritage <ach@gml.com.au> wrote:

Dear Lillie Carroll,

GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.

The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Talei Holm

From: Aboriginal Heritage
Sent: Monday, 21 June 2021 9:29 AM
To: Danny Franks; Aboriginal Heritage
Cc: Scott Franks
Subject: RE: Anambah Aboriginal Heritage—Site Visit

Hi Danny,

Thank you for your email. We look forward to working with Mary during the inspection.

Best,
Talei

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

From: Danny Franks <danny@tocomwall.com.au>
Sent: Monday, 21 June 2021 9:12 AM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Scott Franks <scott@tocomwall.com.au>
Subject: Anambah Aboriginal Heritage—Site Visit

Good morning,

Thank you for considering Tocomwall on this project.

We will ensure we have a Field officer available for this date.

Field Officer-Mary Franks

regards,

Danny Franks

Cultural Heritage Manager

Tocomwall Pty Ltd

M: 0415226725

Breach of Confidentiality

This email and any files transmitted with it are confidential and intended solely for the use of the individual to whom they are addressed. If you have received this email in error please notify the sender. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail. Please notify the sender immediately by e-mail if you have received this e-mail by mistake and delete this e-mail from your system. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited. *Although the company has taken reasonable precautions to ensure no viruses are present in this email, the company cannot accept responsibility for any loss or damage arising from the use of this email or attachments*.

Talei Holm

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Wednesday, 23 June 2021 11:49 AM
To: yunaga1@bigpond.com
Subject: Confirmation of site visit

Hi Rhonda,

It was lovely to talk to you on the phone. We are meeting for the site inspection here:

The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please let me know if there is still an issue with the image loading and I will fins another way of getting it to you.

I look forward to working with Michelle during the site visit.

Best,
Talei

Talei Holm

From: Aboriginal Heritage
Sent: Thursday, 17 June 2021 5:25 PM
To: Arthur Fletcher; Aboriginal Heritage
Subject: RE: Anambah Aboriginal Heritage—Site Visit

Hi Arthur,

Thank you for you fast response. We are looking forwards to working with you.

Best,
Talei

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

From: Arthur Fletcher <wonn1sites@gmail.com>
Sent: Thursday, 17 June 2021 5:23 PM
To: Aboriginal Heritage <ach@gml.com.au>
Subject: Re: Anambah Aboriginal Heritage—Site Visit

Yes, I will be attending.

On Thu, Jun 17, 2021 at 5:02 PM Aboriginal Heritage <ach@gml.com.au> wrote:

> Dear Arthur Fletcher,
>
> GML and Roche Group (DB20 Pty Ltd) are undertaking the next stage of the Anambah project. We provided the ARD for your review previously.
>
> The study area was previously surveyed, we propose to undertake a single day inspection with all RAP groups. This will allow everyone to refamiliarize themselves with the place and the results from the test excavation.

Please can you provide one representative on Monday, 5 July 2021. Please meet at 8am approximately halfway along Anambah Road (Figure 1). The gate is on the western side of Anambah Road, north of 223 Anambah Road. The coordinates are -32.685493, 151.499958.

Please can you confirm your attendance, the name and contact details for the person undertaking the visit. The meeting point is marked on the map below. Please bring all food and water as required for the day, as there will be no return to the cars once the inspection starts. Please wear long pants and walking boots.

The inspection will be paid by Roche, at a rate of $800/group for the day. Please make out your invoice to:

Attn: Glyn Richards:

DB20 Pty Ltd

ACN: 637 243 844

P.O. Box 325, Double Bay NSW 1360

We look forwards to seeing you on 5 July. Please respond by return email confirming your attendance and the name and contact of the person attending.

Figure 1 Location of the site and meeting place for the visit (red circle).

Best,

Talei

Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML Heritage respects and acknowledges Australia's First Peoples and Traditional Custodians of the lands and waterways on which we live and work. We acknowledge Elders past and present. We advocate social and cultural justice and support the Uluru Statement from the Heart.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Please think before you print.

Anambah ACHAR review

On 7 December the Registered Aboriginal Parties (RAP) were invited to attend site to facilitate their review of the Anambah Aboriginal Cultural Heritage Assessment Report (ACHAR). The site inspection was attended by Arthur Fletcher (Wonn1) and Paul Boyd (Didge Ngunawal Clan).

This document provides an overview of the questions asked during the inspection, and a photographic review of the locations visited.

Cultural artefact management

The following questions were raised with respect to artefact management. These questions are to the local Aboriginal community, and should be addressed through RAP responses:

- Should all cultural artefacts excavated from Anambah be returned to Country within Anambah?
- Can the artefacts be returned inside the no-harm, conservation area? It is suggested at the northwest of this area, in a location which is not covered by existing vegetation—refer to ACHAR Figure 6.3, the top left of the blue zone. This location could be specified as a return to Country location under the AHIP, and would not be impacted by future works (it is outside the AHIP application area, refer to ACHAR Figure 6.3 and ATR Figure 6.1).
- When returned, should the artefacts be held inside plastic bags with labels (as per the requirements of the Code of Archaeological Practice), so should all artefacts be returned without plastic bags? The mode of return can be specified on the AHIP.
- It was proposed that return for the artefacts should occur within small but deep machine excavated pit. Do you agree with this methodology.

Inspection areas

The inspection visited the southern, northern and central parts of Anambah. Images showing the current state/condition of certain PAD areas is provided. In general, there had been no change in the condition and integrity of the PAD areas since the archaeological test excavation eg no major erosion or impact had occurred.

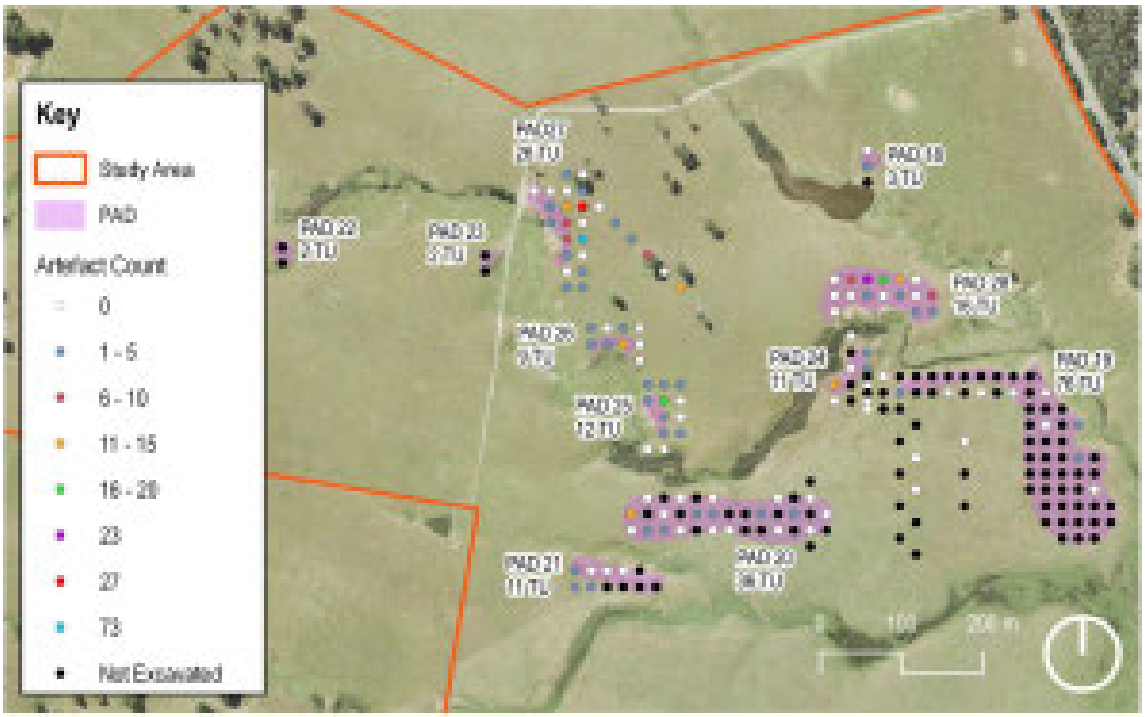
PAD 20 with a low grass/vegetation cover. The landform with potential is the broad flat area on the left of the image.

PAD 24, looking to PAD 28. Soil stabilisation has occurred adjacent to the creek with increased vegetation cover.

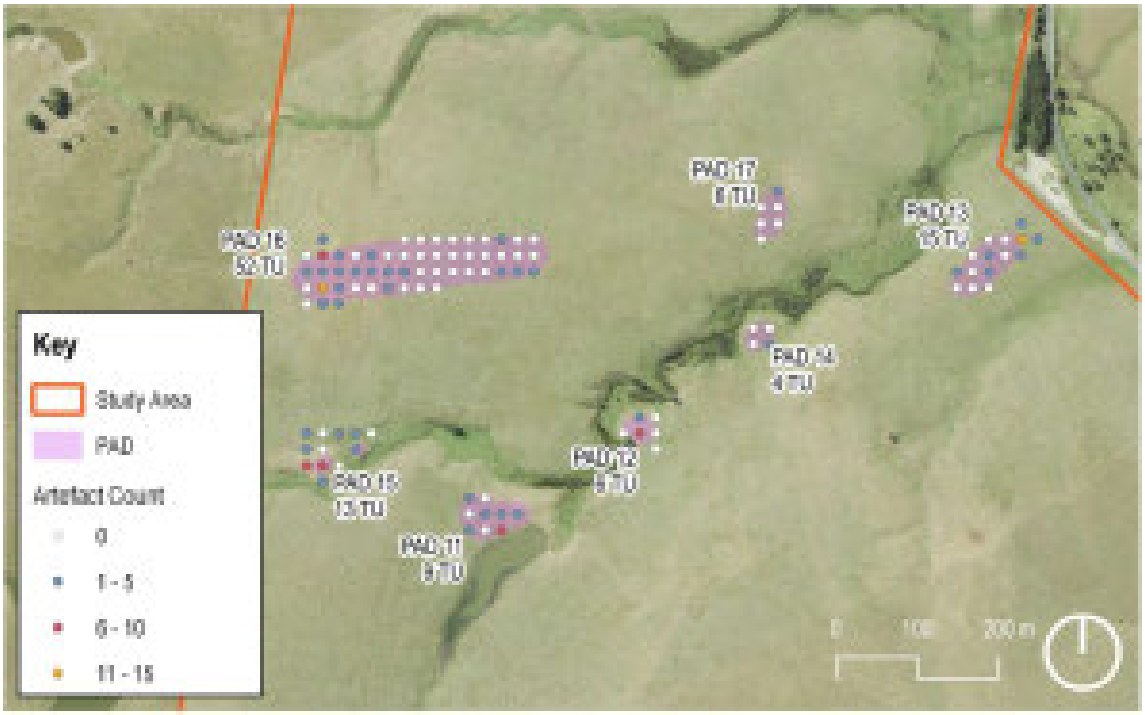
PAD 16 looking east. This is the most elevated PAD and overlooks the creek system to the north.

Test excavation units and artefact densities

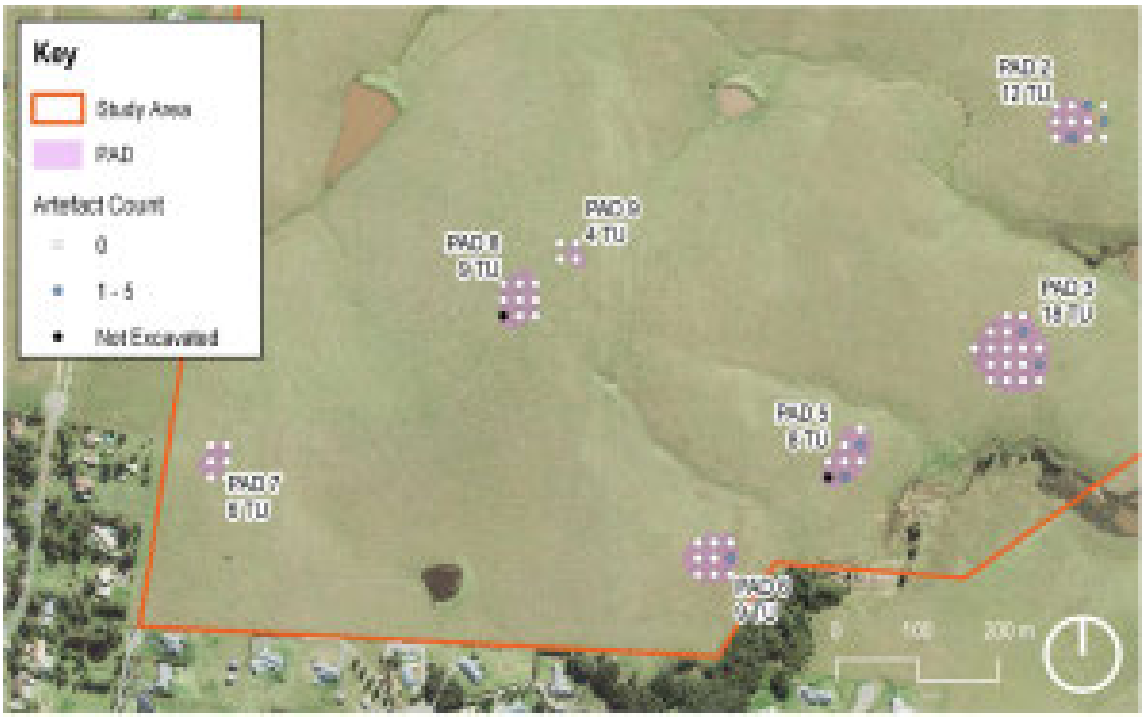
A question was asked about a summary of test excavation units and artefact densities. This information is presented in the ATR (Section 3.9, Table 3.9 and Figures 3.23 to 3.27). For ease of understanding the work completed and the outcomes, we have provided the relevant figures below. Please note that within PAD 19, post AHIP management and mitigation requirements include completion of archaeological sampling across this PAD area.



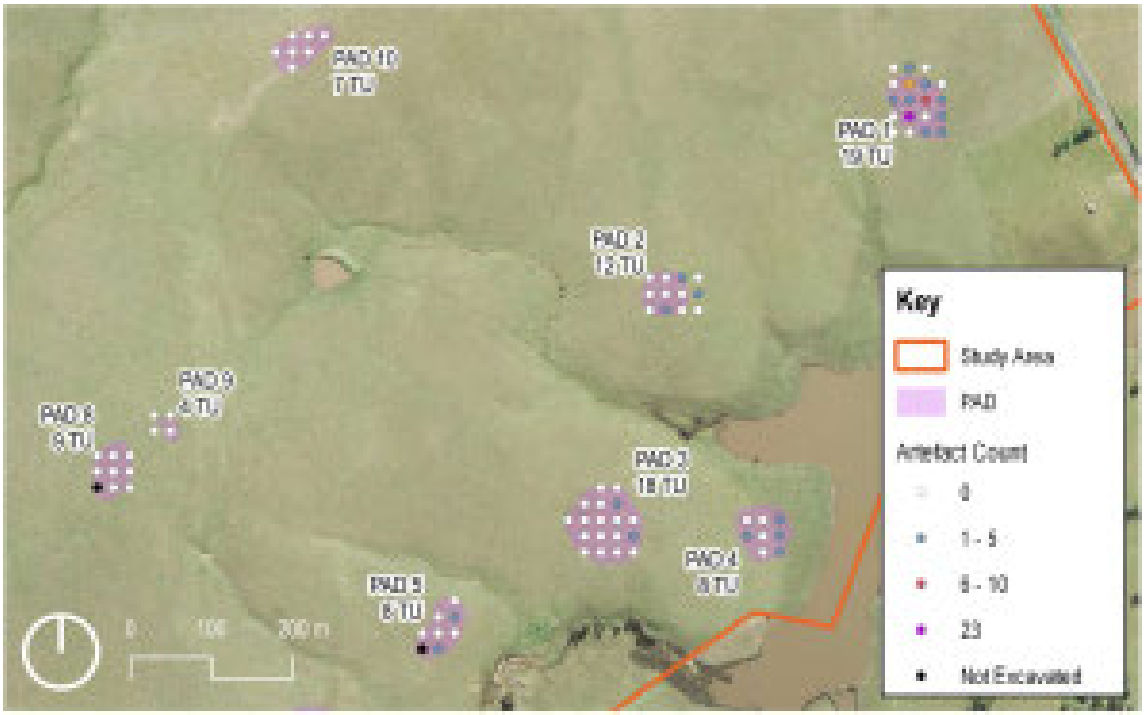
ATR Figure 3.24. Artefact numbers and TU locations, northern part of Anambah



ATR Figure 3.25. Artefact numbers and TU locations, central part of Anambah



ATR Figure 3.26. Artefact numbers and TU locations, southwestern part of Anambah



ATR Figure 3.27. Artefact numbers and TU locations, southeastern part of Anambah

Andie Coulson

From: Aboriginal Heritage
Sent: Thursday, 16 November 2023 12:32 PM
To: Aboriginal Heritage
Cc: Sandra Hutton
Subject: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Dear project RAP,

Please find the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project within this link: Anambah ACHAR, ATR and Site Inspection Letter Please let me know via return email if you have any difficulties accessing the reports. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, please provide comments by **12 January 2024**. We appreciate that the ACHAR is a long document. Therefore we are providing a review process and period which exceeds the standard requirements of Heritage NSW.

We invite all RAPs to attend a site visit on **7 December 2023**. Details are provided within the ACHAR Review & Site inspection letter, included in the information package linked above. Meeting location for the site inspection will be along Anambah Road at the location shown (https://maps.app.goo.gl/gEFpDpstXMsrRxEp8). The site visit is mid-way through the ACHAR review period. The intention is that you will be able to review the ACHAR, attend the site visit, have any questions addressed and/or provide feedback at the site visit, and then finalise your response on the ACHAR review. This process provides all RAPs with 8 weeks from the date of this email to provide written or oral comment on the ACHAR.

We look forward to hearing from you. Kind regards,
Andie Coulson

Andie Coulson

From: Arthur Fletcher <wonn1sites@gmail.com>
Sent: Tuesday, 5 December 2023 9:07 AM
To: Aboriginal Heritage
Subject: Re: Reminder re Anambah site inspection RE: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Hi Andie
We hope all is well with you guys. Could you please send me your contact information including phone numbers etc ASAP and resend the Package in P D F format. Regards Arthur- Kauwul Wonnarua Elder and Lynne and Families.😊

On Sat, 2 Dec 2023 at 8:19 am, Arthur Fletcher <wonn1sites@gmail.com> wrote:

> Ala Andie
> Could you please resend the Package in PDF format? As we cannot open the attachment . All the best to you.
> Nginuwa Arthur - Kauwul Wonnarua Elder and Lynne and Families.😊
> On Sat, 2 Dec 2023 at 5:40 am, Arthur Fletcher <wonn1sites@gmail.com> wrote:
>
> > I confirm that I will be attending.
> >
> > On Fri, 1 Dec 2023 at 3:36 pm, Aboriginal Heritage <ach@gml.com.au> wrote:
> >
> > > Dear project RAP,
> > >
> > > A reminder that the Anambah site inspection is scheduled for next **Thursday 7 December**, 10am. If you intend to participate in the site inspection, could you please confirm your attendance via return email. More information regarding the inspection has been provided within the link to the project ACHAR, ATR and Site inspection letter, within the email chain below. Please let me know if you have difficulties accessing the reports, or if you have any questions.
> > >
> > > Kind regards,
> > >
> > > Andie
> > >
> > > **GML Heritage**
> > > Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
> > > www.gml.com.au
> > >
> > >
> > >

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Thursday, November 16, 2023 12:32 PM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Sandra Hutton <SHutton@rochegroup.com.au>
Subject: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Dear project RAP,

Please find the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project within this link: Anambah ACHAR, ATR and Site Inspection Letter
Please let me know via return email if you have any difficulties accessing the reports. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, please provide comments by **12 January 2024**. We appreciate that the ACHAR is a long document. Therefore we are providing a review process and period which exceeds the standard requirements of Heritage NSW.

We invite all RAPs to attend a site visit on **7 December 2023**. Details are provided within the ACHAR Review & Site inspection letter, included in the information package linked above. Meeting location for the site inspection will be along Anambah Road at the location shown (https://maps.app.goo.gl/gEFpDpstXMsrRxEp8). The site visit is mid-way through the ACHAR review period. The intention is that you will be able to review the ACHAR, attend the site visit, have any questions addressed and/or provide feedback at the site visit, and then finalise your response on the ACHAR review. This process provides all RAPs with 8 weeks from the date of this email to provide written or oral comment on the ACHAR.

We look forward to hearing from you. Kind regards,

Andie Coulson

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Andie Coulson

From: Aboriginal Heritage
Sent: Friday, 1 December 2023 3:37 PM
To: Aboriginal Heritage
Cc: Sandra Hutton
Subject: Reminder re Anambah site inspection RE: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Dear project RAP,

A reminder that the Anambah site inspection is scheduled for next **Thursday 7 December**, 10am. If you intend to participate in the site inspection, could you please confirm your attendance via return email. More information regarding the inspection has been provided within the link to the project ACHAR, ATR and Site inspection letter, within the email chain below. Please let me know if you have difficulties accessing the reports, or if you have any questions.

Kind regards,
Andie

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Thursday, November 16, 2023 12:32 PM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Sandra Hutton <SHutton@rochegroup.com.au>
Subject: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Dear project RAP,

Please find the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project within this link: Anambah ACHAR, ATR and Site Inspection Letter Please let me know via return email if you have any difficulties accessing the reports. This ACHAR has been provided to all RAPs for

their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, please provide comments by **12 January 2024**. We appreciate that the ACHAR is a long document. Therefore we are providing a review process and period which exceeds the standard requirements of Heritage NSW.

We invite all RAPs to attend a site visit on **7 December 2023**. Details are provided within the ACHAR Review & Site inspection letter, included in the information package linked above. Meeting location for the site inspection will be along Anambah Road at the location shown (https://maps.app.goo.gl/gEFpDpstXMsrRxEp8). The site visit is mid-way through the ACHAR review period. The intention is that you will be able to review the ACHAR, attend the site visit, have any questions addressed and/or provide feedback at the site visit, and then finalise your response on the ACHAR review. This process provides all RAPs with 8 weeks from the date of this email to provide written or oral comment on the ACHAR.

We look forward to hearing from you. Kind regards,
Andie Coulson

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Andie Coulson

From: Kerrie Brauer <kerrie@awabakal.com.au>
Sent: Monday, 4 December 2023 4:18 PM
To: Aboriginal Heritage
Cc: 'Sandra Hutton'
Subject: RE: Reminder re Anambah site inspection RE: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Hi Andie,

Thank you for your email and unfortunately our Site Officers are not available week.

Many thanks,
Karrie Brauer

ATOAC
Kerrie Brauer | Director | Administration | Awabakal Traditional Owners Aboriginal Corporation
M: 04 12 86 63 57 | E: kerrie@awabakal.com.au | www.awabakal.com.au
PO Box 122 Rutherford NSW 2320 Australia

CONFIDENTIALITY NOTICE: This e-mail is confidential and intended for the addressee only. The use, copying or distribution of this message or any information it contains, by anyone other than the addressee is prohibited by the sender. If you have received this e-mail in error, please delete it and notify the original author immediately. Every reasonable precaution has been taken to ensure that this e-mail, including attachments, does not contain any viruses. However, no liability can be accepted for any damage sustained as a result of such viruses, and recipients are advised to carry out their own checks. Please consider the environment before printing this correspondence.

From: Aboriginal Heritage [mailto:ach@gml.com.au]
Sent: Friday, 1 December 2023 3:37 PM
To: Aboriginal Heritage
Cc: Sandra Hutton
Subject: Reminder re Anambah site inspection RE: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Dear project RAP,

A reminder that the Anambah site inspection is scheduled for next **Thursday 7 December**, 10am. If you intend to participate in the site inspection, could you please confirm your attendance via return email. More information regarding the inspection has been provided within the link to the project ACHAR, ATR and Site inspection letter, within the email chain below. Please let me know if you have difficulties accessing the reports, or if you have any questions.

Kind regards,
Andie

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Thursday, November 16, 2023 12:32 PM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Sandra Hutton <SHutton@rochegroup.com.au>
Subject: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Dear project RAP,

Please find the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project within this link: Anambah ACHAR, ATR and Site Inspection Letter Please let me know via return email if you have any difficulties accessing the reports. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, please provide comments by **12 January 2024**. We appreciate that the ACHAR is a long document. Therefore we are providing a review process and period which exceeds the standard requirements of Heritage NSW.

We invite all RAPs to attend a site visit on **7 December 2023**. Details are provided within the ACHAR Review & Site inspection letter, included in the information package linked above. Meeting location for the site inspection will be along Anambah Road at the location shown (https://maps.app.goo.gl/gEFpDpstXMsrRxEp8). The site visit is mid-way through the ACHAR review period. The intention is that you will be able to review the ACHAR, attend the site visit, have any questions addressed and/or provide feedback at the site visit, and then finalise your response on the ACHAR review. This process provides all RAPs with 8 weeks from the date of this email to provide written or oral comment on the ACHAR.

We look forward to hearing from you. Kind regards,
Andie Coulson

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Andie Coulson

From: Tracey Skene <tracey@marrung-pa.com.au>
Sent: Friday, 1 December 2023 6:44 PM
To: Aboriginal Heritage
Subject: Re: Reminder re Anambah site inspection RE: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Hi I will be attending this meeting
Tracey Skene
Culturally Aware

On Fri, 1 Dec 2023 at 3:36 pm, Aboriginal Heritage <ach@gml.com.au> wrote:

Dear project RAP,

A reminder that the Anambah site inspection is scheduled for next **Thursday 7 December**, 10am. If you intend to participate in the site inspection, could you please confirm your attendance via return email. More information regarding the inspection has been provided within the link to the project ACHAR, ATR and Site inspection letter, within the email chain below. Please let me know if you have difficulties accessing the reports, or if you have any questions.

Kind regards,

Andie

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Thursday, November 16, 2023 12:32 PM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Sandra Hutton <SHutton@rochegroup.com.au>
Subject: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Dear project RAP,

Please find the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project within this link: Anambah ACHAR, ATR and Site Inspection Letter Please let me know via return email if you have any difficulties accessing the reports. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, please provide comments by **12 January 2024**. We appreciate that the ACHAR is a long document. Therefore we are providing a review process and period which exceeds the standard requirements of Heritage NSW.

We invite all RAPs to attend a site visit on **7 December 2023**. Details are provided within the ACHAR Review & Site inspection letter, included in the information package linked above. Meeting location for the site inspection will be along Anambah Road at the location shown (https://maps.app.goo.gl/gEFpDpstXMsrRxEp8). The site visit is mid-way through the ACHAR review period. The intention is that you will be able to review the ACHAR, attend the site visit, have any questions addressed and/or provide feedback at the site visit, and then finalise your response on the ACHAR review. This process provides all RAPs with 8 weeks from the date of this email to provide written or oral comment on the ACHAR.

We look forward to hearing from you. Kind regards,

Andie Coulson

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Tim Owen

From: Tracey Skene <tracey@marrung-pa.com.au>
Sent: Friday, 8 December 2023 5:33 AM
To: Tim Owen
Subject: Re: 21-0037 Anambah Project - ACHAR, ATR review - extension to 25 Jan 2024

Good Morning Tim

Thank You for a better link to Reports ,I will review and send feedback by due Date.

Kind regards
Tracey Skene
7 Crawford Place,Millfield NSW 2325
Mobile 0474106537

On Thu, Dec 7, 2023 at 1:47 PM Tim Owen <tim.owen@gml.com.au> wrote:

Dear project RAP,

We have previously provided the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4. I have copied the relevant links below:

21-0037 ACHAR.pdf

Anambah First Nations Heritage, ATR, November 2023.pdf

GML seek your feedback in relation to these documents and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, we had provided a review period to 12 January 2024. All RAPs had been invited to the site today for an inspection. The inspection was attended by Arthur Fletcher and Paul Boyd, with apologies from the Mindaribba LALC and Tracey Skene. I will provide a synopsis of questions asked and some recent site photos early next week.

At the meeting, it was requested that an extension to the review period be provided. This was agreed, and the revised date of **25 January 2024** is now the date for submission of comments with respect to the ACHAR.

Please send all comments to ach@gml.com.au marked 21-0037 review.

Kind regards,

Tim

Dr Tim Owen
Principal
(he/him)

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
T Direct: 02 9318 7578 | T Reception: 02 9319 4811
Availability: Monday - Friday, 9.00am-5.30pm
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Andie Coulson

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Friday, 1 December 2023 5:36 PM
To: Aboriginal Heritage
Cc: Sandra Hutton
Subject: Re: Reminder re Anambah site inspection RE: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Hi guys

I will be there on the 7th, kind regards Paul Boyd

Sent from Yahoo Mail for iPhone

On Friday, December 1, 2023, 3:36 pm, Aboriginal Heritage <ach@gml.com.au> wrote:

Dear project RAP,

A reminder that the Anambah site inspection is scheduled for next **Thursday 7 December**, 10am. If you intend to participate in the site inspection, could you please confirm your attendance via return email. More information regarding the inspection has been provided within the link to the project ACHAR, ATR and Site inspection letter, within the email chain below. Please let me know if you have difficulties accessing the reports, or if you have any questions.

Kind regards,

Andie

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Thursday, November 16, 2023 12:32 PM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Sandra Hutton <SHutton@rochegroup.com.au>
Subject: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Dear project RAP,

Please find the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project within this link: Anambah ACHAR, ATR and Site Inspection Letter Please let me know via return email if you have any difficulties accessing the reports. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, please provide comments by **12 January 2024**. We appreciate that the ACHAR is a long document. Therefore we are providing a review process and period which exceeds the standard requirements of Heritage NSW.

We invite all RAPs to attend a site visit on **7 December 2023**. Details are provided within the ACHAR Review & Site inspection letter, included in the information package linked above. Meeting location for the site inspection will be along Anambah Road at the location shown (https://maps.app.goo.gl/gEFpDpstXMsrRxEp8). The site visit is mid-way through the ACHAR review period. The intention is that you will be able to review the ACHAR, attend the site visit, have any questions addressed and/or provide feedback at the site visit, and then finalise your response on the ACHAR review. This process provides all RAPs with 8 weeks from the date of this email to provide written or oral comment on the ACHAR.

We look forward to hearing from you. Kind regards,

Andie Coulson

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000

www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Tim Owen

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Friday, 8 December 2023 10:28 AM
To: Tim Owen; Sandra Hutton
Subject: Re: Anambah - Didge Ngunawal Clan invoice

Hi Tim

DNC is Happy with the ACHAR, as job is progressing well, everything was discussed on site and is pleased with you guys, Gml, and hope to be a part of the salvage!

Kind regards
Paul Boyd
Director DNC
0426823944

Sent from Yahoo Mail for iPhone

On Friday, December 8, 2023, 9:05 am, Tim Owen <tim.owen@gml.com.au> wrote:

Dear Sandra

Attached is the Didge Ngunawal Clan invoice – associated with Paul Boyd's attendance yesterday.

Lilly – please note that this amount covers both the site inspection and your written review response to the ACHAR.

Regards

Tim

Dr Tim Owen
Principal
(he/him)

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
T Direct: 02 9318 7578 | T Reception: 02 9319 4811

Availability: Monday - Friday, 9.00am-5.30pm
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Thursday, December 7, 2023 5:05 PM
To: Tim Owen <tim.owen@gml.com.au>
Subject: Payment

Hi Tim, can you pass this on to Sandra please thank you very much

Sent from Yahoo Mail for iPhone

Andie Coulson

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Thursday, 23 November 2023 11:13 AM
To: Aboriginal Heritage
Cc: Sandra Hutton
Subject: Re: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

As I can't get into other formats to the email, do u have a time for this to please, @ Anambah survey

Sent from Yahoo Mail for iPhone

On Thursday, November 23, 2023, 11:10 am, lilly carroll <didgengunawalclan@yahoo.com.au> wrote:

> Hi guys
>
> I was hoping if I can get contact details for Andy Coulson for the Anambah survey thanks
>
> Sent from Yahoo Mail for iPhone
>
> On Thursday, November 16, 2023, 12:32 pm, Aboriginal Heritage <ach@gml.com.au> wrote:
>
> > Dear project RAP,
> >
> > Please find the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project within this link: Anambah ACHAR, ATR and Site Inspection Letter Please let me know via return email if you have any difficulties accessing the reports. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4.
> >
> > GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, please provide comments by **12 January 2024**. We appreciate that the ACHAR is a long document. Therefore we are providing a review process and period which exceeds the standard requirements of Heritage NSW.
> >
> > We invite all RAPs to attend a site visit on **7 December 2023**. Details are provided within the ACHAR Review & Site inspection letter, included in the information package linked above. Meeting location for the site inspection will be along Anambah Road at the location shown (https://maps.app.goo.gl/gEFpDpstXMsrRxEp8). The site visit is mid-way through the ACHAR review period. The intention is that you will be able to review the ACHAR, attend the site visit, have any questions addressed and/or provide feedback at the site visit, and then finalise your response on the ACHAR review. This process

provides all RAPs with 8 weeks from the date of this email to provide written or oral comment on the ACHAR.

We look forward to hearing from you. Kind regards,

Andie Coulson

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection t
Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the pro
their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response b
return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage P
third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error
notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please
them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be th
sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Tim Owen

From: lilly carroll <didgengunawalclan@yahoo.com.au>
Sent: Friday, 8 December 2023 11:58 AM
To: Aboriginal Heritage
Cc: Sandra Hutton
Subject: Re: 21-0037 Anambah Project - Update following site visit

Hi Tim/Sandra

Will believe that Artefact should be returned in a 1.5 m deposit in a hard case with labelled bags and CD

Kind regards
Paul Boyd
Director DNC
0426823944

Sent from Yahoo Mail for iPhone

On Friday, December 8, 2023, 11:52 am, Aboriginal Heritage <ach@gml.com.au> wrote:

Dear project RAP,

Please find attached a short summary document which details the outcomes of yesterdays site visit. This includes some important questions on artefact management—as part of your submission on the ACHAR, we seek your response on questions.

Kind regards,

Tim

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Tim Owen

From: Maree Waugh <wallangan@outlook.com>
Sent: Thursday, 7 December 2023 4:24 PM
To: Tim Owen
Subject: Re: 21-0037 Anambah Project - ACHAR, ATR review - extension to 25 Jan 2024

Thanks Tim was unable to attend sites inspection yesterday sorry for not getting back to you.

Maree Waugh
wallangan Cultural Services

Get Outlook for Android

From: Tim Owen <tim.owen@gml.com.au>
Sent: Thursday, December 7, 2023 1:46:52 PM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Sandra Hutton <SHutton@rochegroup.com.au>
Subject: 21-0037 Anambah Project - ACHAR, ATR review - extension to 25 Jan 2024

Dear project RAP,
We have previously provided the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4. I have copied the relevant links below:
21-0037 ACHAR.pdf
Anambah First Nations Heritage, ATR, November 2023.pdf
GML seek your feedback in relation to these documents and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, we had provided a review period to 12 January 2024. All RAPs had been invited to the site today for an inspection. The inspection was attended by Arthur Fletcher and Paul Boyd, with apologies from the Mindaribba LALC and Tracey Skene. I will provide a synopsis of questions asked and some recent site photos early next week.
At the meeting, it was requested that an extension to the review period be provided. This was agreed, and the revised date of **25 January 2024** is now the date for submission of comments with respect to the ACHAR.
Please send all comments to ach@gml.com.au marked 21-0037 review.
Kind regards,
Tim

Dr Tim Owen
Principal
(he/him)

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
T Direct: 02 9318 7578 | T Reception: 02 9319 4811
Availability: Monday - Friday, 9.00am-5.30pm
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Tim Owen

From: Arthur Fletcher <wonn1sites@gmail.com>
Sent: Thursday, 7 December 2023 4:13 PM
To: Tim Owen
Cc: Aboriginal Heritage; Sandra Hutton
Subject: Re: 21-0037 Anambah Project - ACHAR, ATR review - extension to 25 Jan 2024

Many thanks for this. 😊

On Thu, 7 Dec 2023 at 1:47 pm, Tim Owen <tim.owen@gml.com.au> wrote:

Dear project RAP,

We have previously provided the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4. I have copied the relevant links below:

21-0037 ACHAR.pdf

Anambah First Nations Heritage, ATR, November 2023.pdf

GML seek your feedback in relation to these documents and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, we had provided a review period to 12 January 2024. All RAPs had been invited to the site today for an inspection. The inspection was attended by Arthur Fletcher and Paul Boyd, with apologies from the Mindaribba LALC and Tracey Skene. I will provide a synopsis of questions asked and some recent site photos early next week.

At the meeting, it was requested that an extension to the review period be provided. This was agreed, and the revised date of **25 January 2024** is now the date for submission of comments with respect to the ACHAR.

Please send all comments to ach@gml.com.au marked 21-0037 review.

Kind regards,

Tim

Dr Tim Owen
Principal
(he/him)

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket, NSW, 2000
T Direct: 02 9318 7578 | T Reception: 02 9319 4811
Availability: Monday - Friday, 9.00am-5.30pm
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Andie Coulson

From: Arthur Fletcher <wonn1sites@gmail.com>
Sent: Thursday, 16 November 2023 6:15 PM
To: Aboriginal Heritage
Cc: Sandra Hutton
Subject: Re: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Looks good to me! Ala Andie
We hope all's well with you. Thanks for the update with this project. Nginuwa Arthur - Kauwul Wonnarua Elder and Aunty Lynne and their families. 😊

On Thu, 16 Nov 2023 at 12:32 pm, Aboriginal Heritage <ach@gml.com.au> wrote:

> Dear project RAP,
>
> Please find the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project within this link: Anambah ACHAR, ATR and Site Inspection Letter Please let me know via return email if you have any difficulties accessing the reports. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4.
>
> GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, please provide comments by **12 January 2024**. We appreciate that the ACHAR is a long document. Therefore we are providing a review process and period which exceeds the standard requirements of Heritage NSW.
>
> We invite all RAPs to attend a site visit on **7 December 2023**. Details are provided within the ACHAR Review & Site inspection letter, included in the information package linked above. Meeting location for the site inspection will be along Anambah Road at the location shown (https://maps.app.goo.gl/gEFpDpstXMsrRxEp8). The site visit is mid-way through the ACHAR review period. The intention is that you will be able to review the ACHAR, attend the site visit, have any questions addressed and/or provide feedback at the site visit, and then finalise your response on the ACHAR review. This process provides all RAPs with 8 weeks from the date of this email to provide written or oral comment on the ACHAR.
>
> We look forward to hearing from you. Kind regards,
>
> Andie Coulson
>
> **GML Heritage**

Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Andie Coulson

From: Arthur Fletcher <wonn1sites@gmail.com>
Sent: Saturday, 2 December 2023 5:41 AM
To: Aboriginal Heritage
Cc: Sandra Hutton
Subject: Re: Reminder re Anambah site inspection RE: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

I confirm that I will be attending.

On Fri, 1 Dec 2023 at 3:36 pm, Aboriginal Heritage <ach@gml.com.au> wrote:

> Dear project RAP,
>
> A reminder that the Anambah site inspection is scheduled for next **Thursday 7 December**, 10am. If you intend to participate in the site inspection, could you please confirm your attendance via return email. More information regarding the inspection has been provided within the link to the project ACHAR, ATR and Site inspection letter, within the email chain below. Please let me know if you have difficulties accessing the reports, or if you have any questions.
>
> Kind regards,
>
> Andie
>
> **GML Heritage**
> Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
> www.gml.com.au
>
>
>
>
> We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.
>
> We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.
>
> The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Thursday, November 16, 2023 12:32 PM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Sandra Hutton <SHutton@rochegroup.com.au>
Subject: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Dear project RAP,

Please find the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project within this link: Anambah ACHAR, ATR and Site Inspection Letter Please let me know via return email if you have any difficulties accessing the reports. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, please provide comments by **12 January 2024**. We appreciate that the ACHAR is a long document. Therefore we are providing a review process and period which exceeds the standard requirements of Heritage NSW.

We invite all RAPs to attend a site visit on **7 December 2023**. Details are provided within the ACHAR Review & Site inspection letter, included in the information package linked above. Meeting location for the site inspection will be along Anambah Road at the location shown (https://maps.app.goo.gl/gEFpDpstXMsrRxEp8). The site visit is mid-way through the ACHAR review period. The intention is that you will be able to review the ACHAR, attend the site visit, have any questions addressed and/or provide feedback at the site visit, and then finalise your response on the ACHAR review. This process provides all RAPs with 8 weeks from the date of this email to provide written or oral comment on the ACHAR.

We look forward to hearing from you. Kind regards,

Andie Coulson

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Andie Coulson

From: Arthur Fletcher <wonn1sites@gmail.com>
Sent: Saturday, 2 December 2023 8:20 AM
To: Aboriginal Heritage
Subject: Re: Reminder re Anambah site inspection RE: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Ala Andie
Could you please resend the Package in PDF format? As we cannot open the attachment . All the best to you.
Nginuwa Arthur - Kauwul Wonnarua Elder and Lynne and Families.😊
On Sat, 2 Dec 2023 at 5:40 am, Arthur Fletcher <wonn1sites@gmail.com> wrote:

I confirm that I will be attending.

On Fri, 1 Dec 2023 at 3:36 pm, Aboriginal Heritage <ach@gml.com.au> wrote:

Dear project RAP,

A reminder that the Anambah site inspection is scheduled for next **Thursday 7 December**, 10am. If you intend to participate in the site inspection, could you please confirm your attendance via return email. More information regarding the inspection has been provided within the link to the project ACHAR, ATR and Site inspection letter, within the email chain below. Please let me know if you have difficulties accessing the reports, or if you have any questions.

Kind regards,

Andie

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please

notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Thursday, November 16, 2023 12:32 PM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Sandra Hutton <SHutton@rochegroup.com.au>
Subject: 21-0037 Anambah Project - ACHAR, ATR and invitation to site inspection

Dear project RAP,

Please find the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project within this link: Anambah ACHAR, ATR and Site Inspection Letter Please let me know via return email if you have any difficulties accessing the reports. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4.

GML seek your feedback in relation to this document and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, please provide comments by **12 January 2024**. We appreciate that the ACHAR is a long document. Therefore we are providing a review process and period which exceeds the standard requirements of Heritage NSW.

We invite all RAPs to attend a site visit on **7 December 2023**. Details are provided within the ACHAR Review & Site inspection letter, included in the information package linked above. Meeting location for the site inspection will be along Anambah Road at the location shown (https://maps.app.goo.gl/gEFpDpstXMsrRxEp8). The site visit is mid-way through the ACHAR review period. The intention is that you will be able to review the ACHAR, attend the site visit, have any questions addressed and/or provide feedback at the site visit, and then finalise your response on the ACHAR review. This process provides all RAPs with 8 weeks from the date of this email to provide written or oral comment on the ACHAR.

We look forward to hearing from you. Kind regards,

Andie Coulson

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Andie Coulson

From: Lawrence Perry <laurie.perry2020@outlook.com>
Sent: Saturday, 9 December 2023 11:07 AM
To: Tim Owen; Aboriginal Heritage
Cc: Sandra Hutton
Subject: RE: 21-0037 Anambah Project - ACHAR, ATR review - extension to 25 Jan 2024

Hi Tim

Thank you

Cheers

Laurie Perry
Chief Executive Officer
Wonnarua Nation Aboriginal Corporation
T 02 6571 8595 **M** 0412 593 020 **E** laurie.perry2020@outlook.com
Ground Floor 254 John St Singleton NSW 2330
PO BOX 3066 Singleton 2330
W www.wonnarua.org.au
E enquiries@wonnarua.org.au

We acknowledge the Traditional Custodians of the Land I work on and pay my respect to Elders both past, present and future.

From: Tim Owen
Sent: Thursday, December 7, 2023 1:47 PM
To: Aboriginal Heritage <ach@gml.com.au>
Cc: Sandra Hutton <SHutton@rochegroup.com.au>
Subject: 21-0037 Anambah Project - ACHAR, ATR review - extension to 25 Jan 2024

Dear project RAP,

We have previously provided the draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Technical Report (ATR) for the Anambah Project. This ACHAR has been provided to all RAPs for their review and comment in accordance with Heritage NSW's *Aboriginal cultural heritage consultation requirements for proponents* 2010 Section 4.4. I have copied the relevant links below:

21-0037 ACHAR.pdf

Anambah First Nations Heritage, ATR, November 2023.pdf

GML seek your feedback in relation to these documents and any input from the RAPs will be considered in the final ACHAR for the project. In accordance with Heritage NSW guidelines, we had provided a review period to 12 January 2024. All RAPs had been invited to the site today for an inspection. The inspection was attended by Arthur Fletcher and Paul Boyd, with apologies from the Mindaribba LALC and Tracey Skene. I will provide a synopsis of questions asked and some recent site photos early next week.

At the meeting, it was requested that an extension to the review period be provided. This was agreed, and the revised date of **25 January 2024** is now the date for submission of comments with respect to the ACHAR.

Please send all comments to ach@gml.com.au marked 21-0037 review.

Kind regards,

Tim

Dr Tim Owen
Principal
(he/him)

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
T Direct: 02 9318 7578 | T Reception: 02 9319 4811
Availability: Monday - Friday, 9.00am-5.30pm
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From:	Aboriginal Heritage
To:	Aboriginal Heritage
Bcc:	aga.services@hotmail.com; kerrie@awabakal.com.au; cacatua4service@tpg.com.au; corroboreecorp@bigpond.com; tracey@marrung-pa.com.au; didgengunawalclan@yahoo.com.au; les.atkinson@hotmail.com; wonn1sites@gmail.com; ceo@mindaribbalalc.org; wallangan@outlook.com; widescope.group@live.com; dawnrichard@bigpond.com; laurie.perry2020@outlook.com; scott@tocomwall.com.au; yunaga1@bigpond.com
Subject:	21-0037 Anambah Project Update
Date:	Tuesday, 1 March 2022 12:21:12 PM

Dear Project RAPS

I am emailing to update you on the Anambah ACHAR. The project is still on hold at this time. Please be assured we will keep you updated when the status of the project changes.

Best
Talei

Andie Coulson

From: Aboriginal Heritage <ach@gml.com.au>
Sent: Monday, 18 July 2022 11:52 AM
To: Aboriginal Heritage
Subject: 21-0037 Anambah Project Update

Dear Project Raps,

I am emailing to update you on the status of the Anambah ACHAR, on behalf of Roche. Roche is currently undertaking some further planning work to assist in determining future land uses.

We have prepared a draft ACHAR, and anticipate this will be sent to you within the next three months.

GML plan to hold site day to discuss the report during a two month ACHAR review period. Please be assured we will contact you again to let you know when this will happen.

If you have any questions please feel free to contact me.

Thanks,
Drew Kennedy

From:	Aboriginal Heritage
To:	Aboriginal Heritage
Subject:	21-0037 Anambah Project Update, 25 November 2022
Date:	Friday, 25 November 2022 11:31:38 AM
Attachments:	image392854.jpg image042729.png image003470.png image849681.png

---

Dear RAPs,

We have been in contact with our client Roche, who instruct that further actions on the Anambah project will be delayed until next year. We anticipate being in touch during March to organise a site inspection, with consequent review of reporting during April 2023.

Regards
Tim

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From: Kerrie Brauer
To: Aboriginal Heritage
Subject: RE: 21-0037 Anambah Project Update, 25 November 2022
Date: Monday, 28 November 2022 12:40:28 PM
Attachments: image001.jpg
image002.jpg
image003.jpg
image004.gif
image005.gif

Hi Tim,

Thank you for your email and update it is very much appreciated.

We take this opportunity to wish you all a Merry Christmas and a Happy and Safe New Year.

Kind regards,
Kerrie Brauer

KerrieSignature

CONFIDENTIALITY NOTICE: This e-mail is confidential and intended for the addressee only. The use, copying or distribution of this message or any information it contains, by anyone other than the addressee is prohibited by the sender. If you have received this e-mail in error, please delete it and notify the original author immediately. Every reasonable precaution has been taken to ensure that this e-mail, including attachments, does not contain any viruses. However, no liability can be accepted for any damage sustained as a result of such viruses, and recipients are advised to carry out their own checks. Please consider the environment before printing this correspondence.

From: Aboriginal Heritage [mailto:ach@gml.com.au]
Sent: Friday, 25 November 2022 11:31 AM
To: Aboriginal Heritage
Subject: 21-0037 Anambah Project Update, 25 November 2022

Dear RAPs,

We have been in contact with our client Roche, who instruct that further actions on the Anambah project will be delayed until next year. We anticipate being in touch during March to organise a site inspection, with consequent review of reporting during April 2023.

Regards
Tim

GML Heritage
Level 6 372 Elizabeth St, Surry Hills NSW 2010
T Reception: 02 9319 4811
www.gml.com.au

GML

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From: Tracey Skene
To: Aboriginal Heritage
Subject: Re: 21-0037 Anambah Project Update, 25 November 2022
Date: Saturday, 26 November 2022 8:11:13 AM
Attachments: image476529.jpg
image512784.png
image501734.png
image418269.png

Thanks for the update.
Tracey

On Fri, 25 Nov 2022 at 11:31 am, Aboriginal Heritage <ach@gml.com.au> wrote:

> Dear RAPs,
>
> We have been in contact with our client Roche, who instruct that further actions on the Anambah project will be delayed until next year. We anticipate being in touch during March to organise a site inspection, with consequent review of reporting during April 2023.
>
> Regards
>
> Tim
>
> **GML Heritage**
> Level 6 372 Elizabeth St, Surry Hills NSW 2010
> T Reception: 02 9319 4811
> www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

--

Kind regards
Tracey Skene
7 Crawford Place,Millfield NSW 2325
Mobile 0474106537

From: Arthur Fletcher
To: Aboriginal Heritage
Subject: Re: 21-0037 Anambah Project Update, 25 November 2022
Date: Friday, 25 November 2022 1:38:52 PM
Attachments: image418269.png
image476529.jpg
image512784.png
image501734.png

Thank you for the update.

On Fri, 25 Nov 2022 at 11:31 am, Aboriginal Heritage <ach@gml.com.au> wrote:

> Dear RAPs,
>
> We have been in contact with our client Roche, who instruct that further actions on the Anambah project will be delayed until next year. We anticipate being in touch during March to organise a site inspection, with consequent review of reporting during April 2023.
>
> Regards
>
> Tim
>
> **GML Heritage**
> Level 6 372 Elizabeth St. Surry Hills NSW 2010
> T Reception: 02 9319 4811
> www.gml.com.au
>
> We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.
>
> We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.
>
> The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

From:	Aboriginal Heritage
To:	Aboriginal Heritage
Bcc:	aga.services@hotmail.com; kerrie@awabakal.com.au; cacatua4service@tpg.com.au; corroboreecorp@bigpond.com; tracey@marrung-pa.com.au; didgengunawalclan@yahoo.com.au; les.atkinson@hotmail.com; wonn1sites@gmail.com; ceo@mindaribbalalc.org; wallangan@outlook.com; widescope.group@live.com; dawnrichard@bigpond.com; laurie.perry2020@outlook.com; scott@tocomwall.com.au; yunaga1@bigpond.com
Subject:	21-0037 Anambah Project Update, 15 May 2023
Date:	Monday, 15 May 2023 6:56:00 AM

Dear project RAPs,

Following the last update (November 2022), we have no further information from Rochegroup on the site inspection and further consultation. Once GML is advised to proceed, we will notify you.

Regards
Tim

From:	Tim Owen
To:	Aboriginal Heritage; Sandra Hutton; Andie Coulson
Bcc:	aga.services@hotmail.com; kerrie@awabakal.com.au; cacatua4service@tpg.com.au; corroboreecorp@bigpond.com; tracey@marrung-pa.com.au; didgengunawalclan@yahoo.com.au; les.atkinson@hotmail.com; wonn1sites@gmail.com; ceo@mindaribbalalc.org; wallangan@outlook.com; widescope.group@live.com; dawnrichard@bigpond.com; laurie.perry2020@outlook.com; scott@tocomwall.com.au; yunaga1@bigpond.com
Subject:	Anambah Project Update, 13 November 2023 - draft ACHAR issue and placeholder for site visit
Date:	Monday, 13 November 2023 10:41:47 AM
Attachments:	image155149.jpg image689622.png image437103.png image847120.png

---

Dear Anambah Project RAPs,

This is to provide a brief project update. We will provide greater detail later in the week.

- ACHAR – the report has been prepared to a draft and will be issued to all RAPs for review in the next week. The ACHAR is a long document, and therefore the review period will be greater than the minimum 28 days.
- AHIP – Heritage NSW are confirming the proposed AHIP pathway for the project. This detail will be provided once the advice is confirmed.
- Site visit placeholder – Please set aside 7 December for a site visit to Anambah. This visit is outside the standard consultation process. It will be during the ACHAR review period. The aim is to allow you to contextualise the ACHAR, ask any questions of the project team, and/or provide verbal feedback on the ACHAR (if you do not want to make a written submission). Details of the visit will be provided with the draft ACHAR.

GML and Roche will be in touch within the week with the draft AHCAR and details of the site visit.

Regards
Tim

Dr Tim Owen
Principal
(he/him)

GML Heritage
Level 17, 323 Castlereagh Street, Haymarket. NSW, 2000
T Direct: 02 9318 7578 | T Reception: 02 9319 4811
Availability: Monday - Friday, 9.00am-5.30pm
www.gml.com.au

We respect and acknowledge the First Nations of the lands and waters on which we live and work, their rich cultural heritage and deep connection to Country, and we acknowledge their Elders past and present. We are committed to truth-telling and to engaging with First Nations to support the protection of their culture and heritage. We strongly advocate social, cultural and political justice and support the Uluru Statement from the Heart.

We value and encourage working flexibly at GML and I may send you an email outside your normal working hours, but I do not expect a response before you return to work.

The information contained in this e-mail message and any attached files may be confidential and may contain copyright material of GML Heritage Pty Ltd or third parties. Any unauthorised use, disclosure or copying of this e-mail and/or its attachments is prohibited. If you have received this e-mail in error please notify the sender immediately by return e-mail and delete all copies of the message and attachments. Before opening or using attachments, please check them for viruses or defects. Our liability is limited to resupplying the e-mail and attached files. Content and views expressed in this e-mail may be those of the sender, and are not necessarily endorsed by GML Heritage Pty Ltd.

Appendix D

Archaeological Technical Report

Anambah First Nations Heritage

Archaeological Technical Report

Report prepared for DB20 Pty Limited

February 2024

Sydney Office Level 17, 323 Castlereagh Street Haymarket NSW Australia 2000 T +61 2 9319 4811
Canberra Office 2A Mugga Way Red Hill ACT Australia 2603 T +61 2 6273 7540
GML Heritage Pty Ltd ABN 60 001 179 362
www.gml.com.au

Report Register

The following report register documents the development and issue of the report entitled Anambah First Nations Heritage—Archaeological Technical Report, undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
21-0037	1	Draft Report for Client Review	25 October 2021
21-0037	2	Draft Report for Client Second Review	9 December 2021
21-0037	3	Report for RAP Review	6 June 2022
21-0037	4	Draft Report for RAP Review	November 2023
21-0037	5	Final Report following RAP Review	February 2024

Quality Assurance

GML Heritage Pty Ltd operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2016.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Copyright

Historical sources and reference material used in the preparation of this report are acknowledged and referenced at the end of each section and/or in figure captions. Reasonable effort has been made to identify, contact, acknowledge and obtain permission to use material from the relevant copyright owners.

Unless otherwise specified or agreed, copyright in this report vests in GML Heritage Pty Ltd ('GML') and in the owners of any pre-existing historic source or reference material.

Moral Rights

GML asserts its Moral Rights in this work, unless otherwise acknowledged, in accordance with the (Commonwealth) *Copyright (Moral Rights) Amendment Act 2000*. GML's moral rights include the attribution of authorship, the right not to have the work falsely attributed and the right to integrity of authorship.

Right to Use

GML grants to the client for this project (and the client's successors in title) an irrevocable royalty-free right to reproduce or use the material from this report, except where such use infringes the copyright and/or Moral Rights of GML or third parties.

Contents Page

1.0 Introduction 1
1.1 Project Background 1
1.2 The Study Area 1
1.3 Proposed Works 1
1.4 Objectives for this Assessment 2
1.5 Statutory Context 2
1.6 Approach to First Nations Heritage Management 3
1.7 Reporting Approach 3
1.8 Limitations 3
1.9 Endnotes 7

2.0 Archaeological Context 8
2.1 Previous Archaeological Reports 8
2.1.1 Jill L Ruig Archaeology Consultant 1997 8
2.1.2 Mary Dallas Consulting Archaeologists 1997 8
2.1.3 Mary Dallas Consulting Archaeologists 2003a 9
2.1.4 Mary Dallas Consulting Archaeologists 2003b 9
2.1.5 Mary Dallas Consulting Archaeologists 2004 9
2.1.6 Giles Hamm Cultural Heritage Consultant 2004 10
2.1.7 Mary Dallas Consulting Archaeologists 2006 10
2.1.8 McCardle Cultural Heritage 2007a 10
2.1.9 McCardle Cultural Heritage 2007b 11
2.1.10 Mary Dallas Consulting Archaeologists 2008 11
2.1.11 McCardle Cultural Heritage 2011 12
2.1.12 Godden Mackay Logan 2012 12
2.2 Aboriginal Heritage Information Management System Search 14
2.3 Landscape Context 17
2.3.1 Landforms and Landscape Features 17
2.3.2 Geology and Geomorphic Activity 17
2.3.3 Soil Landscape 18
2.3.4 Hydrology 18
2.3.5 Fauna and Flora 19
2.3.6 Viewing Locations 20
2.3.7 Land Use History 24
2.3.8 Summary of Archaeological and Environmental Context 29
2.4 Aesthetic and Regional Character 30
2.5 Preliminary Archaeological Zoning Plan (AZP) 30
2.6 Endnotes 34

3.0 Archaeological Field Methods 35
3.1 Survey Sampling Strategy 35
3.1.1 Archaeological Potential 36
3.2 Survey Results—Survey Units and Landforms 36
3.3 Survey Results—First Nations Sites and Areas of PAD 42

3.4 Survey Results—First Nations Landscape Use ... 50
3.4.1 Hill–Slope Shade Analysis ... 50
3.4.2 Key Viewing Locations ... 53
3.5 Survey Results—Other Aspects ... 57
3.5.1 Sources of Raw Stone Materials ... 57
3.5.2 Alluvial Terraces ... 60
3.6 Analysis and Discussion ... 61
3.6.1 Observed Landform and Aspect ... 61
3.6.2 Soil Conditions (Integrity and Condition) ... 62
3.6.3 Environmental Focus ... 62
3.6.4 Observed First Nations sites ... 62
3.7 Mechanism for Archaeological Test Excavation ... 63
3.8 Test Excavation Sampling Strategy ... 63
3.8.1 Archaeological Sampling Strategy ... 64
3.9 Test Excavation Results ... 74
3.9.1 Landscape and Landforms vs Soil Landscape ... 110
3.9.2 Soil Conditions (Integrity and Condition) ... 110
3.10 Stone Artefact (Object) Analysis ... 114
3.10.1 Artefact Recording ... 114
3.10.2 The assemblage generally ... 116
3.10.3 Lithic distribution ... 116
3.11 Excavation Interpretation and Discussion ... 117
3.11.1 Addressing Research Questions ... 117
3.11.2 Identified First Nations Archaeological Sites ... 122
3.12 Endnotes ... 124

4.0 Scientific Values and Significance Assessment ... 125
4.1 Preamble ... 125
4.1.1 Assessment Criteria ... 125
4.2 Scientific Assessment ... 126
4.2.1 Research Potential ... 126
4.2.2 Representativeness ... 130
4.2.3 Rarity ... 130
4.2.4 Education potential ... 130
4.2.5 Archaeological landscapes ... 130
4.3 Statement of Scientific Heritage Significance ... 131
4.4 Endnotes ... 131

5.0 Impact Assessment ... 132
5.1 Ecologically Sustainable Development ... 132
5.1.1 Principles of Ecologically Sustainable Development ... 132
5.2 Description of Proposed Development ... 133
5.3 Impact Assessment ... 136
5.3.1 Identification of Impacts ... 136
5.3.2 Potential Effects Arising From Proposed Impacts ... 136
5.3.3 Cumulative Impact ... 137
5.4 Summary of Sites, Impacts and Effects ... 138
5.5 Endnotes ... 141

6.0 Management, Mitigation and Recommendations 142
6.1 Potential Management and Mitigation Strategies 144
6.1.1 Strategy—Avoidance 144
6.1.2 Strategy—Salvage Excavation 145
6.1.3 Strategy—Community Collection 154
6.1.4 Strategy—Public Interpretation 154
6.1.5 Strategy—Management of Aboriginal Stone Objects 154
6.2 Recommendations 155

7.0 Appendices 157
Appendix A
Legislation
Appendix B
AHIMS Search Results
Appendix C
Stone Source Review
Appendix D
Test Excavation Roster
Appendix E
Context Register
Appendix F
Context Sheets
Appendix G
Photo Register
Appendix H
Site Photos Thumbnails
Appendix I
Artefact Analysis
Appendix J
AHIMS Site Cards
Appendix K
Salvage ARD

Executive Summary

GML Heritage (GML) Pty Ltd was engaged by DB20 to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) for the Anambah Precinct. This report forms part of the Environmental Assessment for the study area prepared under Part 5 of the *Environmental Planning and Assessment Act 1979.*

This Aboriginal Archaeological Technical Report (ATR) is an appendix to the ACHAR for the Anambah Precinct. This archaeological report is a standalone technical report which provides evidence about the material traces of First Nations land use that is integrated with the other findings from the assessment of First Nations heritage to support the conclusions and management recommendations in the ACHAR.

The project has a relatively long history of assessment, with commencement in 2012, a period of hiatus (2015–2020), and recommencement of the assessment work in 2021. Heritage NSW was consulted with respect to the break in assessment. An agreed scope and process for recommencing First Nations community consultation was agreed.

Due to COVID related delays, a 2023 site visit was held during the Registered Aboriginal Parties review period. This allowed for community to have time to read the report, view the site and also discuss the report.. A second period for preparing comments and responses was then allowed.

In 2012, the original search of Heritage NSW's Aboriginal Heritage Information Management System (AHIMS), before the GML archaeological survey, did not identify any First Nations sites within the study area. Following the archaeological survey, GML registered 29 First Nations heritage sites and/or places within the study area. This led to a program of archaeological test excavation, which have underpinned our understanding of this place.

The archaeological assessment of the study area, as reported herein, has confirmed the identification of five First Nations sites/places, and defined seven areas with archaeological potential to yield further First Nations heritage objects.

The scientific values assessment of these sites has determined that Anambah is of high scientific significance due to its high archaeological, research and educational potential.

An impact assessment relating to the proposed activity has determined all but one archaeological site will be impacted by the proposed development.

The recommendations arising from this report is that one First Nations site will be conserved (AHIMS #37-6-2777), whilst 28 sites will be impacted as a result of the proposed redevelopment project. Mitigation measures including avoidance, interpretation, salvage excavation and community collection are recommended.

1.0 Introduction

1.1 Project Background

DB20 Pty Limited (DB20) has recently purchased a number of lots in Anambah, NSW, which were previously owned by Stockland Development and is predominantly within the Anambah Urban Investigation Area (Figure 1.1). Between 2012 and 2015, GML Heritage (GML) assessed First Nations heritage across these lots with several local First Nations stakeholder groups. The work included archaeological pedestrian survey and archaeological test excavation. In 2015, this work was halted and reporting was not completed.

DB20 now intend to develop the land for residential and urban use and have prepared a development masterplan to guide this process. GML has been engaged by DB20 to prepare an Aboriginal Cultural Heritage Assessment Report (ACHAR) and an Archaeological Technical Report (ATR) for the project. This ATR forms an Appendix to the ACHAR, which will be submitted to Heritage NSW to support an application for an Aboriginal Heritage Impact Permit (AHIP) under Section 90 of the *National Parks and Wildlife Act 1974* (NSW) (NPW Act) for the Anambah project. It is part of the Environmental Assessment for the study area prepared under Part 4 and Part 5 of the *Environmental Planning and Assessment Act 1979* (NSW) (EPA Act).

The purpose of this report is to identify whether the Anambah study area possesses or has the potential to possess First Nations archaeological sites, places, objects, landscapes and/or values.

It also provides a significance assessment of identified First Nations archaeological sites, places, landscapes and/or other values. An impact assessment and management recommendations are included to assist DB20 with their future responsibilities for the management of First Nations cultural heritage within the study area.

1.2 The Study Area

The study area is located in the Maitland Local Government Area (LGA) south of the Hunter River (Figure 1.2 and Figure 1.3). The lot and DP numbers are:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171;
- Lot 56, DP 874170; and
- Section of River Road reserve that separates Lots 178 and 56.

1.3 Proposed Works

The proposed residential development within the study area involves the subdivision of the existing lots into approximately 2500–2800 residential dwellings (lots, multi-dwellings, and seniors housing), along with parks, playing fields, riparian linkages, a school and a commercial/retail centre. Overall, the area has the potential to accommodate 3500–4000 dwellings (Figure 1.3).

There are a number of opportunities to integrate identified First Nations cultural and heritage values, including conservation of archaeological sites, recognition of intangible First Nations values through the layout of the development, and the interpretation of First Nations connections through future design initiatives. DB20 has sought to work with the local First Nations community to identify those locations, places and values which are important and to have these recognised through the development process.

1.4 Objectives for this Assessment

The objectives of this assessment are to:

- understand the number, extent, type, condition, integrity and archaeological potential of First Nations heritage sites and places within the study area;
- determine whether the identified First Nations sites and places are a component of a wider First Nations cultural landscape;
- understand how the physical First Nations sites relate to First Nations tradition within the wider area;
- prepare a scientific cultural values assessment for all identified aspects of First Nations cultural heritage identified within this report;
- determine how the proposed project may impact the identified First Nations cultural heritage;
- aim to minimise impacts to First Nations cultural heritage through sensible and pragmatic site and land management;
- determine where impacts are unavoidable and develop a series of impact mitigation strategies that benefit First Nations cultural heritage and the proponent; and
- provide recommendations for the conservation of archaeological values and mitigation of impacts to these values.

1.5 Statutory Context

The following statutory controls are relevant to the study area and therefore this report (detailed in Appendix A):

- *National Parks and Wildlife Act 1974* (NPW Act); and
- *Environmental Planning and Assessment Act 1979* (EP&A Act);

Under Section 90 of NPW Act, the proponent will require an AHIP should the development activities harm any First Nations object or First Nations place. Heritage NSW also requires the appropriate management of First Nations heritage social values if they are found to be connected with the study area.

This ATR aims to determine if harm will impact and/or can be avoided to any First Nations sites identified within the study area.

1.6 Approach to First Nations Heritage Management

In order to administer the NPW Act and EPA Act, Heritage NSW has issued a series of best practice guidelines and policies. The current project will be assessed and granted approval under Part 4 of the EPA Act. Therefore, the approach to the preparation of this document was based on current best practice guidelines:

- *Aboriginal cultural heritage consultation requirements for proponents 2010;*[1]
- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (the Due Diligence Code);[2]
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (the Code of Practice);[3]
- *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW;*[4]
- *Guide to Determining and Issuing Aboriginal Heritage Impact Permits;*[5] and
- the *Australia ICOMOS Burra Charter 2013* (the Burra Charter).[6]

1.7 Reporting Approach

This ATR is an appendix to the ACHAR and supports the conclusions and management recommendations within that overarching report. However, it is also standalone technical report which provides evidence of the material traces of First Nations land use within the study area.

It has been prepared following the requirements for reporting established under the Code of Practice.

1.8 Limitations

This ATR is based on the results of the test excavation undertaken in 2012–2013. No additional archaeological excavation has been undertaken post this work. The investigations into the study area were also limited by COVID-19 management requirements which delayed the site inspection until during the report review period, This is detailed in the main ACHAR.

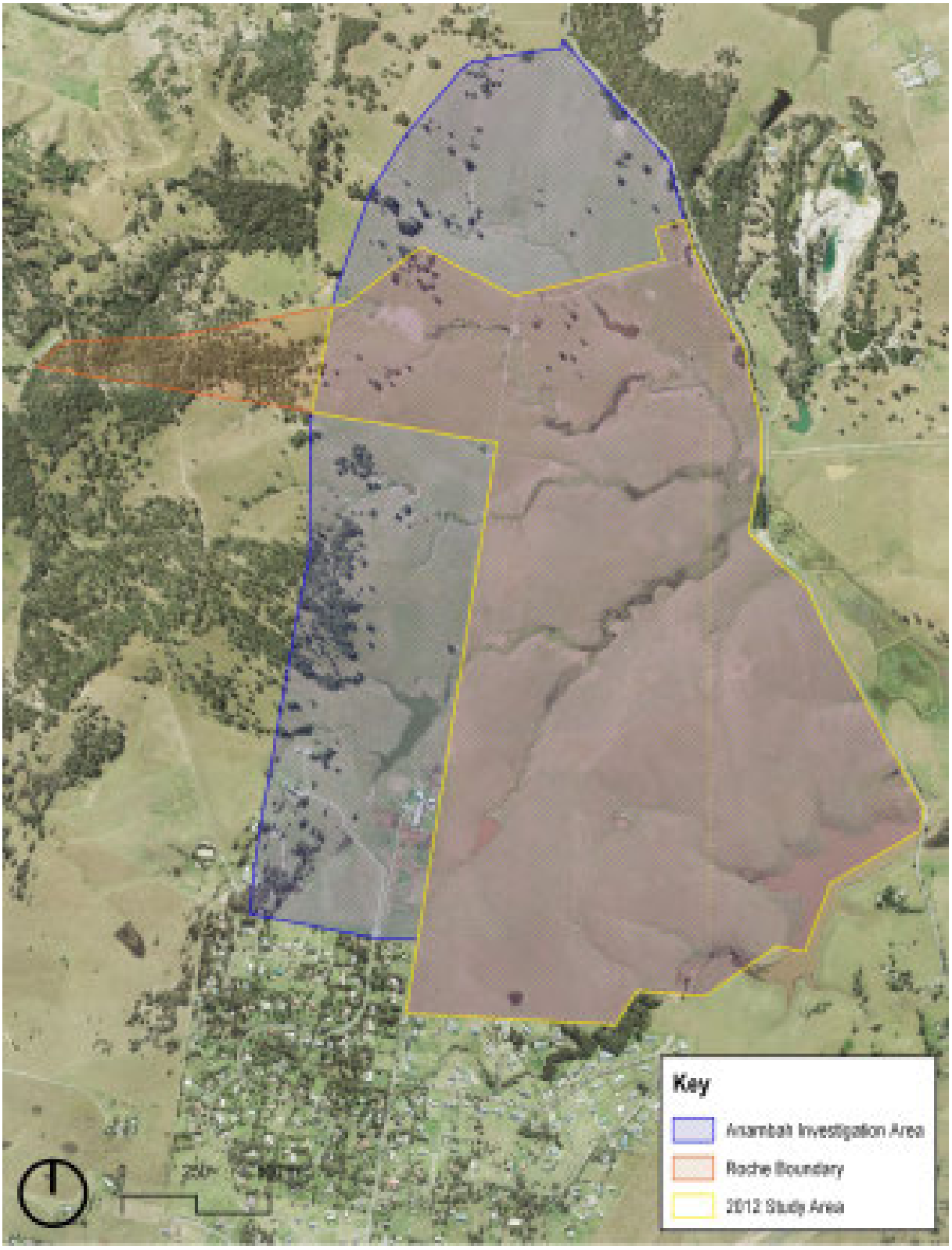


Figure 1.1 DB20 Landholding (the study area), Anambah Investigation Area and Stockland Landholding (2012 study area). (Source: NearMaps with GML additions, 2021)

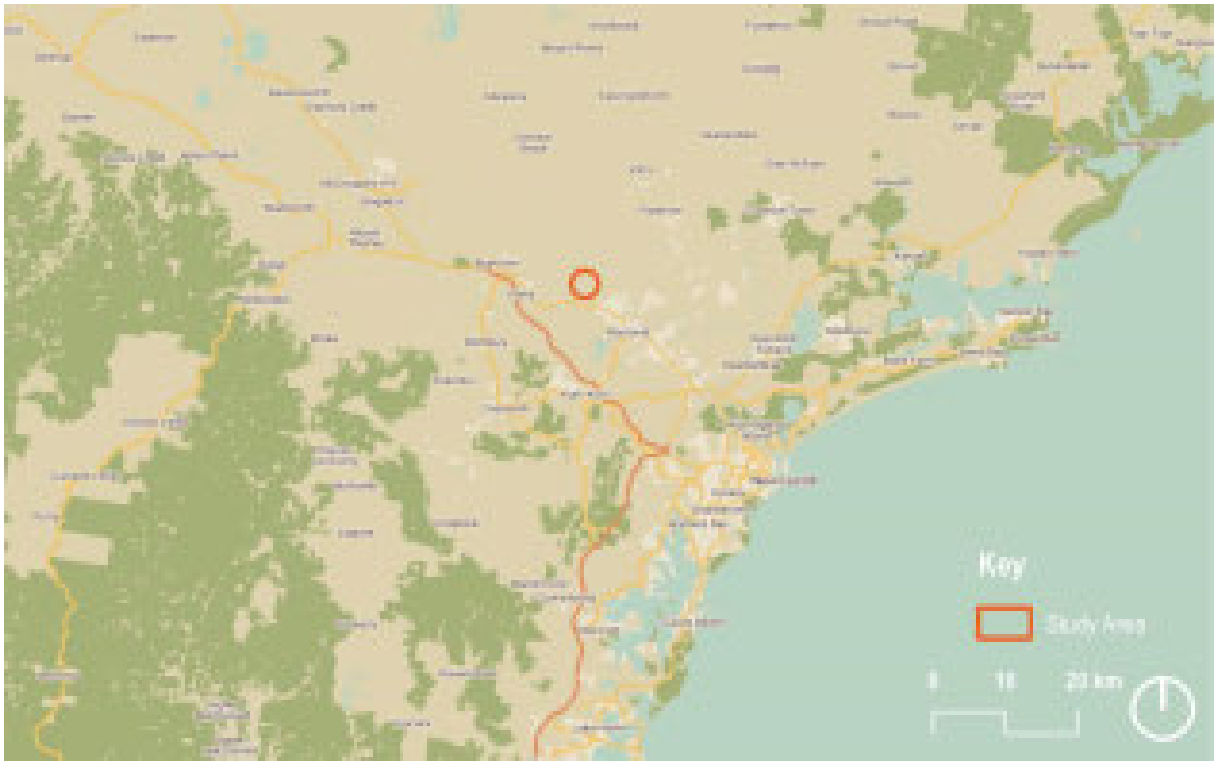


Figure 1.2 The study area's context within the Newcastle region. (Source: Google, with GML additions, 2021)

Figure 1.3 The study area. (Source: NearMaps with GML additions, 2021)

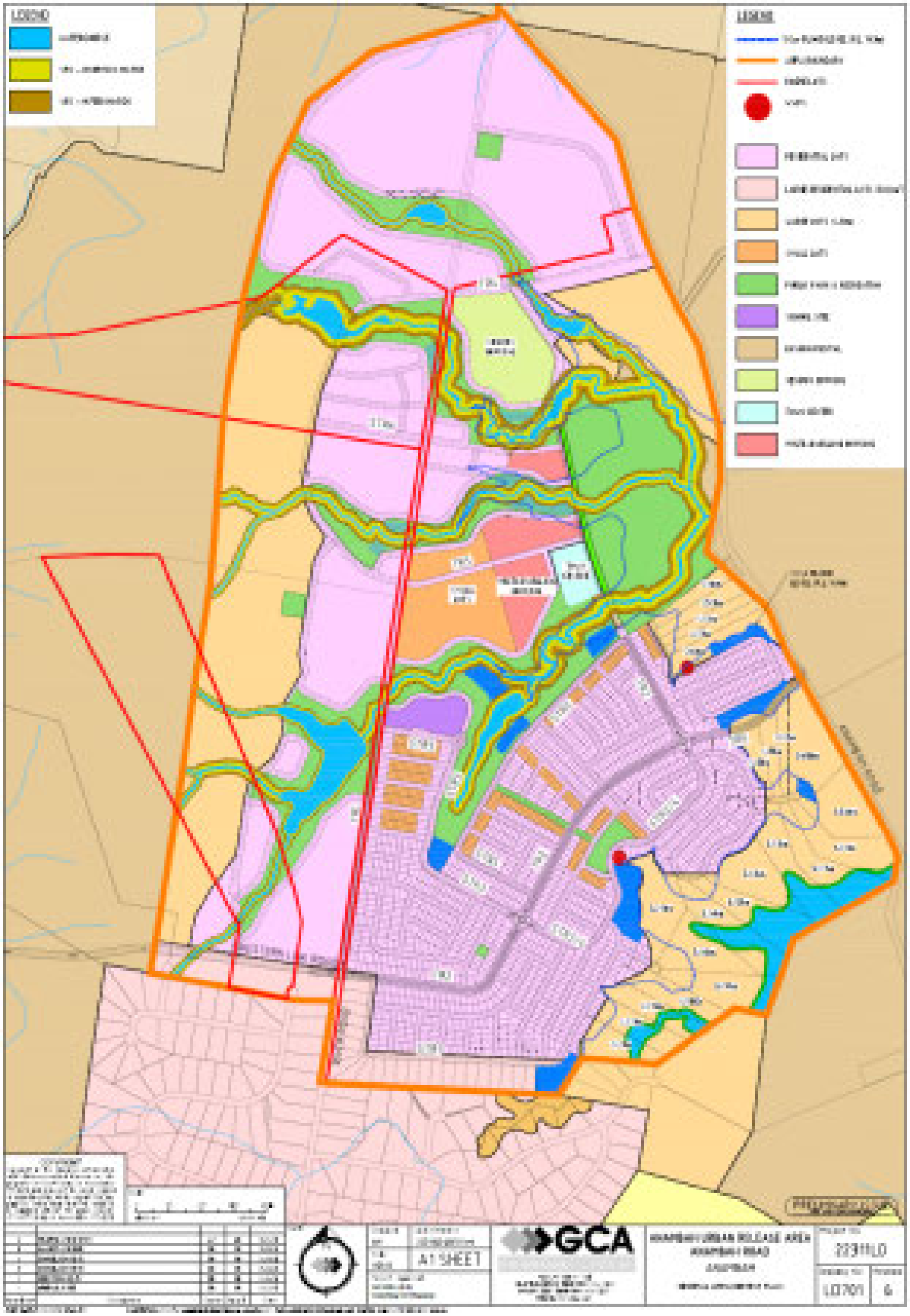


Figure 1.4 Concept Masterplan for Anambah Urban Heritage Area. (Source: DB20, 2023)

1.9 Endnotes

[1] Department of Environment, Climate Change and Water 2010, *Aboriginal cultural heritage consultation requirements for proponents 2010*, Sydney.

[2] Department of Environment, Climate Change and Water, *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*, September 2010.

[3] Department of Environment, Climate Change and Water, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, September 2010.

[4] Office of Environment and Heritage, *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, Sydney, April 2011.

[5] Department of Environment and Climate Change, *Guide to Determining and Issuing Aboriginal Heritage Impact Permits*, 2009, <http://www.environment.nsw.gov.au/resources/cultureheritage/09121AHIPGuide.pdf>.

[6] Australia ICOMOS Inc, *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance 2013,* Australia ICOMOS Inc, Burwood, VIC.

2.0 Archaeological Context

In line with Heritage NSW reporting requirements,[1] this section provides a review of previous archaeological work in the vicinity of the study area, a description of the landscape context and regional character, and First Nations heritage predictive model.

2.1 Previous Archaeological Reports

A literature review of the Heritage NSW library (and additional reports held by GML) was undertaken to understand the broader region's archaeological patterning. This review was targeted to those reports relevant to the study area. A review of key reports is provided, in chronological order, below. Figure 2.1 provides an indication of the localities of these studies.

2.1.1 Jill L Ruig Archaeology Consultant 1997[2]

In 1996, Jill L Ruig Archaeology Consultant undertook test excavation of the southern areas of Portions 62 and 63 located at Penn Park 1, Lochinvar, in the Parish of Gosforth, County Durham (~1.2km south of the study area). The test excavations were located within 30m of and on either side of the creek running through the site. They comprised two 50m parallel transects in which test units of 1000mm by 250mm were spaced every 5m along each transect. In total 44 test units were excavated.

The excavations uncovered two artefacts from two separate trenches on the northern side of the creek. It was concluded that the site was of low First Nations archaeological significance and that the developer should apply for consent to destroy the Penn Park 1 artefacts prior to development.

2.1.2 Mary Dallas Consulting Archaeologists 1997[3]

In 1997, Mary Dallas Consulting Archaeologists (MCDA) produced a report for the archaeological survey of Lot 71, DP 573183, part Portions 59, 20A and 69. The survey area consisted of 30ha 10km west of Maitland in Rutherford, Parish of Gosforth, County of Northumberland (immediately to the south of the study area).

Prior to MDCA's work, no First Nations sites had been recorded in the survey area. The report aimed to identify, record and assess First Nations sites, while concurrently assessing any impact the proposed development would have on them. It also determined the significance of First Nations sites and advised on impact mitigation and management.

The report identified the following:

- one exposed open artefact scatter of four artefacts on the western edge of a dam;
- two isolated finds—one at the headwaters of a creek below a low spur, the other identified during a surface scrape; and
- a Potential Artefact Deposit (PAD) located in an aggrading alluvial intermittent creek deposit.

The report suggested that likely locations for sites were along flatter ground, such as on ridge crests and along creek flats. The report suggested that a full archaeological survey was needed before the development of the site.

2.1.3 Mary Dallas Consulting Archaeologists 2003a[4]

In 2003, MDCA produced an archaeological assessment for Lot 2 in DP 812143, Blue Gum Drive, Aberglasslyn. The survey area covered 12.7 hectares, approximately 1km northwest of where Aberglasslyn and Oakhampton Roads intersect (~2.5 km east of the study area). The objective of this assessment was to identify new and previously recorded sites.

A previous archaeological investigation was undertaken in the area in 2001 by Insite Heritage. This previous survey identified site 38-4-0611, consisting of seven artefacts. It also identified that the area possessed archaeological sensitivity. The survey undertaken by MDCA did not relocate the site 38-4-0611 or identify new archaeological sites and/or artefacts as the visibility at the time was less than 1%.

The assessment concluded that preliminary archaeological testing for the site was required and that this would help to identify if further excavation and/or monitoring would be needed.

2.1.4 Mary Dallas Consulting Archaeologists 2003b[5]

Also in 2003, MDCA assessed Lot 51 in DP 840643, an area of 12 hectares situated on the western side of Aberglasslyn Road, Aberglasslyn, approximately 1.2km from the intersection with the New England Highway (~4 km east of the study area). The survey objective was to identify, record and assess any archaeological evidence for past First Nations visitation.

The survey area consisted of a central spur ridge, gentle slopes and minor watercourses. It had been previously surveyed by Insite Heritage in 2002, but no First Nations sites and/or artefacts were identified. Likewise, the survey undertaken by MDCA did not identify any sites and/or artefacts. Ground visibility was identified as low and thus contributed to the lack of detectable sites.

The assessment concluded that preliminary archaeological testing for the site was required and that this would help to identify if further excavation and/or monitoring would be required.

2.1.5 Mary Dallas Consulting Archaeologists 2004[6]

In 2004, MDCA conducted an assessment to locate, record and assess any First Nations archaeological evidence for past First Nations occupation in a 131.01ha area 10km north of Maitland in Aberglasslyn. The subject site was situated between Aberglasslyn Road and the Hunter River, approximately 2km north of the New England Highway (~4 km east of the study area). It included Lots 80 and 81 of DP 524028, Lot 41 of DP 611238, Lot 11 of DP 1042562 and Portion 2 of DP 160043 in the parish of Gosforth, County of Northumberland.

The study separated the area into three topographic criteria. Survey Unit 1 consisted of a ridgeline above the Hunter River and included uppermost reaches of drainage lines. Survey Unit 2 was an area of ridge slopes between the level ridgelines and the lagoon, while Survey Unit 3 comprised the areas on the margins of lagoons. The survey identified two open artefact scatters (AB Site 1 and AB Site 2) and one isolated find (ABisf 1). All finds were located in the northern section of the survey area and in areas of disturbance. The survey also identified three PADs, labelled AB PAD 1–3. AB PAD 1 was identified on the ridgeline between Survey Unit 1 and Survey Unit 2, while AB PAD 2 and AB PAD 3 were identified on the margins of lagoon zones.

The assessment recommended archaeological test excavation for AB PAD 1 and AB PAD 2 in order to accurately assess the need for salvage excavation and/or monitoring. AB Site 1, AB Site 2 and AB PAD 3 were not going to be impacted by the development and thus no further archaeological work was required. A Section 90 permit for ABisf 1 was required to destroy/relocate the artefact on site.

2.1.6 Giles Hamm Cultural Heritage Consultant 2004[7]

The Archaeological Risk Assessment Report developed by Giles Hamm Cultural Heritage Consultant (GHCHC) in 2004 aimed to assess the First Nations heritage potential and any impact of proposed activity on lots 1, 2, 10, 12, Part of 15, 1411 and 1412, Aberglasslyn Road, Aberglasslyn (~3.5 km east of the study area). It also provided cultural heritage recommendations for the land.

The survey area was divided into two different sample areas. Transect 1 included landforms of simple slope/ridge, drainage channel and gentle mid-slopes. Two sites were identified within Transect 1. Site 1 consisted of three stone artefacts on the edge of a dam drainage line, while Site 2 was an isolated find similarly located on the edge of a dam feature. Transect 2 consisted of landform units of ridge crests/simple slopes. No sites and/or artefacts were identified within this transect.

The surveyed areas were given an overall low level of archaeological significance, while being identified as having First Nations heritage potential. A rezoning proposal with all sites and artefacts mapped was recommended for the area.

2.1.7 Mary Dallas Consulting Archaeologists 2006[8]

In 2006, MDCA developed a research design to apply for a Section 87 Permit for AHIMS PADs 38-8-0865 and 38-8-0866. The research design sought to determine through excavation if subsurface artefacts were present, characterise the archaeological deposits encountered, identify further requirements, and provide mitigation recommendations.

The excavation methodology consisted of a machine grader stripping the topsoil (up to 200–300mm in depth) across 100m transects ‘several meters wide’. Every 20m, 10 x 10L buckets were sample sieved. The extent of PAD 1 was 700m x 200m. Areas of soil destruction were limited to former farming and residential building footprints but was considered extensive enough to destroy any First Nations heritage features/artefacts. PAD 2 consisted, like PAD 1, of localised subsurface disturbance in association with farm tracks and dams. The extent of the PAD was approximately 600m x 300m. Some areas of PAD 2 were located within a flood zone and were therefore not going to be affected by the development. No mitigation measures were recorded as the report was an application for a Section 87 Permit.

2.1.8 McCardle Cultural Heritage 2007a[9]

In 2007, McCardle Cultural Heritage (MCH) produced an assessment report for an area 38.6ha, 3 kilometres north of the Maitland CBD and comprising lots 12 DP 530358, Lot 2 DP 1080705, Lot 2 DP 1067060, lots 1411 and 1412 DP 717879 and Lot 22 DP 841959 (~3.5 km east of the study area). The assessment aimed to develop a predictive archaeological statement based on data searches and previous archaeological works. The assessment also aimed to identify impacts in relation to known archaeological sites in the area.

The site was previously surveyed by MDCA in 2004, when PAD 1 and PAD 2 were identified. The survey was conducted at the site by two persons on foot spaced 5–10 metres apart. Four survey units were identified for survey. No new sites were identified and the previously identified PAD 1 and PAD 2 were not relocated.

It was concluded that no development works would affect PAD 1 and PAD 2. A Section 90 Permit was recommended for collection of the artefacts previously identified at PAD 1 and PAD 2.

2.1.9 McCardle Cultural Heritage 2007b[10]

In 2007, MCH undertook test excavations for PAD 1 and PAD 2 for the abovementioned site. The aim of the test excavation was to determine the presence of subsurface artefacts as well as the vertical and horizontal extent of the PAD. The location of test units was guided by the areas of development that would disturb the PAD. Test units were excavated in 500mm x 500mm shovel test pits spaced at 5 metre intervals.

One artefact was recovered at a depth of 150mm in Pit 2 of PAD 2. Both PAD 1 (located on a crest) and PAD 2 (located on a slope) were considered to have disturbed soil profiles resulting from past land uses and bioturbation. It was recommended that if any further artefacts were identified during development, an archaeologist should be notified in order to prepare a Section 90 Permit for the site.

2.1.10 Mary Dallas Consulting Archaeologists 2008[11]

In February and March 2008, MDCA partially salvaged AB Campsite 1 (AHIMS #38-8-0866), which was identified in 2007 during test excavations on the southern side of Oakhampton Road above Oakhampton Swamp at Aberglasslyn, near Maitland. The aim of the subsurface investigation was to:

- identify the areas of dense archaeological concentrations in AB Campsite 1;
- understand how the campsite was used by First Nations people;
- retrieve, if possible, a dateable assemblage; and
- undertake a comparison with stone assemblages and behaviour patterns from other sites within the area.

The staged salvage excavations consisted of 47 1m x 1m squares, of which 36 were within a contiguous area. A total of 1111 artefacts were retrieved during the salvage excavations. Two working floors were identified at the site, with 28 backed artefacts identified in the salvage excavation and 1 core recovered in the testing phase. A small number of scrapers were recovered, resulting in a low diversity of artefacts at the sampled salvaged area and which was uncharacteristic of the wider region.

It was concluded AB Campsite 1 was indicative of a small campsite with frequency of site use not distinguishable in the archaeological record. No radiocarbon dates were recovered for the site.

Giles Hamm Cultural Heritage Consultant 2008 [12]

In 2008, GHCHC determined the First Nations heritage constraints for the proposed re-zoning of the Anambah Road, Anambah site, Lot 71, DP 714785 (~0.5km east of the study area). This was carried out by reviewing all available First Nations cultural heritage studies identified for the area and undertaking an archaeological risk assessment for the First Nations heritage places identified.

GHCHC identified 34 sites within a 3km radius of the survey area boundaries. The survey undertaken identified three First Nations objects and eight PADs. It was acknowledged that the artefacts were spread across elevated landforms associated with ridge crests and exposed primarily due to erosional processes such as ploughing.

The report found that the survey area evidenced low levels of First Nations occupation and it was ultimately considered to have low significance. During the consultation process with First Nations stakeholders, it was identified that a conservation buffer zone around parts of the Anambah Lagoon should be established to protect First Nations heritage resources. Further, the report stated that due to

the lack of knowledge in the area, arguments for archaeological excavation were warranted if development went ahead.

2.1.11 McCardle Cultural Heritage 2011[13]

In 2011, MCH undertook a due diligence assessment of the Anambah Release Area (including parts of the current study area), to identify areas of First Nations cultural heritage and determine possible impacts. Six areas of PAD were identified in association with the drainage lines within the study area.

The draft Indigenous Archaeological Due Diligence Assessment produced by MCH in 2011 referenced an archaeological test excavation and an archaeological assessment undertaken by MCH in 2005 and 2009 respectively.

McCardle Cultural Heritage 2005

The excavations were undertaken between 'the southern side of the new England HWY, running south down Station Lane, west along Freeman Drive, across Lochinvar Creek and back onto the New England HWY at Occupation Lane' (MCH, 2011). The excavations were undertaken for the construction of a sewer main. It was identified that three PADs (PAD 2, PAD 3 and PAD 5) required excavation. Geomorphological analysis of PAD 2 and PAD 3 identified that these sites were on an alluvial flood plain not conducive to past occupation. The excavation at PAD 5 uncovered two artefacts within a disturbed context. It was deemed no further excavation at any of the sites was required and a consent to destroy permit was considered appropriate.

McCardle Cultural Heritage 2009

MCH undertook a preliminary archaeological assessment for a site of 282.26ha on the New England Highway opposite the Rutherford Aerodrome. This area had been identified as cleared for grazing with few remnant vegetation areas. It also had two major drainage lines running southeast toward Wentworth Swamp, 2km southeast of the study area.

During the survey, a total of 10 sites were identified. It was concluded a Section 87 was required for sites R11, R15, R16, R17, R18, R19 R110 and PAD 1, PAD 2 and PAD 3 prior to any development works. A S90 consent to destroy was considered appropriate for sites R12, R13 and R14.

2.1.12 Godden Mackay Logan 2012[14]

In 2012, GML undertook archaeological stripping of the topsoil at McKeachies Run (~3.5km east of the study area), under an AHIP issued from the Office of Environment and Heritage (now Heritage NSW). Two sites had been previously identified within this area, with a further seven sites identified during the topsoil stripping. No impact to the newly identified sites was permitted by the existing AHIP and therefore a new AHIP was required for these sites. An archaeological research design for further staged archaeological investigation was prepared for the site to allow investigation and salvage of artefactual material within the area.

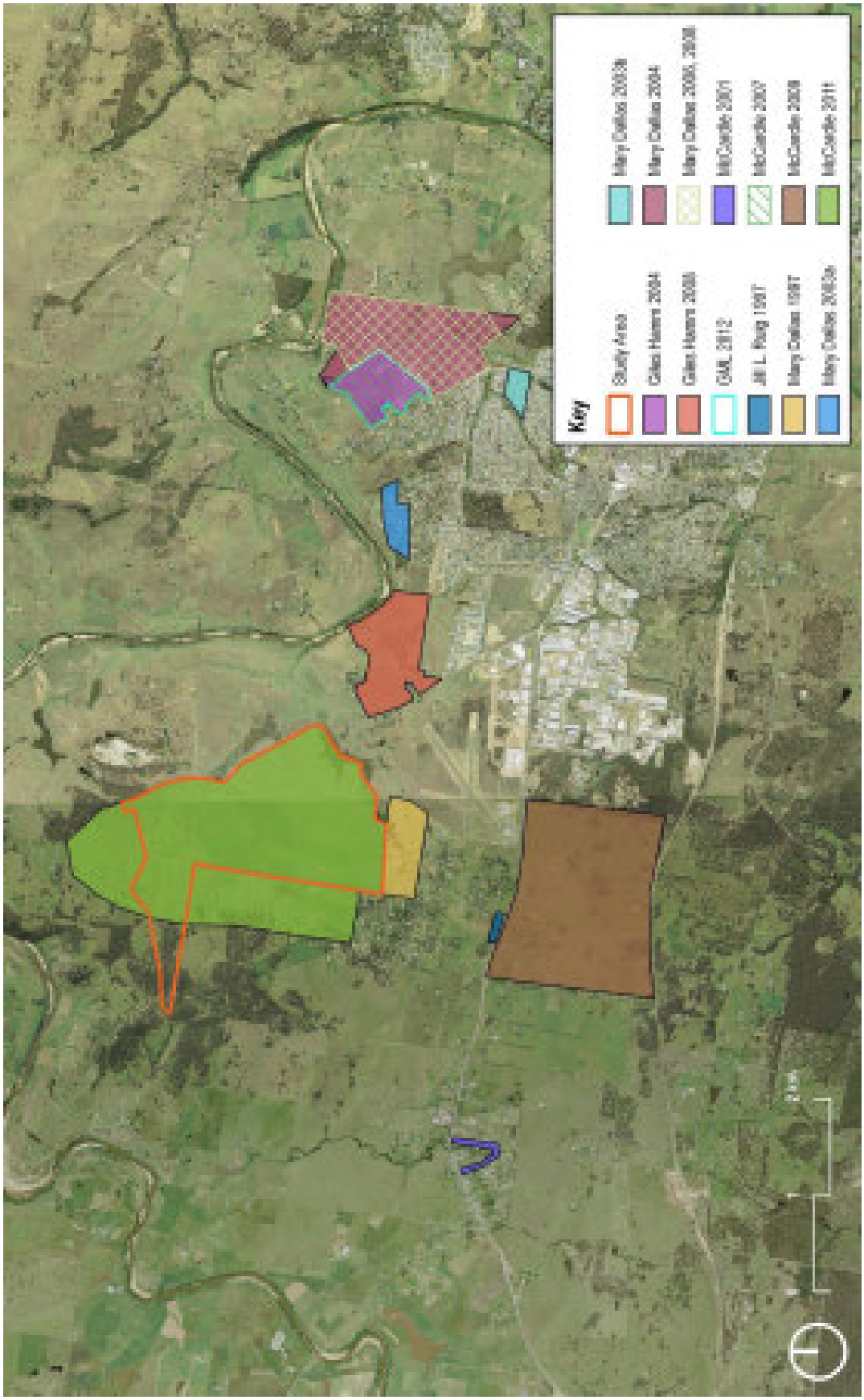


Figure 2.1 Previous archaeological work in the vicinity of the study area. (Source: NSW LPI with GML additions, 2021)

2.2 Aboriginal Heritage Information Management System Search

A search of the Heritage NSW Aboriginal Heritage Information Management System (AHIMS) database was undertaken on 23 March 2021, reference number 578228 (Appendix B). The search covered a zone from latitude, longitude -32.707, 151.4326 to -32.629, 151.4567 with a 0m buffer. The results of the search are shown in Table 2.1, Figure 2.3 and Figure 2.4. The search identified 80 sites—two of which have been excluded from Table 2.1 as they have since been reassessed. There is a restricted site which is within the boundaries of the study area. This site (37-6-2777) has been left out of the AHIMS mapping. The restricted site was not in the 2012 study area, but is in the 2021, larger study area.

An AHIMS search was also undertaken by GML in 2012 as part of archaeological work for Stockland Development when it owned the site. However, that search did not identify any sites within the study area (Figure 2.4). In contrast, the 2021 AHIMS search confirms the presence of 29 sites. These sites were identified during the 2012 survey and test excavation and were added to the AHIMS by GML.

Table 2.1 Results of the 2021 AHIMS Search within the study area.

Site Feature	Frequency
Artefact	46
Artefact and Quarry	2
Isolated Artefact	16
Isolated Artefact and PAD	2
Modified Tree	1
PAD	10
Restricted Site	1
Total	78

The AHIMS data, First Nations site records and the artefact patterning indicates that PADs and isolated stone artefacts dominate the archaeological record. Although these sites may be identified on any landform, such sites appear to be predominantly recorded on ridge crests, in creek flats and on swamp banks.

The density of sites on ridge crests may be due to a preference for manufacturing tools and use of stone objects in locations with a clear view of the surrounding landscape. The patterning of recorded sites on alluvial flats may be due to a need to inhabit areas close to water sources.

The AHIMS record appears to define a pattern of First Nations sites on the south of the Hunter River, with few sites on the northern side of the river (within the area searched on AHIMS). We suggest that this patterning reflects an absence of archaeological work and site recording, rather than an absence of First Nations sites.

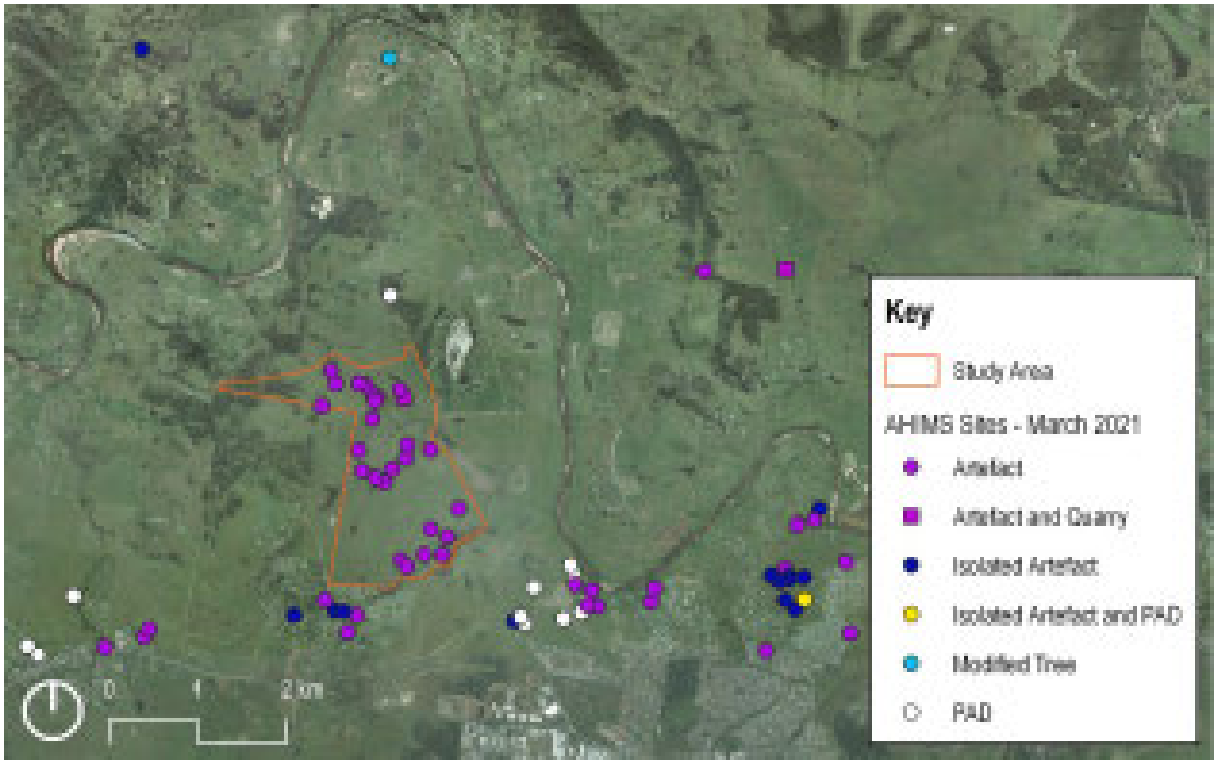


Figure 2.2 2021 AHIMS search results. (Source: NSW LPI with GML additions, 2021)

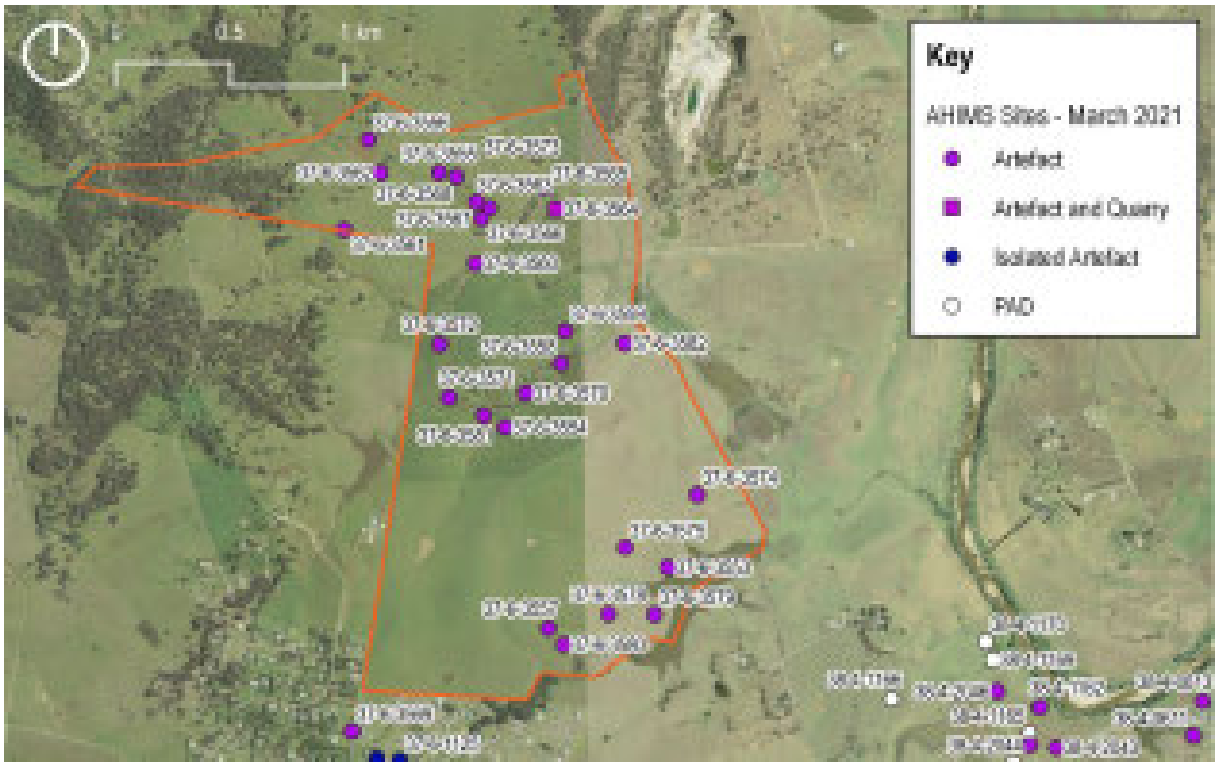


Figure 2.3 Detailed 2021 AHIMS search. (Source: NSW LPI with GML additions, 2021)

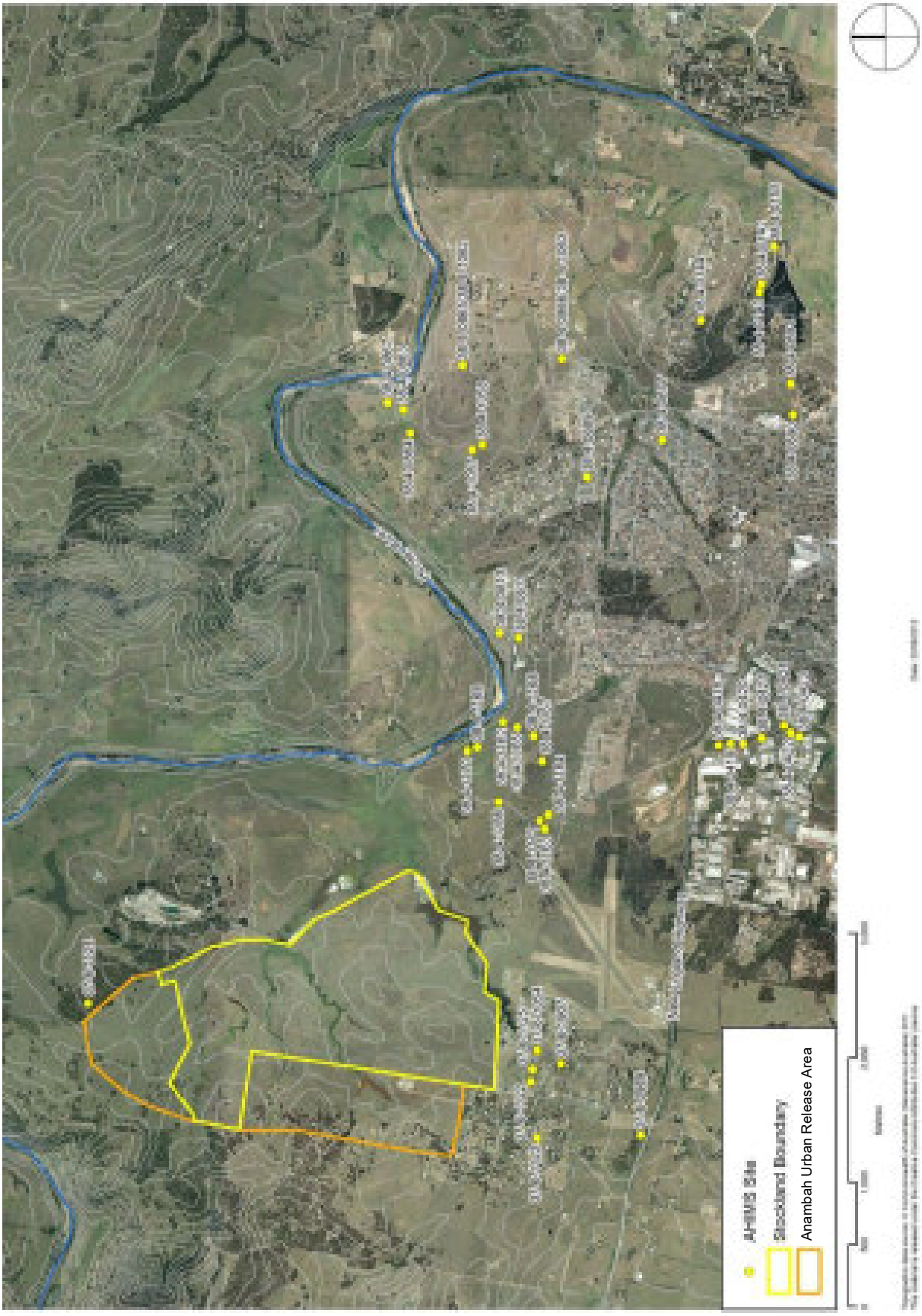


Figure 2.4 2012 AHIMS search, with old study area boundaries. (Source: GML, 2012)

2.3 Landscape Context

The purpose of this section is to provide contextual information for use in developing a predictive model relating to the evidence of First Nations occupation and use of the study area. Interactions between people and their surroundings are of integral importance in both the initial formation and the subsequent preservation of the archaeological record. The nature and availability of resources including water, flora and fauna and suitable raw materials for the manufacture of stone tools and other items had (and continues to have) a significant influence over the way in which people utilise the landscape.

Alterations to the natural environment also impact upon the preservation and integrity of any cultural materials that may have been deposited, whilst current vegetation and erosional regimes affect the visibility and detectability of First Nations sites and objects. For these reasons, it is essential to consider the environmental context as a component of any heritage assessment.

2.3.1 Landforms and Landscape Features

The Anambah study area is approximately 600 metres south of Gosforth, approximately 1.1 kilometres north of the Maitland Airport and approximately 1.18 kilometres north of the New England Highway. Elevations within the study area are generally between 20–120m, with slopes between 0–10% and local relief generally less than 10 metres and up to 40 metres. Drainage lines, ranging from ephemeral first order streams up to more permanent third order streams, are a common feature and are generally found at intervals of 200–1000 metres.

The study area presents a series of landforms with localised views to significant places in the vicinity, and a series of raised flats and ridgelines adjacent to lower order water courses (Figure 2.6). Given the study area possesses an erosional landform pattern containing some areas identified as aggrading landscapes, it is likely that archaeological features over the majority of the study area are no longer in their original context or form.

2.3.2 Geology and Geomorphic Activity

Anambah sits within the primary geology of a number of formations which are of the Permian period and are as follows:

- Maitland Group, consisting of the Muree Sandstone which is made up of sandstone, conglomerate and siltstone;
- the Greta coal measures which are made up of lenticular conglomerates, sandstone, shale, splitting coal seams; and
- the Farley formation consisting of sandstone, mudstone, siltstone, shale and erratics.[15]

The primary mode of geomorphological activity within the study area is minor to moderate sheet erosion. This is associated with minor gully erosion and in areas where ground cover has been removed.[16]

The study area is located 22km northwest of the Stockton Bight and its complex series of Pleistocene and Holocene dunes. Over time these dunes have slowly shifted and re-formed, covering some former land surface primarily with aeolian (ie windblown) sands. Such movement had the potential to bury surface-based First Nations sites of the period deep below the modern surface level. As such, the identification of surface-based First Nations sites on the strand plain dunes, as recorded by GML in 2010, can be attributed to either First Nations sites that have been formed in the past few hundred years or a

disturbance impact such as dune destabilisation, erosion or other sand sheet modification (such activities either revealed a buried surface or brought up material from lower in the dune's stratigraphy).

Ancient aeolian sand sheets, which are sometimes buried, have been identified within the Hunter Valley region, including one located approximately 14km south of the current study area and another 55km north west of the study area. These sand sheets have been dated at approximately 85,000 to 80,000 years of age. These sand sheets may extend from the Stockton Bight in the southeast right through the study area and continue further inland. These sheets have been identified with First Nations archaeological material of a later date.

GML has prepared a review of local and regional stone material sources near Anambah. This review is presented in Appendix C.

2.3.3 Soil Landscape

The study area is located within three soil landscapes as defined by Kovac and Lawrie[17]—the Hunter, Branxton and Rothbury landscapes (Figure 2.7).

The Hunter soil landscape is located within the Hunter River floodplain and comprises soils formed in alluvium. Topsoils are generally brownish black clay loam overlying medium clays. Minor erosion occurs on water course banks, and the landscape is an aggrading one. Within the study area, the Hunter soil landscape is located in the southeastern portion.

The Branxton soil landscape comprises undulating low hills and contains small drainage lines. A lack of erosion is associated with this landscape type. Topsoils consist of a brown sandy loam overlying a light brown medium clay with yellow and grey mottles, with a depth of approximately 1m to bedrock. The Branxton soil landscape is located in the central portion of the study area.

The Rothbury soil landscape covers the majority of the northwestern portion of the study area and comprises undulating to rolling hills. Minor sheet erosion occurs on slopes, while moderate sheet and gully erosion occurs on lower slopes. The topsoil comprises a dark brown fine sandy loam, overlying a brown fine sandy to clay loam, and the subsoil has a clear change to reddish brown medium clay with a depth of approximately 900mm to bedrock.

2.3.4 Hydrology

The availability of water has significant implications for the range of resources available and the suitability of an area for human occupation. The study area is positioned within the Hunter River catchment area. It is located within the periphery of a significant network of high order creeks and a swamp.

Drainage lines within the study area flow to the east across the study area, toward the Hunter River and the swamp. A number of lower order unnamed streams are present within the study area. Second order streams within the study area are fed by a number of first order ephemeral creek lines. Several of these second order streams have been dammed for agricultural purposes, with one dam of significant size located in the south of the study area.

For ease of reference, GML have labelled the drainage lines and watercourses within the study area consecutively from north to south, using the prefix 'ADL' (Anambah Drainage Lines), and are shown in Figure 2.5.

Stream order for the drainage lines within the study area has been identified based on topographic features. It is noted that the Department of Water does not classify all of these streams as watercourses.

- ADL1 is located in the northernmost section of the study area and comprises a first order stream which has been dammed in two places. The stream drains from north to south, into the large wetland located adjacent to the eastern boundary of the study area.
- ADL2 is a third order stream located south of ADL1 and drains from west to east into ADL1. ADL2 has been dammed in the westernmost portion of the study area.
- ADL3 comprises two first order streams which converge to form a second order stream. It is located south of ADL2 and drains from west to east into the large wetland located adjacent to the eastern boundary of the study area. A small dam is located on ADL3 outside of the study area.
- ADL4 is a second and third order stream complex which has been dammed outside the study area. It drains from west to east into the large wetland located adjacent to the eastern boundary of the study area. It becomes a third order stream where ADL6 drains into it.
- ADL5 is a short first order stream located on the eastern boundary of the study area and drains from southwest to northeast into the large wetland located adjacent to the eastern boundary of the study area.
- ADL6 is a second order stream which drains from southwest to northeast, into ADL4, at which point ADL4 becomes a third order stream. ADL6 has two small dams located on it, and is found in the southwestern portion of the study area.
- ADL7 is a small first order stream located on the eastern boundary of the study area and flows into the large wetland located adjacent to the eastern boundary of the study area.
- ADL8 is a second order stream located in the southern portion of the study area. It has been dammed to create the largest dam in the study area.

These lower order streams would have been ephemeral in nature and only flow in periods of wet weather. Clearing and other agricultural use of the surrounding land would have led to additional erosion and destabilisation of the banks of these water courses, as would seasonal flooding.

Whilst these drainage lines individually have a relatively low stream order, most flow into the large wetland located adjacent to the eastern boundary of the study area. This wetland, which becomes a fourth order water course as it drains from the study area, is large, wide and could have been a focus for First Nations activities where water was a consideration.

2.3.5 Fauna and Flora

Native vegetation in the study area would have comprised dry sclerophyll forest, including spotted gum and red ironbark, with swamp oak in drainage lines. Forest red gum, stringybark and paperbark would also have been present, along with smooth and rough-barked apples, white mahogany, red bloodwood, blackbutt, grey gum, Sydney peppermint, *Casuarina*, *Persoonia* and *Acacia* spp.[18] The general location of the study area within the Hunter River catchment area means First Nations populations occupying this area had access to a diverse range of resources and environments.

With the study area being reasonably close to the Hunter River, a range of faunal and plant resources would have been available to the First Nations inhabitants. Such resources include small mammals, kangaroo, fish, berries, bark and other plant resources.

2.3.6 Viewing Locations

The study area presents viewing locations, particularly from the crests of hills. The Sugarloaf Ranges (Figure 2.8) and Mount Sugarloaf (Figure 2.9), located approximately 22km south of the study area, are clearly visible. The gently rolling hills of the study area and nearby surrounds are easily viewed from these crests, suggesting an ideal vantage point for First Nations people in the past.

Further view analysis has been undertaken as a component of the field survey (Section 3.4.2).

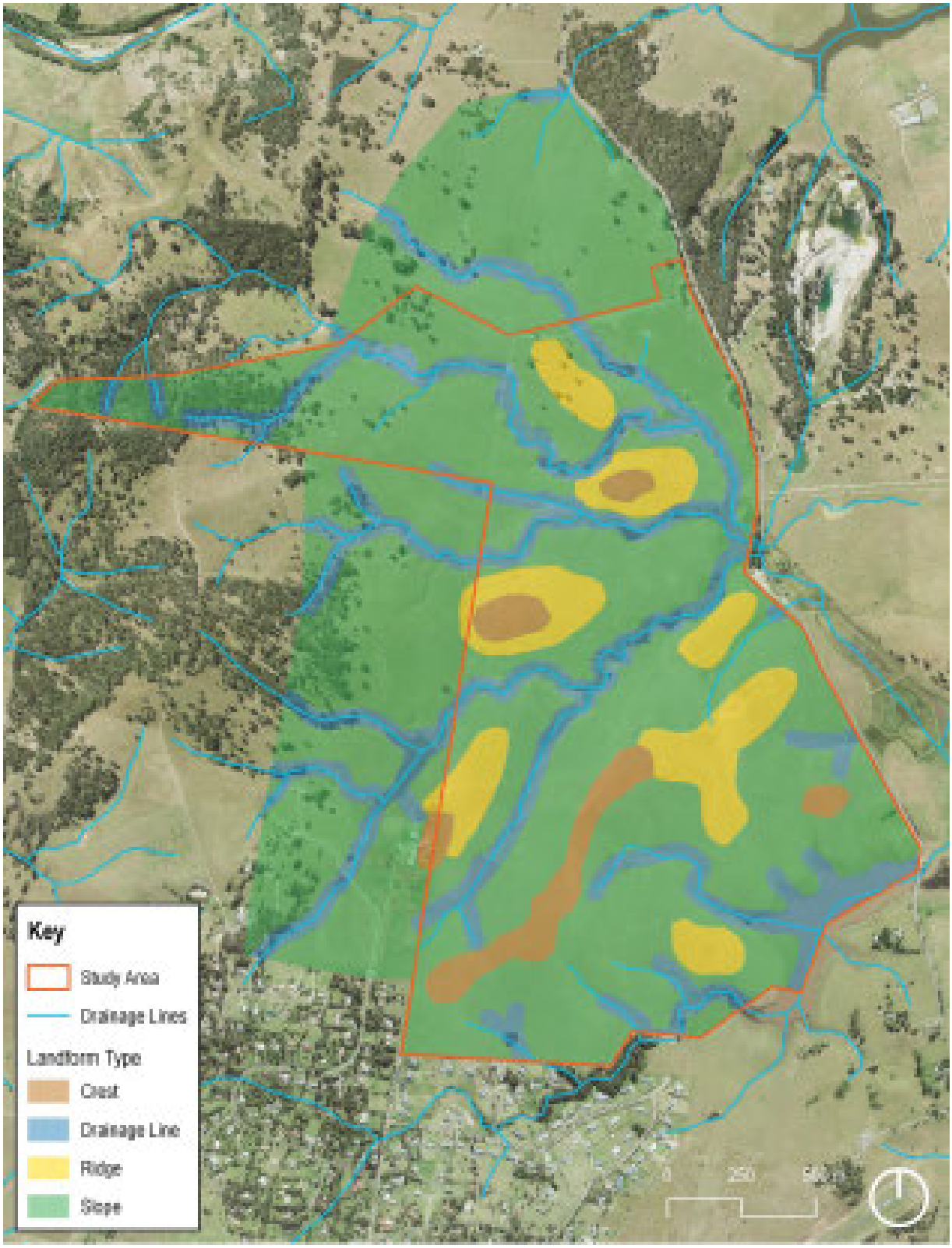


Figure 2.5 Landform features and watercourses within the study area. (Source: NSW LPI with GML additions, 2022)

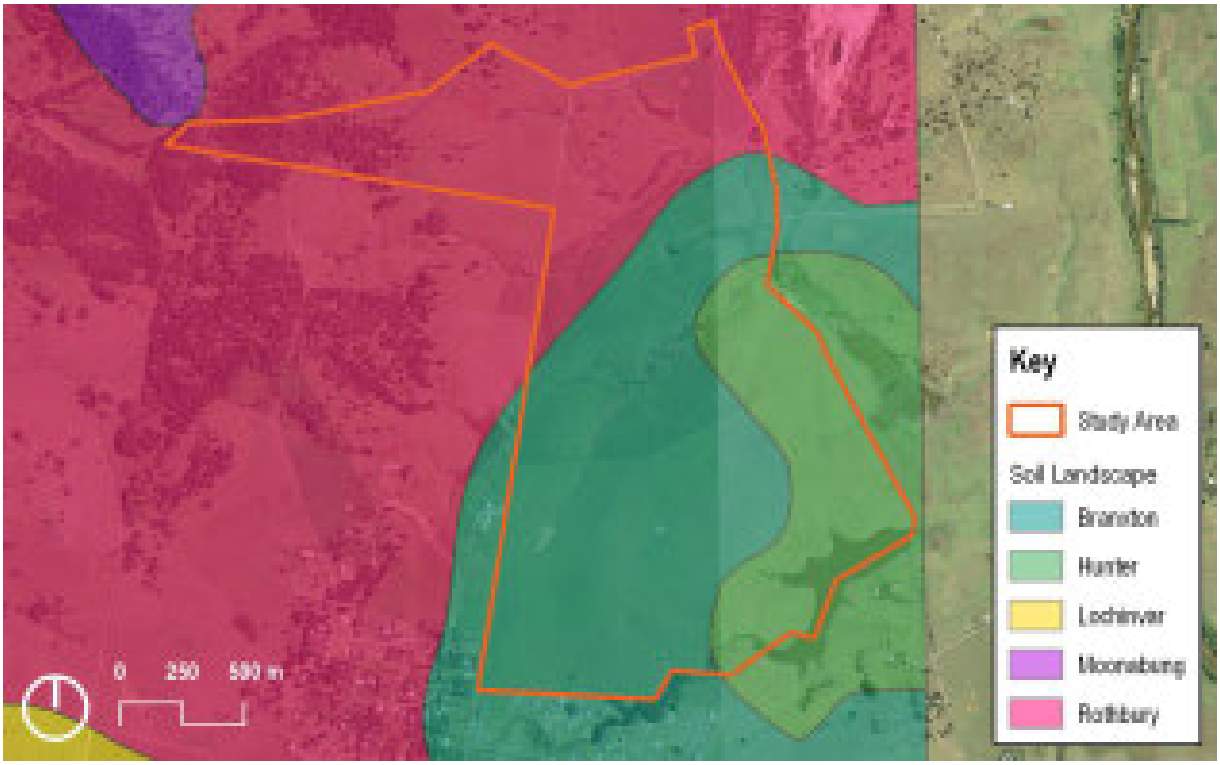


Figure 2.6 Soil landscapes of the study area. (Source: NSW LPI with GML additions, 2021)

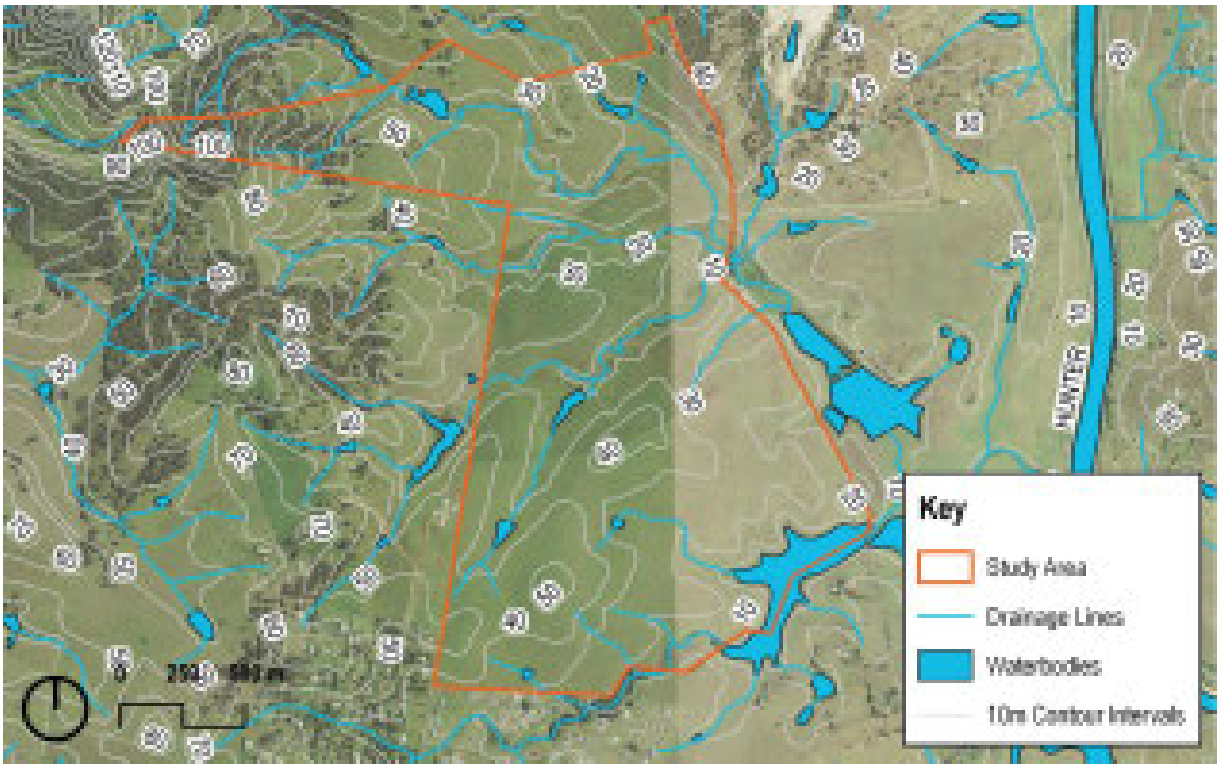


Figure 2.7 Hydrology and contour lines across the study area. (Source: NSW LPI with GML additions, 2022)

Figure 2.8 View of the Sugarloaf Range, approximately 22km to the south of the study area. (Source: GML 2012)

Figure 2.9 View from study area through to Mount Sugarloaf, approximately 22km south of the study area. (Source: GML 2012)

2.3.7 Land Use History

A land use history determined from aerial photograph analysis (Figure 2.10 to Figure 2.12) helps us to deduce potential historical impacts on the study area's soil horizons. Impacts that have resulted in a substantial loss of soils will have reduced the study area's soil condition (summarised as good, moderate and poor); whilst those that have 'moved' soils, will have reduced the study area's soil integrity (summarised as high, moderate and low). In terms of determining archaeological potential it is important to understand both condition and integrity.

1965 Aerial

The 1965 aerial (Figure 2.10) shows the study area to be generally devoid of canopy vegetation (trees), with a number of dams located across the main watercourses and a crop covering the lower two-thirds of the study area.

Prior to 1965, the study area was subject to holistic vegetation stripping and low-grade agricultural practices, possibly including cropping and animal grazing. The date and mechanism for vegetation (ie tree) removal is not known, but likely involved either chain ripping (that results in a high level of ground disturbance) or cut-and-burn, which results in very low levels of ground disturbance, albeit with localised carbon deposits. In general, early vegetation stripping was undertaken by cut-and-burn. However, the level of impact from vegetation removal on the study area cannot be ascertained until archaeological test excavation is undertaken. Only a few large paddock trees remain within the study area. They are primarily located in the northern area.

The second major, localised, impact (modification) in 1965 appears to be the construction of dams across a number of creeks within the study area. These have been located at strategic landscape locations, where soil could be easily excavated to construct dam banks and where water run-off from multiple creeks occurred. In the northern third of the study area there is one small dam, whereas the southern third contains three small dams and another larger dam that forms the southern boundary of the study area.

Immediately outside the northern boundary (but within the Anambah Urban Release Area, part of the 2012 study boundary) a small farm complex is present. However the row of trees present along the northeast boundary (see the 1994 aerial) is not present in 1965. The farm complex appears to comprise a house and outbuilding. Two 'patches' of dark vegetation are associated with this farm complex; the nature and impact of these patches cannot be determined through this analysis.

Of greatest interest to this analysis is the pattern of cropping across the study area. The study area can be divided into roughly equal thirds distinctly divided by fence lines, which create straight boundaries between these thirds. In 1965, only the central (middle) third contains a crop. Neither the northern nor southern thirds appear to be cropped at this time. The crop has been planted up to the margins of the open depressions associated with the creek lines—very little 'flat' landform has remained crop free.

1994 Aerial

The 1994 aerial (Figure 2.11) shows a similar patterning within the study area to that in 1965. Of note are the disappearance of some mature trees from the northern third of the site and the construction of a few additional small dams. The location of all major drainage lines does not appear to have changed and no substantial erosion or other impact appears to have occurred between 1965 and 1994.

2004 Aerial Photograph

The 2004 aerial (Figure 2.12) shows that no further dams or significant disturbance has occurred since 1994. However, the pattern of cropping is very distinct, with a dark-green crop located in the southern third and a mid-green crop across the central third. As in 1965, the northern third does not appear to have been subject to cropping. The 2004 crop has, in general, been planted up to the margins of each creek, although a slightly larger buffer has been allowed between the edge of the crop and the start of each open depression landform, along the creek margins.

Summary of Land Use History

In summary, the following statements can be made with respect to the levels of impact associated with the study area:

- The northern third does not appear to have been impacted by cropping based on information reviewed and in general has a low level of impact as a result of activities over the past 200 years.
- The central and southern thirds have been cropped repeatedly over the past 50 years and have a moderate level of impact.
- Erosion to water courses has resulted in a high level of localised impact.
- All dam construction has resulted in a high level of localised impact.
- All 4WD tracks have resulted in a high level of localised linear impact.
- Fence construction and animal tracks have resulted in a moderate to high level of impact along their courses.

Table 2.2 Overview of Land Use History and Consequence of Impacts.

Activity	When	Extent, Impact and Consequence to Condition and Integrity	Level of Impact
Vegetation stripping	Before 1965	Across the whole study area. A few mature trees remain in the northern third. It is assumed that vegetation stripping was undertaken by cut-and-burn rather than ripping. Therefore the impact on soil horizons should not be high. Condition (as a consequence of the activity): good. Integrity (as a consequence of the activity): high.	Low
Water erosion	Always	All drainage lines have been impacted by water erosion. Modern erosion is observable on some outside bends of the creeks, where soils have been eroded and in places clays and bedrock have been exposed. It is suggested that long-term (ie over a period of millennia) modification to creek courses could have resulted in a number of creek course changes, where large floods could have deposited significantly large quantities of alluvium to modify the course of a creek (this requires archaeological testing). More recent erosion has resulted in the exposure of a number of archaeological sites at certain locations along the creeks, especially in the northern third of the study area. Condition: moderate in areas of impact. Integrity: low to moderate in areas of impact.	High in areas of water erosion

Activity	When	Extent, Impact and Consequence to Condition and Integrity	Level of Impact
Cropping	1965 to 2004	Cropping has been undertaken across the lower two thirds of the study area at least. This will have resulted in ploughing of A horizon soils and thus loss of the archaeological deposit's integrity. Modern ploughing can 'deep-rip' soils over 500mm in depth and thus have a high level of impact on archaeological deposits. In general, ploughing and cropping does not result in a loss of soils, and thus archaeological evidence is retained, albeit not in an original depositional context. It is noted that cropping may be associated with the Branxton soil landscape (Figure 2.3) rather than the mapped extent of Hunter and Rothbury landscapes. Condition: good (all of study area). Integrity: high (northern third), low (central and lower third).	Low (northern third) Moderate (central and southern third)
Animal grazing	1965 to 2004	It can be assumed that the whole of the study area has been subject to animal grazing (apparent in 2012). The primary impacts are erosion along feed locations, dams, some water courses and fence lines where animal tracks occur. Heavy erosion along dam banks was observed in 2012. Condition: moderate in areas of impact. Integrity: low to moderate in areas of impact.	Low to moderate (albeit in localised zones)
4WD tracks	1965 to 2004	A number of farm tracks are present across the study area. These have not been modified since 1965. It was noted that these tracks have resulted in significant erosion and necessitated the importation of fills and gravels in order to stabilise and repair the tracks. Condition: poor in areas of impact. Integrity: low in areas of impact.	High
Fence post installation	1965 to 2004	Wooden fence posts have been used to construct fences and divide the study area into thirds. Installation would have necessitated excavating a post hole. Condition: poor in areas of impact. Integrity: low in areas of impact.	High
Dam construction	1965 to 2004	Most dams were constructed prior to 1965. A few additional dams have been built since. Dam construction necessitates cut-and-fill, impacting on any archaeology that was associated with the location of the dam or redeposition of archaeological material during the construction of the dam banks. Condition: poor. Integrity: low.	High

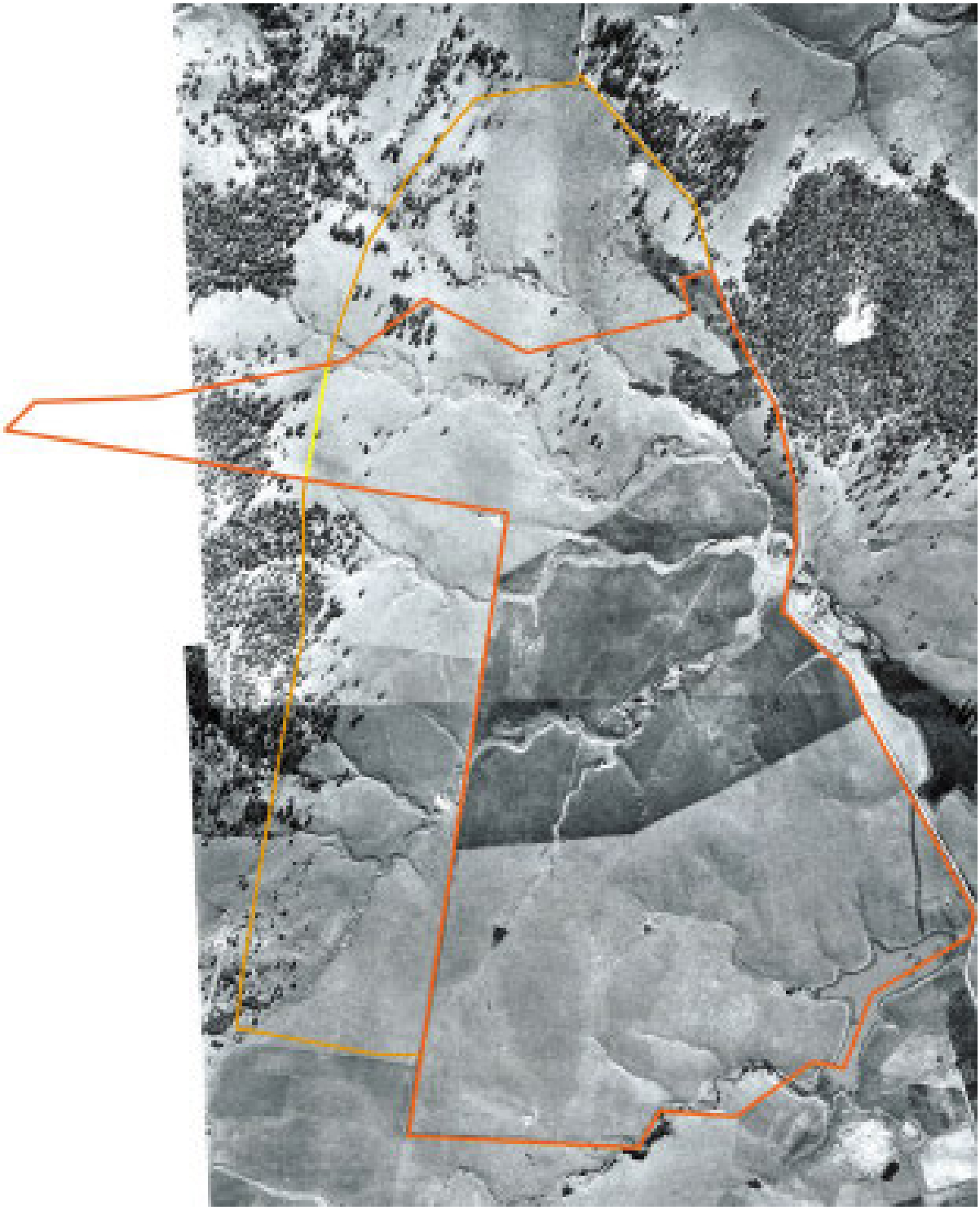


Figure 2.10 1965 historical aerial with the 2021 study area outlined in orange and the 2012 Anambah Urban Release Area outlined in yellow. (Source: NSW LPI with GML additions 2021)

Figure 2.11 1994 historical aerial with the 2021 study area outlined in orange and the 2012 Anambah Urban Release Area outlined in yellow. (Source: NSW LPI with GML additions 2021)

Figure 2.12 2004 historical aerial with the 2021 study area outlined in orange and the 2012 Anambah Urban Release Area outlined in yellow. (Source: NSW LPI with GML additions 2021)

2.3.8 Summary of Archaeological and Environmental Context

Elevations within the study area are generally between 20–120 metres with slopes between 0–10% and local relief generally less than 10 metres and up to 40 metres. Drainage lines, ranging from ephemeral first order streams up to more permanent third order streams, are a common feature and are generally found at intervals of 200–1000 metres.

The study area presents a series of landforms with localised views to significant places in the vicinity, and a series of raised flats and ridgelines adjacent to lower order water courses. Given the study area possesses an erosional landform pattern containing some areas identified as aggrading landscapes, it is likely that archaeological features over the majority of the study area are no longer in their original context or form.

With the study area being reasonably close to the Hunter River, a range of faunal and plant resources would have been available to the First Nations inhabitants. Such resources include small mammals, kangaroo, fish, berries, bark and other plant resources. Drainage lines within the study area flow to the east across the proposed development site toward the Hunter River and the swamp. A number of lower order unnamed streams are present within the study area. Second order streams within the study area are fed by a number of first order ephemeral creek lines. Several of these second order streams have been dammed for agricultural purposes, with one dam of significant size located in the south of the study area.

The study area is likely to have been regularly visited by First Nations people in the past, given its proximity to a wide range of resources, including permanent freshwater, a variety of flora and fauna and excellent views of the surrounding landscape. The study area is located within a major catchment and close to a fifth order river. It is likely to have been visited and traversed during resource gathering activities and for short and long-term camping.

The study area has been subject primarily to land clearing, ploughing and pastoral grazing of cattle and other livestock since European colonisation. These land use activities are likely to have resulted in a moderate impact to First Nations heritage places and sites, such as disruption of site integrity through the scattering of artefacts.

2.4 Aesthetic and Regional Character

This section considers the evidence for First Nations landscape (regional) use of the broader study area. The aim is to highlight the main characteristics of First Nations land use and the material traces it has produced.

In general, the majority of First Nations site locations appear to be around the margins of swamps or creeks, or on flat ridge top landforms, often with an aspect toward the Hunter River or higher order creeks. However, a number of First Nations sites, which are considered significant to the local First Nations community, have been recorded on landforms that do not confirm to this model.

The numerous archaeological sub-surface investigations across the local area have recovered mostly small assemblages of artefacts and have addressed research questions, specifically in terms of assemblage material and tool composition. Overall, all excavated First Nations sites appear to have been created within the last 5000 years (which may be attributed to a general intensification in First Nations occupation of this area). Assemblages are dominated by either silcrete or tuff, which are obtained from local sources (refer to Appendix C). Stone tool types within assemblages have been dominated by the small tools tradition, principally flakes with reduced and retouched backed artefacts.

2.5 Preliminary Archaeological Zoning Plan (AZP)

This section provides a preliminary analysis of landforms within the study area. The allocation of zones with archaeological potential is based upon an understanding of local archaeological excavation results (ie GML 2012 and Dallas 2008); an analysis of historical aerial photographs (1965, 1994 and 2004); an

understanding of soil impacts resultant from land use over the past 150 years; a preliminary site inspection; and patterns of First Nations occupation of this region over the past 20,000 years.

Zones with archaeological potential have been assessed to have a moderate to good level of potential to allow for the recovery of spatially intact archaeological deposits contained within soil horizons that retain their condition and integrity. The study of such deposits may provide new and additional evidence for First Nations occupation within this region and further archaeological and First Nations understanding relating to the local 'pre-colonisation' First Nations economy, demography and society. Some zones have been allocated with archaeological potential because archaeological materials could be present, albeit in deposits with higher levels of impact.

Zones have been allocated with archaeological potential, as shown in Figure 2.13. All other landforms have been allocated a lower level of archaeological potential due to their modal terrain slope and/or historical impacts arising from farming activities. However, the potential exists for a low density distribution of artefacts typically consistent with background discard to be present across the whole study area.

The plan of preliminary archaeological potential will be revised and updated following archaeological survey and again following archaeological test excavation. The evolution of this plan of potential can be used to inform future predictive modelling in this region and provides an illustration of how more detailed archaeological studies (ie desktop to field survey through test excavation) result in new and more detailed understanding of the cultural landscape.

An overview of the types of First Nations sites and/or places and their potential location within the study area's landscape is provided in Table 2.3.

Table 2.3 Types of First Nations Sites that May be Located within the Study Area.

Feature	Description and Potential Location
Stone artefacts	Stone artefact concentrations are collections of stone, frequently brought from other areas, which demonstrate evidence for First Nations working, use and/or discard of the stone at a single location. Stone artefact concentrations may be associated with any of the below site types. Where such sites are buried by sediment they may not be noticeable unless exposed by erosion or disturbed by modern activities. These sites are found in the study area.
Isolated finds	Sites consisting of a single stone artefact, isolated from any other artefacts or archaeological evidence. These are generally indicative of sporadic past First Nations use of a location. A distinction should be drawn between isolated finds which are a component of the background distribution of objects and specialised objects such as axes, hammer stones, grinding dishes etc which would have been used repeatedly and may have been carried from place to place. These sites are found in the study area.
Quarries	These are areas where stone was obtained for flaked artefacts or ground-edge artefacts, or where ochre was obtained for rock paintings, body decoration or decorating wooden artefacts. These sites are found in the study area.
Scarred trees	Scarred trees bear the marks of bark and wood removal for utilisation as canoes, shields, boomerangs or containers. It is commonly very difficult to confidently distinguish between First Nations scars and natural scars or those made by Europeans. Scars may also originate as 'foot-marks', small pockets cut into the bark of a tree enabling the tree to be climbed. These sites may be found in the study area.

Feature	Description and Potential Location
Burial sites	Burial sites may be of isolated individuals, or they may form complex burial grounds. Often associated with other site types such as middens, or mounds. These sites may be found in the study area.
Stone arrangements, carved trees and ceremonial grounds	These site types are often interrelated. Stone arrangements vary from simple cairns or piles of rocks to more elaborate arrangements; patterns of stone laid out to form circles and other designs, or standing slabs of rock held upright by stones around the base. Carved trees may have intricate geometric or linear patterns or representations of animals carved into their trunks. Ceremonial grounds and graves were often marked by such trees. Bora grounds are a common type of ceremonial site and they are generally associated with initiation ceremonies. They comprise two circles, generally edged with low banks of earth but sometimes of stone, a short distance apart and connected by a path. These sites may be found in the study area.

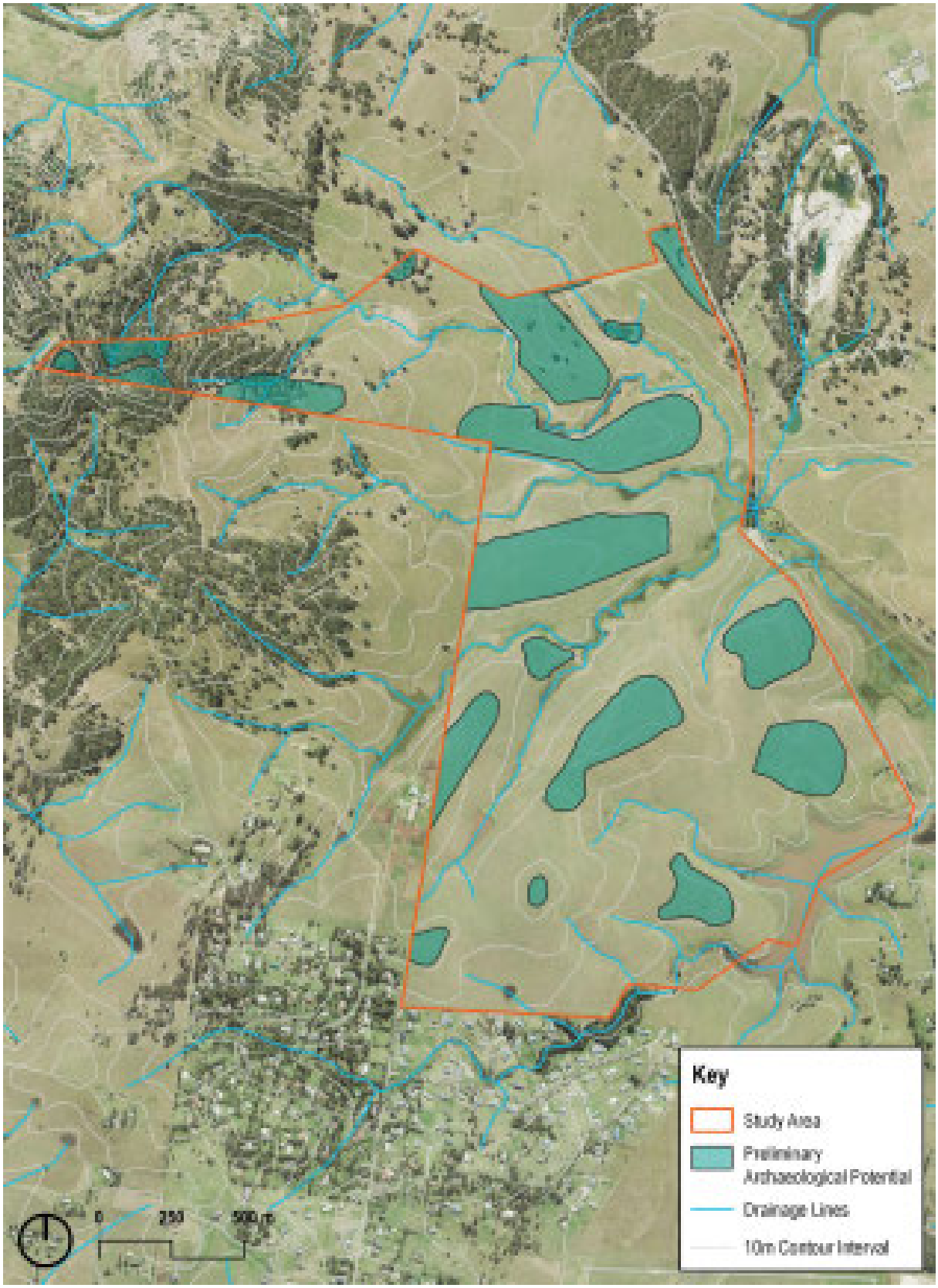


Figure 2.13 Preliminary zones with archaeological potential, based on the desktop assessment. (Source: Google Earth Pro with GML additions 2022)

2.6 Endnotes

[1] Department of Environment, Climate Change and Water, Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, September 2010, pp 20–21.

[2] Ruig, J 1997, Test Excavations on Penn Park, Lochinvar, NSW. Report to Mr L McLeod, "Penn Park, New England Highway, Lochinvar, 2320, NSW.

[3] Dallas, M & R. Kerr 1997, Archaeological Survey of Proposed Subdivision of Rural Land Lot 71, DP 573183, Rutherford, Hunter Valley, NSW. Report to Pulver Cooper & Blackley Pty Limited.

[4] Dallas, M & D Steele 2003a, Aboriginal Archaeological Assessment in support of an Application for a Preliminary Research Permit for NPWS Site #38-4-0611 and Associated Potential Archaeological Deposit (PAD) in Lot 2 DP 812143, Blue Gum Drive, Aberglasslyn, NSW. Report to Conacher Travers Environmental Consultants on behalf of Sunrise Estates Pty Limited.

[5] Dallas, M & D Steele 2003b, Aboriginal Archaeological Assessment Report and Research Design in Support of an Application for a Preliminary Research Permit for an Area of Potential Archaeological Deposit (PAD) in Lot 51 DP 840643, Aberglasslyn Road, Aberglasslyn. Report to Conacher Travers Environmental Consultants on behalf of Sunrise Estates Pty Limited.

[6] Dallas, M 2004, Aboriginal Archaeological Assessment, Lots 80 and 81 in DP 524028, 41 in DP 611238, 11 in DP 1042562 and Portion 2 in DP 160043, Aberglasslyn, NSW. Report to Stockland Development Pty Limited.

[7] Hamm, G 2004, Archaeological Assessment of Lots: 1, 2, 10, 12, Part of 15, 1411 and 1412. Aberglasslyn Road, Aberglasslyn. Report to Andrews Neil Environmental Pty Limited.

[8] Mary Dallas Consulting Archaeologists 2006, Application for a S87 Permit and Accompanying Research Design—Areas of Potentail Archaeological Deposit (AHIMS #38-8-0865 and #38-8-0866) at Aberglasslyn Road, Aberglasslyn, NSW. Application to NSW Department of Environment & Conservation.

[9] McCardle Cultural Heritage Pty Ltd 2007a, Proposed Residential Subdivision by Woodbury Park Estates Pty Ltd, Aberglasslyn—Indigenous Archaeological Assessment. Report to Andrews Neil Pty Ltd.

[10] McCardle Cultural Heritage Pty Ltd 2007b, Proposed Residential Subdivision by Woodbury Park Estates Pty Ltd, Aberglasslyn—S87 Preliminary Research Permit, Archaeological Test Excavation. Report to Andrews Neil Pty Ltd.

[11] Mary Dallas Consulting Archaeologists 2008, Aboriginal Archaeological Excavation—Partial Salvage of AB Campsite 1 (AHIMS #38-8-0866) at Oakhampton Road, Aberglasslyn, NSW. Report to Pulver Cooper Blackley Pty Ltd on behalf of Stockland Developments Pty Ltd.

[12] Hamm, G 2008, Aboriginal Cultural Heritage & Archaeological Assessment for re-zoning Application for Land Identified as: Lot 71, DP: 714785 Anambah Road, Anambah. Report to L & A Wells Property Pty Limited

[13] McCardle Cultural Heritage 2011, Anambah Release Area, LGA: Maitland, Indigenous Archaeological Due Diligence Assessment. Report to ADW Johnson.

[14] Godden Mackay Logan 2012, McKeachies Run Top Soil Stripping, Archaeological Technical Report. Report to Stockland.

[15] Matthei, L E, 1995, *Soil Landscapes of the Newcastle 1:100 000 Sheet,* Department of Land and Water Conservation, Sydney, NSW p 108–111

[16] Matthei, L E, 1995, *Soil Landscapes of the Newcastle 1:100 000 Sheet,* Department of Land and Water Conservation, Sydney, NSW p 108–111

[17] Kovac & Lawrie 1991

[18] Kovac & Lawrie 1991.

3.0 Archaeological Field Methods

The first aim of an archaeological survey is to identify visible evidence of past First Nations occupation within the study area. The second aim is to determine zones that will have buried, subsurface archaeological deposits. When combined, these two objectives allow for the creation of an Archaeological Zoning Plan (AZP) that defines where First Nations evidence is (and will likely be) located across the study area. In addition, consideration should be given to locations within the study area that do not contain physical evidence from First Nations occupation, but which would have been significant for the way that they were used, eg walking tracks, ceremonial areas and Dreaming trails. These should also be recorded, mapped and considered within the framework of assessment and management of First Nations heritage.

It must be noted that practically all archaeological survey is limited by a number of factors, such as ground surface visibility, access restrictions and weather conditions during the period of survey. These will affect the outcome of any survey and introduce biases into the results.

3.1 Survey Sampling Strategy

The study area was surveyed by the study team and First Nations representatives from the 20–23 August 2012. A linear pedestrian survey aimed to assess the whole study area, inspecting all soil exposures and zones with low vegetation that contained tracks and paths. The sampling strategy employed during the survey covered all landforms and areas proposed to be impacted by the development.

When heritage sites were identified, they were recorded by the survey team with a description, GPS location and digital photograph. Notes were made on the soil conditions, evidence of disturbance, and possible extent of the sites and PADs identified. Sites were listed as Isolated Finds (IF), Stone Artefact Concentration (SAC) or quarry sites.

A site visit was held during the report review period so community could refamiliarization with the study area. Field Methods

In accordance with the Heritage NSW guidelines,[1] the description of survey coverage includes landform units, the total area surveyed within that landform unit and a quantification of the level of exposure and visibility. Heritage NSW has defined exposure and visibility thus:

> *Visibility is the amount of bare ground (or visibility) on the exposures which might reveal artefacts or other archaeological materials. It is important to note that visibility, on its own, is not a reliable indicator of the detectability of buried archaeological material. Things like vegetation, plant or leaf litter, loose sand, stony ground or introduced materials will affect the visibility. Put another way, visibility refers to 'what conceals'.*
>
> *Exposure is different to visibility because it estimates the area with a likelihood of revealing buried artefacts or deposits rather than just being an observation of the amount of bare ground. It is the percentage of land for which erosion and exposure was sufficient to reveal archaeological evidence on the surface of the ground. Put another way, exposure refers to 'what reveals'.*[2]

The calculation of effective coverage provides a means with which to describe the proportion of the study area in which it is possible to assess the presence or absence of archaeological material. This measure is expressed as a percentage and can be calculated using a number of different techniques. For this study, effective coverage was calculated by multiplying the area surveyed by the percentage of exposure and visibility within the survey unit. The area of effective coverage was then expressed as a percentage of the whole survey unit.

3.1.1 Archaeological Potential

Sites are formed through a complex combination of scientific factors, such as bioturbation, and environmental factors, such as erosion or burial through soil movement. Once discarded on the ground surface, artefacts are often readily incorporated into the topsoil horizons through the process of bioturbation. Most commonly, dense artefact deposits exist hidden beneath the upper surface, imperceptible to the casual observer (cf Wandsnider and Camilli 1992;[3] Fanning and Holdaway 2001).[4] Archaeological assessments that do not employ appropriate methods of subsurface detection or prediction cannot reliably define an area's archaeological content. Most frequently, the eroded component of a larger subsurface deposit is detected and recorded as a site. Where soils are sandy, artefacts can occur at greater depths and erosion may frequently expose artefacts. Therefore, it is crucial that the soils, sands and geomorphology of an area are defined in an archaeological assessment and the archaeological implications defined. An understanding of these factors, linked further to the notions of site integrity and condition, yields an understanding of an area or site's archaeological potential.

It is important to note that the level of archaeological potential relates to the likelihood of discovering a First Nations object within a location. Further description should then be made as to the potential condition and integrity of the soil matrix and potential site itself. Only once all these factors have been considered can scientific value start to be assessed for an area with potential. Therefore, though scientific value and potential are linked, it must be noted that these values and potentials are not the same and can differ substantially for any single site or area with potential.

Areas with archaeological potential have been identified according to the definitions in Table 3.1.

Table 3.1 Definitions of Archaeological Potential.

Rank	Definition	Example
No potential	Artefacts cannot occur in situ.	Eroded landforms, reconstructed landscapes, hazardous landscape, developed areas.
Low potential	Artefacts are not normally found in comparable contexts but could occur in low densities, making detection unlikely.	Landforms with no specific focus for use, ie with water sources or undifferentiated slopes.
Moderate potential	Artefacts are known to occur in comparable landforms in detectable densities (~1artefact/m2) and there is an unknown possibility for detection.	Landforms with an environmental focus which may have seen seasonal visitation.
High potential	Artefacts are consistently found in comparable landforms or similar environmental contexts and thus will almost certainly be found in any groundbreaking works.	Landforms with known environmental focus encouraging repeat visitation to specific locales, ie on the margins of swamps or near high order creeks.

3.2 Survey Results—Survey Units and Landforms

In accordance with Heritage NSW recording requirements, the study area was surveyed according to survey units, landforms and landscapes. All survey units are described in Table 3.2 and shown in Figure 3.1. Details with respect to landform coverage are provided in Table 3.3.

Table 3.2 Survey Coverage.

Survey Unit (SU)	Landform	Survey unit area (SUA) (sq m)	Visibility (V) %	Exposure (E) %	Effective coverage area (ECA) (sq m) (=SUA* V%*E%)	Effective coverage % (=ECA/SUA *100)
1	Slope	7,759	5%	10%	39	0.50
2	Hilltop	1,564	5%	10%	8	0.50
3	Slope	13,369	5%	10%	67	0.50
4	Ridge	4,807	5%	10%	24	0.50
5	Slope	3,781	5%	10%	19	0.50
6	Open Depression	19,617	100%	100%	19617	100.00
7	Slope	3,506	5%	10%	18	0.50
8	Hilltop	1,423	5%	10%	7	0.50
9	Slope	17,285	5%	10%	86	0.50
10	Open Depression	44,659	50%	100%	22329	50.00
11	Upper Flat	16,839	5%	10%	84	0.50
12	Ridge	4,216	5%	10%	21	0.50
13	Slope	23,087	5%	10%	115	0.50
14	Slope	5,454	5%	10%	27	0.50
15	Hilltop	5,915	5%	10%	30	0.50
16	Slope	3,139	5%	10%	16	0.50
17	Saddle	5,042	5%	10%	25	0.50
18	Slope	4,565	5%	10%	23	0.50
19	Hilltop	3,619	5%	10%	18	0.50
20	Slope	6,866	5%	10%	34	0.50
21	Open Depression	6,643	10%	100%	664	10.00
22	Open Depression	25,600	5%	10%	128	0.50
23	Slope	26,049	5%	10%	130	0.50
24	Ridge	11,167	5%	10%	56	0.50
25	Slope	8,804	5%	10%	44	0.50
26	Open Depression	8,152	100%	100%	8152	100.00
27	Ridge	20,321	5%	10%	102	0.50
28	Slope	9,363	5%	10%	47	0.50
29	Ridge	12,546	5%	10%	63	0.50
30	Ridge	8,023	5%	10%	40	0.50
31	Upper Flat	2,190	5%	10%	11	0.50
32	Slope	7,130	5%	10%	36	0.50
33	Hilltop	8,194	5%	10%	41	0.50

Survey Unit (SU)	Landform	Survey unit area (SUA) (sq m)	Visibility (V) %	Exposure (E) %	Effective coverage area (ECA) (sq m) (=SUA* V%*E%)	Effective coverage % (=ECA/SUA *100)
34	Slope	3,482	5%	10%	17	0.50
35	Saddle	4,513	5%	10%	23	0.50
36	Slope	10,325	50%	90%	4646	45.00
37	Flat	4,419	20%	90%	795	18.00
38	Open Depression	4,400	5%	10%	22	0.50
39	Slope	5,329	5%	10%	27	0.50
40	Hilltop	3,260	5%	10%	16	0.50
41	Slope	20,849	5%	10%	104	0.50
42	Slope	22,400	5%	10%	112	0.50
43	Slope	13,840	5%	10%	69	0.50
44	Slope	8,960	5%	10%	45	0.50
45	Flat	6,460	5%	10%	32	0.50
46	Slope	23,720	5%	10%	119	0.50
47	Upper Flat	10,851	5%	10%	54	0.50
48	Open Depression	7,444	5%	10%	37	0.50
49	Slope	6,138	5%	10%	31	0.50
50	Ridge	5,210	5%	10%	26	0.50
51	Slope	5,008	5%	10%	25	0.50
52	Slope	54,632	20%	100%	10926	20.00
53	Open Depression	54,632	20%	100%	10926	20.00
54	Slope	60,152	20%	100%	12030	20.00
55	Slope	34,115	5%	10%	171	0.50
56	Slope	5,549	5%	10%	28	0.50
57	Slope	2,436	5%	10%	12	0.50
58	Hilltop	7,612	5%	10%	38	0.50
59	Slope	31,415	5%	10%	157	0.50
60	Slope	30,667	5%	10%	153	0.50
61	Slope	12,870	5%	10%	64	0.50
62	Slope	35,104	5%	10%	176	0.50
63	Flat	10,395	5%	10%	52	0.50
64	Open Depression	34,188	5%	10%	171	0.50
65	Slope	10,921	5%	10%	55	0.50
66	Upper Flat	3,262	5%	10%	16	0.50
67	Slope	15,094	5%	10%	75	0.50

Survey Unit (SU)	Landform	Survey unit area (SUA) (sq m)	Visibility (V) %	Exposure (E) %	Effective coverage area (ECA) (sq m) (=SUA* V%*E%)	Effective coverage % (=ECA/SUA *100)
68	Slope	8,715	5%	10%	44	0.50
69	Slope	20,639	10%	50%	1032	5.00
70	Hilltop	2,842	5%	10%	14	0.50
71	Slope	9,658	5%	10%	48	0.50
72	Slope	11,786	100%	100%	11786	100.00
73	Open Depression	1,673	40%	90%	602	36.00
74	Slope	51,833	20%	80%	8293	16.00
75	Open Depression	51,837	20%	100%	10367	20.00
76	Slope	11,435	30%	70%	2401	21.00
77	Flat	15,993	30%	70%	3359	21.00
78	Slope	45,553	30%	70%	9566	21.00
79	Slope	7,425	5%	10%	37	0.50
80	Slope	22,498	5%	10%	112	0.50
81	Slope	2,178	5%	10%	11	0.50
82	Hilltop	1,438	75%	90%	970	67.50
83	Slope	1,473	5%	10%	7	0.50
84	Open Depression	1,845	5%	10%	9	0.50
85	Flat	3,975	5%	10%	20	0.50
86	Slope	1,219	10%	10%	12	1.00
87	Hilltop	509	10%	10%	5	1.00
88	Slope	2,005	10%	50%	100	5.00
89	Flat	1,400	10%	10%	14	1.00

Table 3.3 Landform summary—Sampled Areas.

Landform	Landform Area (LA) (m^2)	ECA	% Landform Effectively Surveyed (=ECA/LA *100)	Number of First Nations Sites Located in Survey	Number of Artefacts or Features Located in Survey
Open Depression	260,691	73,027	28.0		1 IF
Flat	42,642	4,272	10.0	8 PADs	2 SAC
Upper Flat	33,141	166	0.5	4 PADs	1 IF
Slope	749,581	63,194	8.4	10 PADs	10 SAC, 6 IF, 1 quarry (~217 objects)
Hilltop	36,376	1,148	3.2	6 PADs	1 IF
Ridge	66,291	331	0.5		
Saddle	9,554	48	0.5		
Total				28 PADs	1 quarry, 9 IF, 12 SAC

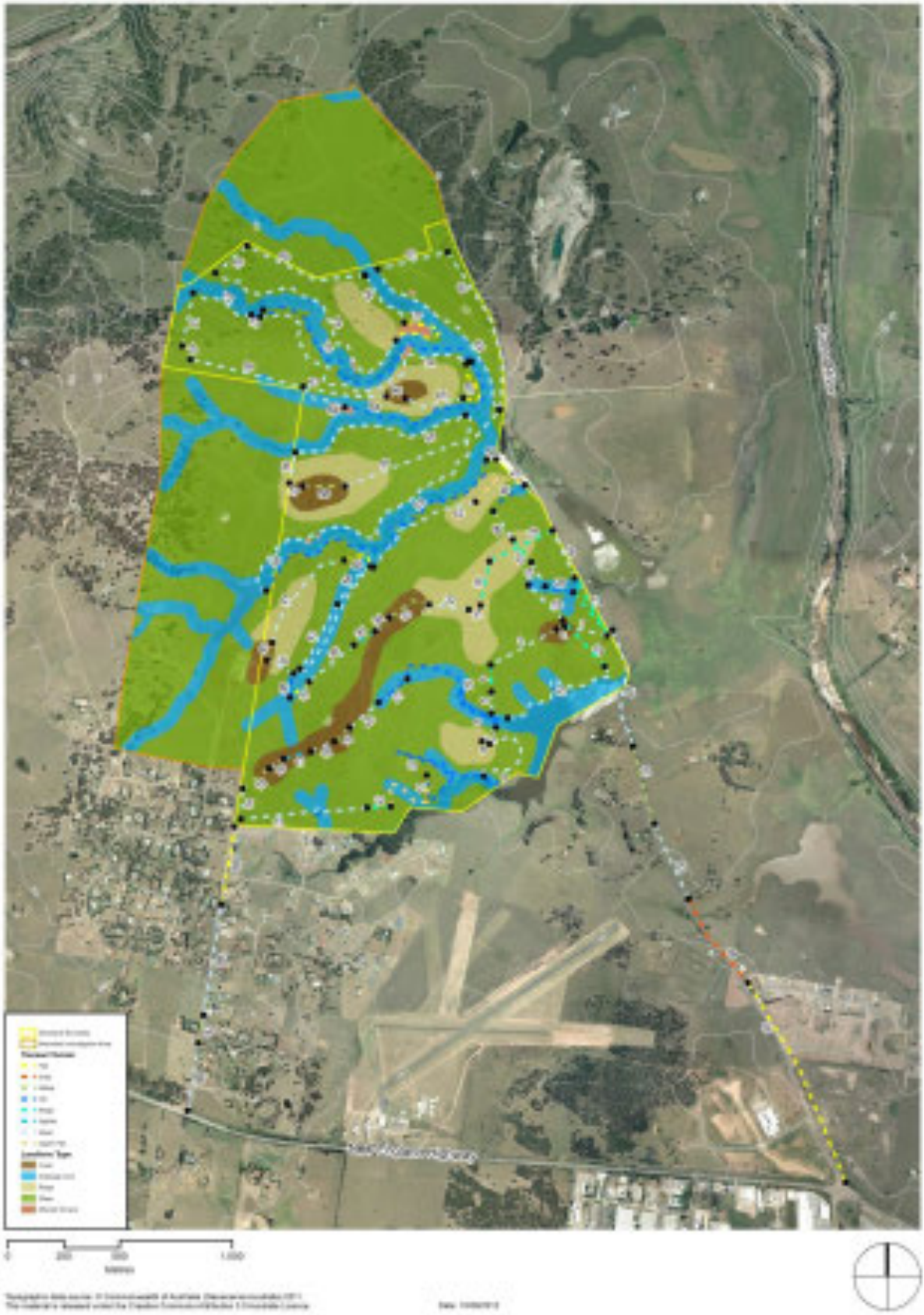


Figure 3.1 Landforms, survey transects and alluvial terraces. (Source: GML, 2012)

3.3 Survey Results—First Nations Sites and Areas of PAD

The archaeological survey identified a total of 21 First Nations sites and 28 areas with PAD. An overview of these sites and areas of PAD are provided in Table 3.4. The locations of all recorded sites and PADs are shown in Figure 3.2.

Table 3.4 First Nations heritage sites and areas with PAD recorded during the survey.

Site Name	Features and Archaeological Potential	SU	Landform
IF 1	Red glossy silcrete flake located within animal erosion at the edge of the large dam. No archaeological potential.	23	Slope
IF 2	Possible core of silicious conglomerate material with small quartz particles. Located within the eroded bank of a dammed second order creek. No archaeological potential.	46	Slope
IF 3 & PAD 12	Brown-grey mudstone/tuff broken flake in erosion on the southern bank of a creek. PAD 12 is on an elevated flat adjacent to the creek. 36m (N–S) by 38m (E–W). 5m to third order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate potential.	47	Upper Flat
IF 4 & PAD 15	Silcrete (heat treated) flake in erosion scars adjacent to the creek. PAD 15 covers two elevated flats on the lower slope within the open depression of the creek. It is *possible* that alluvium is present on these flats. 16m (N–S) by 21m (E–W) and 25 (N-S) by 30m (E-W). 5m to second order creek. The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	54	Slope
IF 5 & PAD 16	Large silcrete core on a large flat hilltop. PAD 16 is on a large flat hilltop and slope to the east, with 270 degree views. 65m (N–S) by 320m (E–W). 150m to second order creek (N) and 165m to first order creek (S). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	58 and 59	Hilltop and slope
IF 6	Very fine dark brown/ red chert blade in erosion scar, 20m from second order creek (S). No archaeological potential.	62	Slope
IF 7 & PAD 18	One possible flake of red silcrete with some conglomeration on highly impacted edge of lower slope adjacent to a dam. PAD 18 is on an elevated flat above a dam. Soil has a high percentage of alluvial material containing some manuported quartzite, silcrete and gravel. 25m (N–S) by 25m (E–W). 30m to second order creek (S). Low to moderate potential.	62	Slope
IF 8 & PAD 23	Pale yellow silcrete flake on heavily eroded bank. PAD 23 is on a raised flat adjacent to the creek. 28m (N–S) by 26m (E–W). 35m to third order creek (NE). Low potential.	75	Open Depression
IF 9	One silcrete flake on the bank of a dam. No archaeological potential.	79	Slope

Site Name	Features and Archaeological Potential	SU	Landform
SAC 1 & PAD 21	Artefacts at three locations within erosion on the margins of the creek bank, which have alluvium present. Fourteen artefacts, six of silcrete, including a core, three of tuff, including a core and five of mudstone (indurated tuff) were identified (Figure 3.3). PAD 21 is on a low flat alluvial terrace above the creek. Fine sandy soil with a lot of small gravels approximately 300mm deep overlying yellow clay. 25m (N–S) by 112m (E–W). 20m to a second order creek (N) and 50m to second order creek (S). The eastern end of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. High potential.	68	Slope
SAC 2	One pink silcrete core with negative scar and one grey indurated tuff with negative scar. No archaeological potential.	69	Slope
SAC 3	This site was located outside the 2012 study area and will not be impacted by development. At the request of the First Nations community all details relating to this site have been withheld.	Outside 2012 study area.	Slope
SAC 4 & PAD 22	One yellow/ brown chert flake with possible backing, one yellow mudstone flake and one yellow silcrete flake on eroded bank of creek. PAD 22/ SAC 4 is on the highly eroded sloped bank of a dam, and a flat area to the south. 35m (N–S) by 25m (E–W). 17m to first order creek (N). Low potential on the slope, low to moderate potential on flat area to the south.	72	Slope
SAC 5 & PAD 20	30+ artefacts in one exposure and 15+ artefacts in a second exposure—primarily silcrete with some mudstone. The SAC 5 is on the north side of PAD 20 in the eroded creek bank (Figure 3.4). PAD 20 is on an elevated flat above the creek. 55m (N–S) by 256m (E–W). 20m to third order creek (N). The eastern half of the PAD has been ploughed and cropped within the last 10 years, and thus has some reduced integrity. Moderate to high potential, depending on proximity to the creek.	67	Slope
SAC 6 & PAD 24	Twenty-four silcrete (mostly light red silcrete) and tuff artefacts, one quartz artefact eroding from the edge of the creek bank (Figure 3.5). PAD 24 in on a low flat adjacent to the creek, which possesses alluvial soil and has the potential for stratified deposits. 65m (N–S) by 20m (E–W). 3m to a third order creek (N/ NW). High potential.	74	Slope
SAC 7 & PAD 19	The Quarry Site, with large cobbles of silcrete, a large number of flakes removed for further reduction, flaked primary reduction flakes, but no smaller tools. Located in an exposure on the margin of the creek overlooking the major confluence. The steep bank has been highly eroded but at the top, where the classic brown A horizon is present, the high incidence of raw material appears to have been worked (Figure 3.6). PAD 19 is on a hill slope overlooking the creek immediately north and the major confluence of creeks to the east. 16m (N–S) by 140m (E–W). 5m to third order creek (N) and 50m to creek confluence (E). High to low potential, depending upon the landscape position and extent of ploughing impact.	74	Slope

Site Name	Features and Archaeological Potential	SU	Landform
SAC 8 & PAD 28	Large number of artefacts in three exposures along the banks of the creek. Exposure one contained four silcrete artefacts, exposure two contained 50+ objects, primarily of yellow silcrete and one mudstone, and 20+ objects were found in the third exposure. PAD 28 is on a low flat landform overlooking a steep eroded slope to the creek, with alluvium present. 48m (N–S) by 142m (E–W). 12m to third order creek (S) and 50m to second order creek (N). Moderate potential.	77	Flat
SAC 9 & PAD 25	30+ artefacts in two exposures in the creek bank. PAD 25 is on a low flat landform above the creek. Soil is alluvial with a high stone (gravel) content. 55m (N–S) by 16m (E–W). 10m to third order creek (S). Moderate to high potential.	78	Slope
SAC 10 & PAD 26	Two silcrete artefacts in heavy erosion on the creek bank, which has been terraced. PAD 26 is on a very slight sloped landform overlooking the creek. 14m (N–S) by 44m (E–W). 8m to third order creek (S). Moderate to low potential.	78	Slope
SAC 11 & PAD 27	10 silcrete artefacts along highly eroded bank. PAD27 is on a slightly sloped landform overlooking the creek. 100m (N–S) by 25m (E–W). 10m to third order creek (S). Low potential.	78/ 79	Slope
SAC 12	Four mudstone flakes within urban landscaped bank (disturbed). No archaeological potential.	89	Flat
PAD 1	Low flat hilltop with views in all directions, especially to the low surrounding water courses. 90m (N–S) by 65m (E–W). 210m to major water course (S) and 140m to second order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	2	Hilltop
SAC 18 & PAD 2	On the break of a slope, creating a small flat landform. Good views to the SE. 50m (N–S) by 60m (E–W). 150m to a second order creek (SE) and 110m to another second order creek (W). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	4	Raised flat
SAC 19 & PAD 3	On a middle hill slope where an elevated flat creates a good outlook to the south. 90m (N–S) by 90m (E–W). 80m to a second order creek (S). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Low to moderate potential.	8	Low hilltop
SAC 20 & PAD 4	Small raised flat on the slope, above the creek (now dammed). Good views to the south, sheltered from northerly wind, and receives the early morning sun. 70m (N–S) by 70m (E–W). 45m to a second order creek (E). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	9	Raised flat
SAC 21 & PAD 5	Small raised flat on a slope, between two second order creeks. Localised views to the south. 40m (N–S) by 80m (E–W). 60m to a second order creek (SE), 40m to second order creek (N), 70m to a second order creek (SW). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	11	Raised flat

Site Name	Features and Archaeological Potential	SU	Landform
PAD 6	Flat section at the end of a ridge overlooking a creek. 60m (N–S) by 65m (E–W). 45m to a second order creek (S). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Low potential due to the slight slope of the land. The area is suitable for infrequent First Nations activities which may have resulted in an archaeological signature.	12	Raised flat at the end of a ridge
PAD 7	Flat on the third highest hilltop within the study area. Good views to all directions, including Mount Sugar Loaf, and other sensitive landscapes (as described by the First Nations community). 50m (N–S) by 45m (E–W). 285m to a second order creek (S). Moderate to low potential; due to distance from water sources.	15	Hilltop
PAD 8	Flat on the second highest hilltop within the study area. Good views to all directions, including Mount Sugar Loaf, and other sensitive landscapes (as described by the First Nations community). 80m (N–S) by 55m (E–W). 120m to first order creek (S) and 250m to second order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential; close to ephemeral water sources and other prominent landforms with archaeological potential. The landform may have been suitable for occupation by larger numbers of First Nations people at a time.	19	Hilltop
PAD 9	Small flat areas on the northeast slope of the second largest hill in the study area. 40m (N–S) by 20m (E–W). 120m to first order creek (S) and 250m to second order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential. The landform is located near to PAD 8, which may have been suitable for occupation by larger numbers of First Nations people at a time.	20	Raised flat on a slope
PAD 10	Large flat hilltop and the commencement of the upper slope to the west. 40m (N–S) by 80m (E–W). 200m to second order creek (N) and 120m to a first order creek (S). The hilltop has commanding views of the study area and local area. The hilltop contains stone outcrop D (siltstone), which appears to have been quarried for historical purposes. The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	33 and 34	Hilltop and slope
PAD 11	Raised flat at the junction of two second order creeks. 45m (N–S) by 90m (E–W). A large dam has been constructed adjacent to the PAD and may have impacted the condition and integrity of the PAD. The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Low potential due to possible disturbance.	45	Raised flat
PAD 12	See IF 3.	47	Raised flat
PAD 13	Wide raised flat landform overlooking a large creek system. 45m (N–S) by 110m (E–W). 45m to a third order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	47	Raised flat
IF 11 & PAD 14	Raised flat landform overlooking a large wide creek. 32m (N–S) by 42m (E–W). 20m to a third order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Low to moderate potential.	52	Slope (creek bank)
PAD 15	See IF 4.		
PAD 16	See IF 5.		

Site Name	Features and Archaeological Potential	SU	Landform
IF 12 & PAD 17	Small raised flat on the slope of a hilltop overlooking the confluence of three creeks. 60m (N–S) by 35m (E–W). 50m to a third order creek (S) and 175m to a second order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	54	Slope
PAD 18	See IF 7.		
PAD 19	See SAC 7.		
PAD 20	See SAC 5.		
PAD 21	See SAC 1.		
PAD 22	See SAC 4.		
PAD 23	See IF 8.		
PAD 24	See SAC 6.		
PAD 25	See SAC 9.		
PAD 26	See SAC 10.		
PAD 27	See SAC 11.		
PAD 28	See SAC 8.		

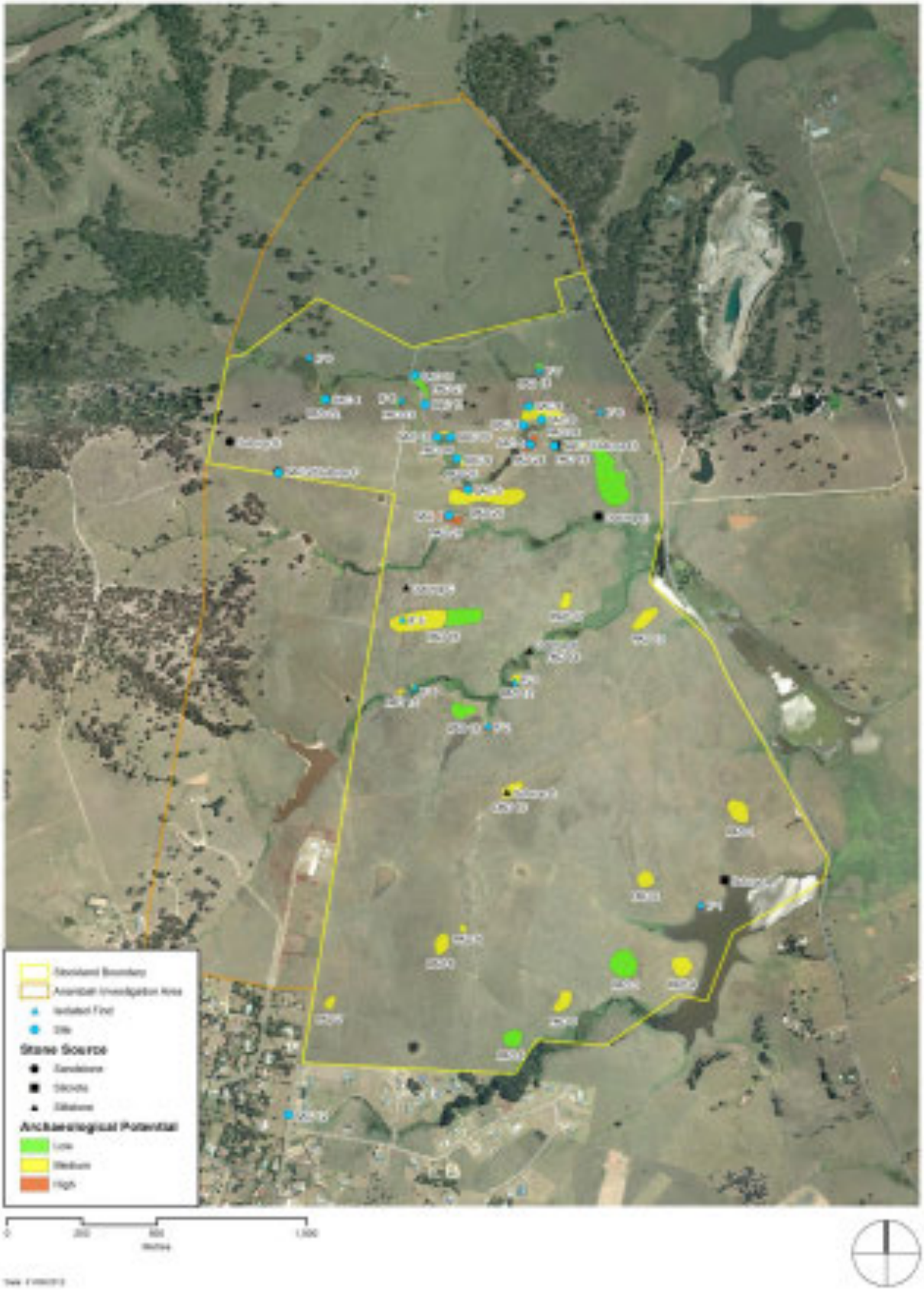


Figure 3.2 First Nations sites, PADs and sources (outcrops) of stone materials. The assessment of archaeological potential was assigned during the survey and consequentially revised following archaeological testing in 2012. (Source: GML 2012 over Google Earth Aerial)

Figure 3.3 SAC 1 and PAD 21. PAD area extends along the flat raised terrace. First Nations representatives are sat on the second soil exposure, where stone objects with alluvial soil are present. (Source: GML 2012.)

Figure 3.4 SAC 5 and PAD 20. Exposures on the edge of the raised flat landform contain First Nations objects. An area of high potential is located adjacent to the top of this open depression. (Source: GML 2012)

Figure 3.5 SAC 6 and PAD 24. Exposure provides evidence for alluvium and First Nations objects. Area of PAD extends towards the fence line, an area which is thought not to have been ploughed. (Source: GML 2012)

Figure 3.6 SAC 7 and PAD 19. Exposure with silcrete cobbles is positioned where the recorders are stood. PAD area extends from this bank to the raised flat above the creek. (Source: GML 2012)

3.4 Survey Results—First Nations Landscape Use

3.4.1 Hill–Slope Shade Analysis

A GIS-based hill-slope shade analysis was undertaken for the Anambah study area. This analysis compared landforms at noon in mid–summer and mid–winter (Figure 3.7 and Figure 3.8), resulting in a pattern of shade intensity. An initial observation is that the study area's winter and summer sun vary greatly in intensity—as is common and would be expected, the summer sun has a minimum strength equalling the strongest winter sun (a fact obviously demonstrated by seasonal differences in temperature).

An assessment of the locations where First Nations sites were recorded during the survey indicates that most stone artefact sites were located on landforms that receive a lot of winter sun (but not the full sun) and a lower amount of summer sun—most were on moderately sunny north-facing slopes. However, some of the sites were on landforms that were in the maximum shade during both summer and winter. No sites were located on a landform that received full sun year-round and only a few sites were located on south-facing landforms.

This suggests that the study area was used year-round by First Nations people, although it is possible more landforms (ie a wider range) were used for occupation activities during the summer months than in the winter. It is hypothesised that specific landforms were selected for seasonal use, where clan groups returned to the same landform 'position' each year for an extended period of time. Such landform selection could have resulted in a distinct archaeological signature in discrete locations where pockets of archaeological evidence may be recovered, spatially separate from other archaeological evidence.

The archaeological accumulation of materials resulting from occupation activities may be present in sufficient quantities to draw inference on landscape use and infer intra-site archaeological patterning. The outcomes from the field survey suggested that the lower lying creek systems in the northern third of the study area were preferred locations for First Nations activities (these landforms are distinct to the higher hills in the centre and south of the study area). Should sufficient archaeological materials be present, then it may be possible to describe these areas as First Nations landscape and commence inferring First Nations economic and social use of this space.

Archaeological patterning to support theories may be discernible through archaeological excavation (as was observed in recent excavations in Sydney[5] and Marulan[6], NSW). However, any interpretation should be tempered by interpretations of data across both 'space' and 'time'.[7]

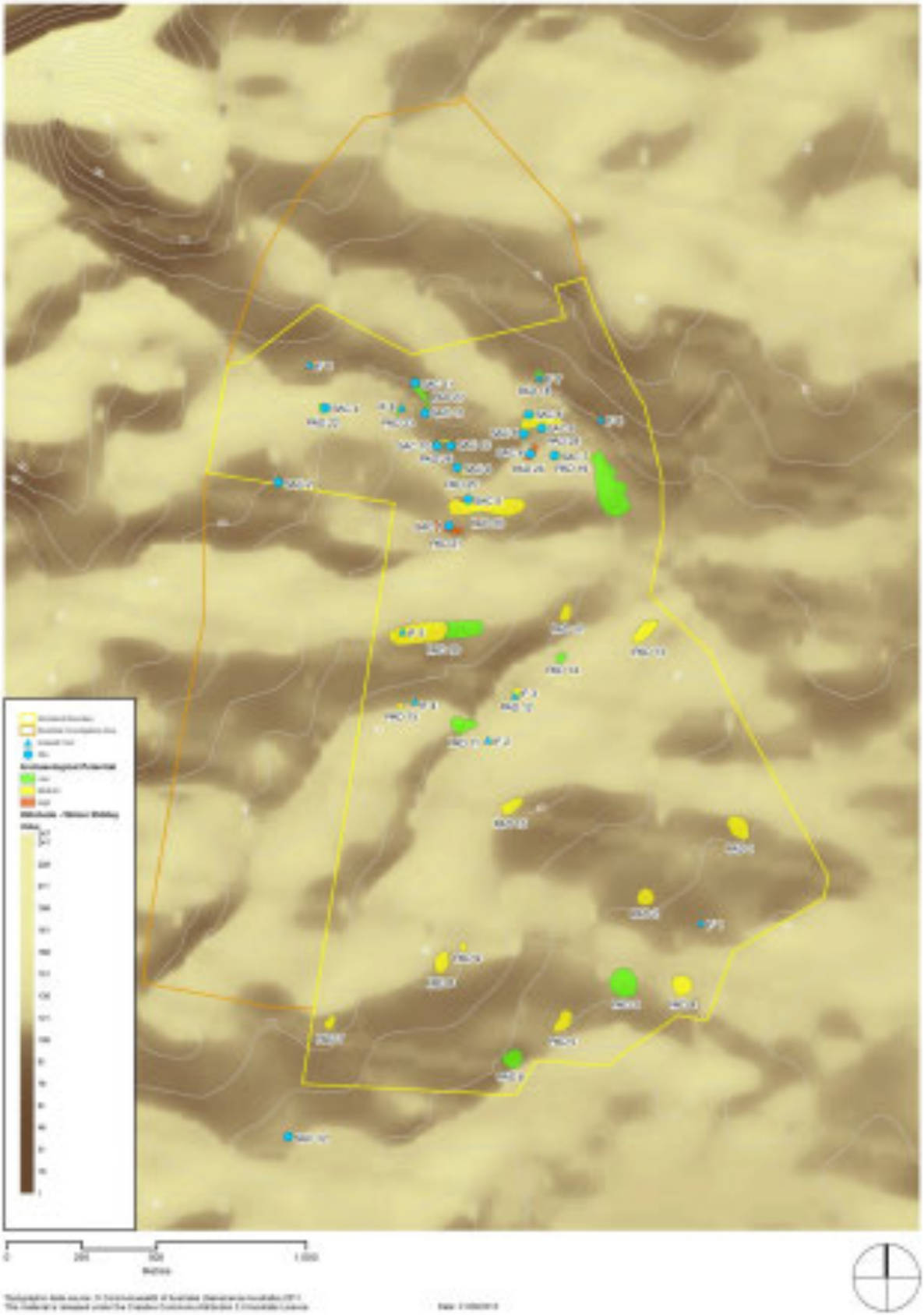


Figure 3.7 Hill–slope shade analysis—midday winter, with archaeological sites. (Source: GML 2012)

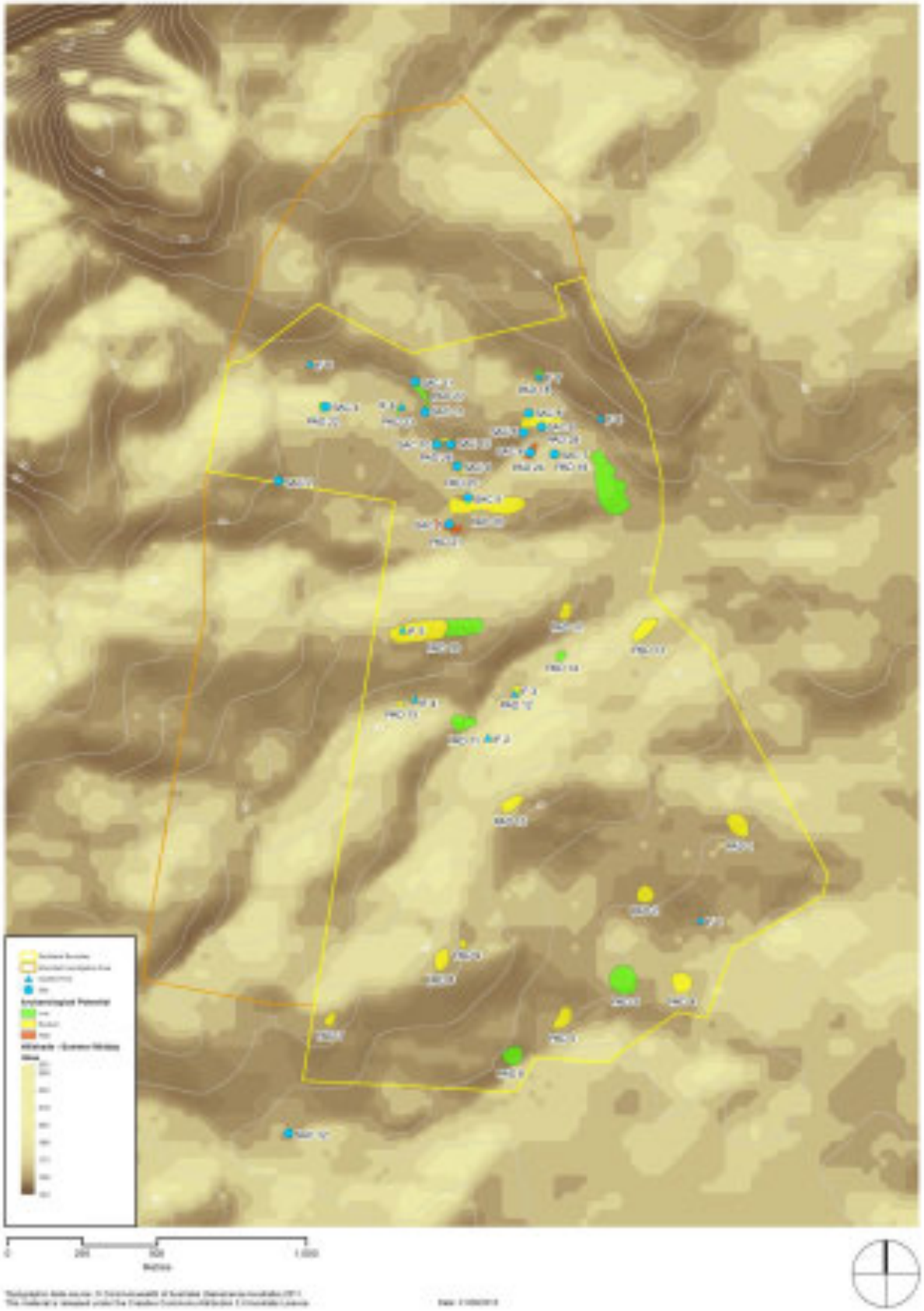


Figure 3.8 Hill–slope shade analysis—midday summer, with archaeological sites. (Source: GML 2012)

3.4.2 Key Viewing Locations

Views can indicate locations that were important for First Nations people. Views to distant locations (and significant sites or landforms), as well as those which provided a vantage point from which to observe territory—for the purpose of watching other First Nations clans/groups or hunting game—were likely to have been significant. Localised views are more likely to have contributed to the planning and 'layout' of First Nations encampments, where social laws defined where families were allowed to 'camp'.[8]

A number of First Nations economic strategies that were discussed during the field survey with First Nations representatives may have depended on the use of specific landscapes within the study area.

Obviously, more recent vegetation regimes (farming) and construction of features such as dams have altered views that once existed or do not exist, but there are four viewing locations likely to have remained relatively unchanged since First Nations occupation of the Anambah study area (Figure 3.9). Each is located on a high point and provides both localised views to locations that contain archaeological sites (within the study area) and distant views to ranges and landforms.

- View point 1 (Figure 3.10) is located in the northeast corner, with a view on to the northern three creek systems where there the greatest density of stone artefact sites were recorded. From this view point, the hilltops on which viewpoints 2 and 3 are located can be seen.
- View point 2 (Figure 3.11) is positioned on the hilltop in the northwest of the study area. This is the highest hilltop and provides localised views into the northern third of the study area and distant views to the Hunter River.
- View point 3 (Figure 3.12) provides a vantage location from which PAD 7, PAD 8, PAD 9 and PAD 10 can be seen. Some distant views towards the Hunter River are also available from this location.
- View point 4 (Figure 3.13 and Figure 3.14) is located on the highest hill in the southwest corner of the study area. From here, views extend to the north east across low hills, the fourth order creek to the mountains beyond, and to the south across the valley to Mount Sugarloaf.

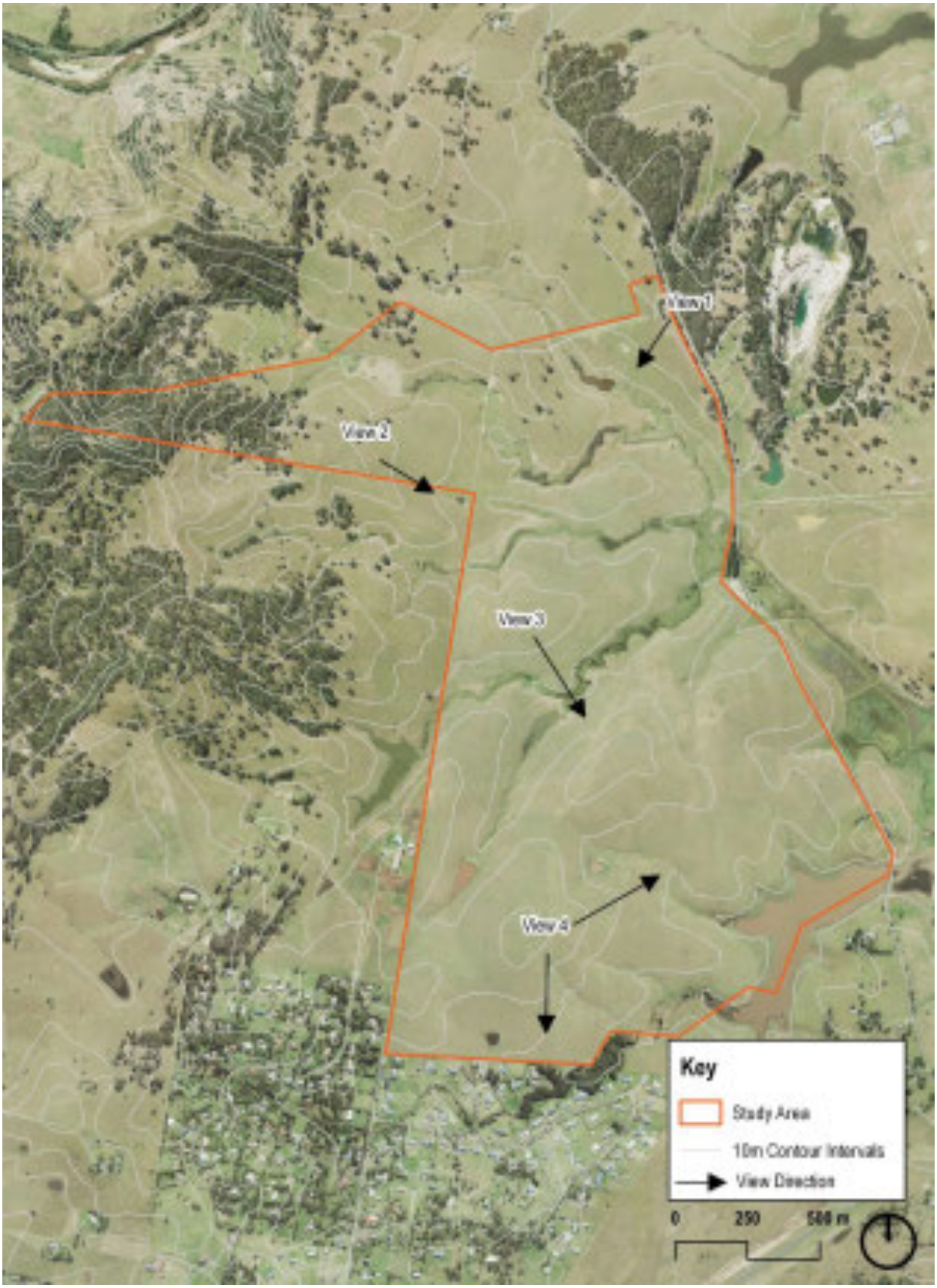


Figure 3.9 The four main view points within the study area. (Source: SIX Maps 2016, with GML additions 2022)

Figure 3.10 View point 1, southwest. (Source: GML 2012)

Figure 3.11 View point 2, looking south east, across the study area. (Source: GML 2012)

Figure 3.12 View point 3, looking south. The hilltops which contain PAD 7, PAD 8, PAD 9 and PAD 10 can all be seen from this location (PAD 16). (Source: GML 2012)

Figure 3.13 View point 4, looking south, towards Mount Sugarloaf. (Source: GML 2012)

Figure 3.14 View point 4, looking east, across the southern third of the study area and the Hunter River, with the mountain range in the distance. (Source: GML 2012)

3.5 Survey Results—Other Aspects

3.5.1 Sources of Raw Stone Materials

Stone artefacts in the Maitland area are predominantly made of silcrete, augmented by silicified tuff—with smaller numbers made of silicified wood, quartz, quartzite and igneous stone (Baker 1997; GML 2012:30–31; Kuskie 2008a:48; MDCA 2008; Reeves and Coulter 2006:14,17). Lithic raw material sources could potentially have occurred:

- in the local area as bed rock;
- in distant outcrops transported into the local area by streams—the Hunter River gravels include rocks from diverse geological formations to the north, west and southwest. Wallis Creek could potentially include rocks from diverse geological formations to the south; and
- in distant outcrops transported to the study area by people during visits or as a result of trade/exchange.

Eight stone outcrops were identified during the field survey (Table 3.5 and Figure 3.2). Seven of the eight outcrops did not contain workable material, one possibly did, but the pebbles were relatively small and the last contained workable material. These outcrops include three siltstone, two sandstone one unworked conglomerate siliceous material on a creek edge and one small red silcrete exposure. The only quality, workable material is the silcrete outcrop on a slope adjacent to PAD19/SAC7—the Quarry Site, which displays evidence of primary reduction by First Nations people. Figure 3.2 displays the locations of these raw stone sources. Of the artefacts found across the site, the majority were made

from silcrete, a stone material found on site and near to many of the SACs. The next most common material was mudstone, followed by chert/tuff.

Beth White has undertaken a preliminary study to identify stone resources of potential use to First Nations people in the Maitland area, considering both locally available resources and non-local resources which could have been obtained through exchange or trade with neighbouring clan groups. The study was based on desktop research with a brief field visit to the Maitland area, and focussed on lithic raw materials known to have been used for artefact production. The stone resources report is available in Appendix C.

Table 3.5 Stone Outcrops Recorded during the Survey.

Outcrop	Location	Description
A	Eroded bank of southern dam	At the edge of the water, buried approximately 200mm below the surface. Small pockets of alluvial gravel with small red-silcrete pebbles. First exposure extends 1.5m along the bank, the second (5m from the first) measures 500mm and the exposure has a depth of around 300mm. This material would possibly have been suitable for stone artefact manufacture, although the pebbles were relatively small.
B	Creek bank	Outcrop of poor quality siltstone—highly shattered, highly fragmented with no signs of use. Unsuitable for stone artefact manufacture.
C	Slope	Siltstone, poor quality outcrop on the side of a slope. Unsuitable for stone artefact manufacture.
D	Flat/very slight slope on hilltop	Outcrop of poor quality siltstone within the boundaries of PAD 10. Unsuitable for stone artefact manufacture.
E	Creek edge	Pocket of large unworked conglomerate siliceous material (silcrete cobbles). Occurs over an area of 30m from the top of the flat, down to the creek edge. Stone from this exposure appears to have been worked at SAC 7, adjacent to PAD 19 (the Quarry Site).
F	Hill top	Outcrop of very granular sandstone. Does not appear to have been used for grinding stone objects.
G	Hill top	Outcrop of sandstone on high hilltop associated with skeletal soils. Does not appear to have been used for grinding stone objects.
H	Slope	Outcrop of quality, workable silcrete at SAC 7, adjacent to PAD 19 (the Quarry Site) (Figure 3.15).

Figure 3.15 Silcrete cobbles from the Quarry Site (PAD 19, SAC 7) with evidence of possible heat treatment and primary reduction. (Source: GML 2012)

Figure 3.16 Alluvial deposit (foreground only) located within an erosional scour in SAC 8. (Source: GML 2012)

Figure 3.17 SAC 8—duplex soils on the left exposure, alluvial soils on the right exposure. (Source: GML 2012)

3.5.2 Alluvial Terraces

Alluvial terraces have been associated with the following First Nations sites and PADs: IF 4/PAD 15, IF 7/PAD 18, SAC 1/PAD 21, SAC 6/PAD 24, SAC 8/PAD 28 and SAC 9/PAD 25. Information on the alluvial material at each site is presented in Table 3.6.

Following the regional soil landscape mapping (Section 2.2.3, Figure 2.6), all of the locations with recorded alluvial deposits (except IF 4/PAD 15) were associated with the Rothbury soil landscape, close to the border of the Branxton soil landscape. IF 4/PAD 15 was positioned on the Branxton soil landscape (and could have been impacted by ploughing and recent flood events).

It is noted that the descriptions of soil landscapes (Section 2.2.3) define that alluvium should be associated with the Hunter soil landscape; this soil landscape has not been mapped in the northern section of the study area. However, it is suggested that the observed alluvial pockets are connected with the Hunter soil landscape, rather than the Rothbury landscape as mapped. An accumulation of Hunter alluvium could easily have formed in the central northeast of the study area, associated with large flood events through lower lying lands.

SAC 8/PAD 28 (Figure 3.16 and Figure 3.17) provides a case study for the localised accumulation of alluvium, juxtaposed against a second soil landscape. Figure 3.17 shows the two different soil profiles within a single erosion scar. The profile to the right (which is positioned closest to the confluence of two major creeks) has three distinct stratigraphical layers, with a light brown gritty very stony alluvial layer, sharply interfaced against a brownish black clay loam, grading to a lighter brown clay. The soil profile to

the left, demonstrates the Rothbury soils, with the A1 and A2 horizons of a brown loam over a reddish clay.

This difference in soil landscape will be important to note during test excavation, where vertical control of the excavation may provide evidence for stratigraphical layers and thus, a chronological archaeological sequence.

Table 3.6 Alluvial Terraces, Associated Landform and Artefact Sites.

Site/ PAD	Location (landform location eg outer bend of creek, aspect)	Soil Description (including inclusions)
IF 4 & PAD 15	Two elevated flats on the lower slope within the open depression of the creek. On the inner bend of the creek with south westerly aspect toward the creek.	Gravel soil material in an exposed bank of the creek. This location could have been exposed to high velocity water movements, which could have removed any archaeological deposit, whilst depositing the alluvial material.
IF 7 & PAD 18	Elevated flat above a highly impacted lower slope adjacent to a dam. Aspect toward dam to the south of the flat.	Soil has high percentage of alluvial material containing some manuported quartzite, silcrete and gravel.
SAC 1 & PAD 21	Low flat terrace in sloping landform above the creek. On the outer bend of the creek with south westerly aspect toward the creek.	Fine sandy alluvial soil with a lot of small gravels, approximately 300mm deep overlying yellow clay.
SAC 6 & PAD 24	Low flat in a sloping landform adjacent to the creek. On the inner bend of the creek with north westerly aspect toward the creek.	Very fine powdery alluvial soil with few inclusions. Away from the bank, the brown A1 soil has formed over the alluvium. This terrace has the potential for stratified deposits.
SAC 8 & PAD 28	Low flat landform overlooking a steep eroded slope to the creek. On the outer bend of the creek with southerly aspect toward the creek.	Thin, very sandy alluvial soil approximately 200mm in depth overlying yellow clay. Lots of larger alluvial gravels and pebbles from the creek, with larger silcrete material from the Quarry Site. Weathered bedrock is approximately 1.4m below the surface.
SAC 9 & PAD 25	Low flat in a sloping landform above the creek. South westerly aspect toward the creek.	Soil was alluvial in nature, with a high gravel content.

3.6 Analysis and Discussion

3.6.1 Observed Landform and Aspect

Stone artefact based sites were recorded on all landforms within the study area, including flats, hilltops, and open depressions; although the majority were on the gently inclined sloping landforms that predominate across the study area. Most of these sites were located on north-facing slopes, directed towards the sun. Most of the stone artefacts were identified in exposures, particularly those associated with erosion around watercourses.

In general the PADs, associated with the identified artefact sites, were positioned on flat to gently sloping landforms overlooking the watercourses. Further areas with PAD were identified on hilltops, raised flats and some gentle slopes. Four of the PADs have significant views that span a large proportion of the study area. Four PADs have good views to the south, five overlook large drainage lines and have ‘middle distance’ views and one PAD has a good northerly aspect. The remainder of the PADs have localised views across their immediate landforms.

3.6.2 Soil Conditions (Integrity and Condition)

Pedestrian survey and examination of historical aerials has shown that although much of the land has suffered historical disturbance from land clearing and agricultural activities, large parts retain the potential for intact archaeological deposits (Section 2.2.7).

The southern two thirds of the study area has been ploughed and cropped within the last 10 years, and thus has reduced integrity, but it has experienced very little animal or water erosion by comparison to the northern third. In general, the zones with PAD located within the centre or south of the study area have been subject to soil disturbance from cropping and ploughing over the last 10 years—this has reduced their condition.

The northern third of the study area does not appear to have been ploughed or cropped in recent years, but has been impacted and eroded by animals and water; visible erosion scars exist along the creeks, especially on the outer bends. The areas with PAD in the northern third do not appear to have been cropped and thus were thought to probably have a good soil condition.

It can be assumed that the whole of the study area has been subject to animal grazing (apparent in 2012–2013). The primary impacts are erosion along feed locations, dams, some water courses and fence lines where animal tracks occur. Heavy erosion along dam banks was observed in 2012.

In general, the study area retains a good level of soil integrity, with erosion largely restricted to the outer banks of the creeks in the north. However, the impacts of cropping and ploughing may have reduced the study area's soil condition, especially in the central and southern portion.

3.6.3 Environmental Focus

After the field survey, it appeared that the lower-lying drainage lines in the northern third of the study area were preferred locations for First Nations activities (these landforms are distinct to the higher hills in the centre and south of the study area). Should sufficient archaeological materials be present, then it may be possible to describe these areas as a First Nations landscape and infer that the space could have been used as social and economic purposed by First Nations Peoples.

3.6.4 Observed First Nations sites

Tangible First Nations sites observed during the field survey were all connected with the use of stone. No scarred trees or other site features were observed. This was expected given the regional predominance of stone in the archaeological record. The most common stone material observed was a red silcrete, possibly originating from the quarry located within the study area. A number of mudstone, chert/tuff artefacts were also recorded. These may have originated from gravels in the Hunter River or from sources in the Tomago Coal Measures, ~10km southeast of the study area, near East Maitland (see Appendix C).

The absence of other materials used by First Nations people, particularly wood, is expected. However, the dominance of archaeological stone should not be used to write the First Nations 'history' of the Anambah study area. Inference of plant and wood use should be made from the record of stone; the spatial patterning of stone may also be used to underpin an understanding of social landscape use, ie domiciliary spacing.[9]

3.7 Mechanism for Archaeological Test Excavation

Archaeological test excavation is permitted under the Code of Practice[10] without the need for a Section 90 permit. That is, it is excluded from the definition of 'harm' under the NPW Act provided that the subsurface investigations are not carried out in the following areas:

- in or within 50m of an area where burial sites are known or are likely to exist;
- in or within 50m of a declared Aboriginal Place;
- in or within 50m of a rock shelter, shell midden or earth mound; and/or
- in areas known or suspected to be Aboriginal missions, reserves or institutes.

As described by Heritage NSW, the purpose of test excavation is to:

> *… collect information about the nature and extent of sub-surface Aboriginal objects, based on a sample derived from sub-surface investigations. Test excavations contribute to the understanding of site characteristics and local and regional prehistory and they can be used to inform conservation goals and harm mitigation measures for the proposed activity.*[11]

This section provides details of the proposed archaeological test excavation in accordance with Requirements 14–17 of the Code of Practice. It includes:

- the test excavation sampling strategy;
- details of Heritage NSW notification;
- the methodology for test excavation;
- test excavation results; and
- analysis and discussion.

First Nations community consultation has been undertaken in accordance with NPW Regulation subclause 80C(6) prior to the methodology being prepared and will continue throughout the project.

3.8 Test Excavation Sampling Strategy

An appropriate methodology for archaeological test excavation has been defined by Heritage NSW.[12] However, the sampling strategy for undertaking test excavation was also developed in accordance with the needs of each project and is subject to the specific requirements of its study area.

An understanding of previous archaeological work and AHIMS data provides a context for previously identified First Nations objects. Acknowledging the data and recording limitations of the AHIMS system, there is a basic correlation between densities of previously recorded First Nations features and zoning identified as having a potential for archaeological deposits.

Ideally, where no past First Nations occupation impacts have occurred, all the zones identified as possessing archaeological potential would be sampled. However, in order to develop a strategic sampling model, consideration needs to be given to natural and historical processes that have impacted and/or removed archaeological deposits associated with the study area. Therefore, areas known to have been impacted by the construction will not be tested.

The goals of the test excavation were to:

- identify whether the study area has a First Nations archaeological signature; and
- identify whether the entire Anambah study area has archaeological potential.

3.8.1 Archaeological Sampling Strategy

The archaeological sampling strategy employed during the excavation of the study area was based on the methodology for sampling developed by Orton.[13] Orton presents a 12-step process for determining a sampling and test excavation methodology. The test methodology developed by GML for the study area follows Orton's categories and is presented below.

Existing Knowledge

The existing knowledge collected for this report comprises:

- registered site data and prior reports;
- the landscape context; and
- known impacts to the study area that will affect archaeological potential.

The combination of these aspects defines the zones within the study area that are suitable for archaeological testing. Test excavation units were located in areas of varying archaeological potential.

Objectives (and Research Questions)

The first objective of the archaeological test excavation for the Anambah study area was to undertake excavation to clarify, characterise and describe archaeological potential of soil horizons across it.

The second objective was to determine whether these soil profiles contain archaeological materials, and to undertake an assessment of these materials within a regional context.

In order to achieve these two objectives, research questions were established to guide the archaeological process and provide the basis for questioning the data collected. Relevant research questions were:

1. **What are the characteristics of soil horizons across the study area?**
    a. How has the land use history impacted the study area and survival of soils, and thus archaeological material?
    b. Is there a difference in the soil landscape's integrity across the study area due to different ploughing regimes?
    c. At each location, is the deposit consistent? Or does it possess characteristics that tell of different depositional events?
    d. Are there three soil landscapes (Hunter, Branxton and Rothbury) present? Are these found where they are mapped at the regional level? Does the archaeological deposit vary on each landscape? How do these soil landscapes interact and does the archaeological deposit vary by soil landscape?

e. Is there alluvium present (other than that identified through field survey)? How deep is the alluvium and what are its characteristics? Is there evidence for former alluvial terraces and 'ancient' modifications to the water courses? How does the alluvium interact with the associated soil landscape?

f. Are buried sand sheets or buried alluvial terraces present within the study area? If so, is any archaeological material associated with them? Is stratigraphy present in alluvial deposits?

2. What are the characteristics of archaeological deposits across the study area?

a. What types and densities of archaeological materials are present? What is the nature (type) of the deposit? Is the deposit stratified? Is the deposit associated with a particular flood event? Does the deposit have different degrees of archaeological potential with depth?

b. What, if any, evidence other than stone is present for First Nations occupation of this region? Is it correct to infer that stone equates to First Nations use of a landform or were other landforms without stone used by First Nations people?

c. How was stone used on site? Is there a relationship between artefact creation and use of landscape and/or landform?

d. Are stone deposits spatially discrete within areas of PAD? Does this provide information in terms of First Nations social laws and patterning of site use?

e. Can deposits be dated? What is the antiquity of the evidence?

f. What is the source of the artefactual stone at any particular site? How does this correlate with the regional research into stone resources undertaken (Appendix C)?

3. How can the deposit be interpreted?

a. Is there evidence of archaeological spatial patterning of deposits on continuous landforms? How long has it taken for such evidence to be created?

b. Does spatial patterning, if present, provide any evidence for First Nations social rules and laws?

c. How do archaeological deposits relate to the hill-slope shade analysis? Can this analysis be used to inform seasonal use of this landscape?

d. If archaeological deposits are absent from a landform in which they were expected to exist, ie soils have good condition and integrity, what does this mean in terms of First Nations landscape use?

e. What are the physical attributes of the deposit (stone, carbon, clay or other)?

f. For stone deposits, what are their physical characteristics and do they indicate a specialised use? Is there a difference in stone tool types between the different locations tested?

4. **What does the archaeological deposit tell us about First Nations use of this specific landscape?**
    a. How do long-term patterns of First Nations population movement through this valley (as described by First Nations Elders and early ethnographers) correlate with archaeological deposits?
    b. Was the study area used for large-scale First Nations gatherings? Does landform use correlate with the number of people inhabiting the study area—ie if large groups gathered, then did they use the larger landforms for habitation?
5. **Can the archaeology be interpreted in a regional context?**
    a. Where did raw stone materials originate from? Have they been brought into the study area? If so, from how far away has the stone been brought?
    b. How old is the archaeological deposit and how does this relate to regional use of this landscape?
    c. What is the relationship of the archaeological material within the study area to the region; in particular, the Pleistocene/Holocene relationship with Stockton Bight and other sites of great antiquity in the region?
    d. Is there evidence of trade in connection to stone deposits?
6. **Is the archaeological deposit culturally significant?**
    a. What is the heritage value of the deposit, both scientifically and culturally?
    b. How does the First Nations community view and value the deposit identified?
7. **Is there a deposit worthy of conservation or of future research?**
    a. Where and what deposits should be conserved for future generations?
    b. Which deposits should be subject to more extensive investigations?
    c. How should a boundary be drawn around an identified site? Are identifiable places present within a cultural landscape?
8. **Does the deposit provide a link between scientific hypotheses and First Nations cultural views?**

Population

The targeted population was defined by the extent of the study area boundary and the extent of significant impacts within the study area. Archaeological sampling was further targeted to those areas that had archaeological potential (those zones that were likely to contain a residual deposit) and those areas not highly disturbed and/or posing a danger to the fieldworkers. These areas had been identified during the field survey. GML proposed to excavate up to 500 archaeological Test Units (TU), but only 394 were planned during the original layout. Up to an additional 106 could therefore be excavated, once the initial 394 were completed. The TU layout is presented in Figure 3.18 to Figure 3.22.

In order to test a 'null hypothesis', TUs were placed extending away from landforms with a high to moderate level of archaeological potential towards areas with a low archaeological potential (or that were possibly highly disturbed). Such TUs were excavated to prove that archaeological deposits can be scientifically classified according to landform and level of disturbance—and that certain landforms do not contain an archaeological deposit.

Data to be Collected

Data was collected for each TU during the test excavation on a specific TU context sheet. Data collected included:

- TU number;
- TU location;
- TU landform;
- TU aspect;
- depth of each spit as excavated;
- number of stone objects (or other feature/s) per spit;
- total number of objects;
- any features or inclusions (such as carbon);
- taphonomic factors (disturbance, bioturbation etc); and
- soil characteristics.

Section and plan diagrams (especially where features were present) were created where appropriate. Recommendations were also made as to whether the TU should be expanded (in accordance with Heritage NSW guidelines) or if further TUs should be located surrounding the one excavated in order to better understand the extent of an archaeological deposit.

The excavation director supervised all TU recording and determined whether further TUs should be opened (in addition to those defined by the sample grid), or whether a TU should be expanded.

A running total of features and First Nations objects was kept, allowing for an in-the-field comparison between sample areas.

Degree of Precision Required

The location of each sample transect was established using a geographic information system (GIS)—based on landforms, disturbance factors, archaeological potential and consultation with Registered Aboriginal Parties (RAPs). For every sample transect, TUs were positioned using QGIS on transects at 20m intervals. The accuracy of this initial layout was high (Figure 3.18–Figure 3.22). All TU locations were set out by a surveyor, based upon the sample pattern developed in QGIS (with minor variation only where physical features on the ground necessitate this). Additional TUs were set out in the field by hand using standard surveying techniques when required. Excavation of each spit was determined by an archaeologist using a hand tape—the vertical control for excavating was around 100mm.

Spatial control of TU locations and vertical excavation was sufficiently precise to define the location of First Nations deposits across the study area and to allow the research questions to be addressed.

Method of Measure

Based upon our understanding of archaeological excavation results from regional work, the 'background' density of First Nations objects across the wider region is very low, possibly around 0.1 objects per metre square. In this region it is suggested that object densities over 100 objects per square metre represent a very dense deposit.

The origins of stone materials also required assessment, as field survey identified a number of locations that possibly contain localised sources of stone suitable for artefact manufacture. Further, the First Nations community has described mechanisms for the transport of non-local materials from the north and south into the study area. Therefore, all First Nations material present in any one site required assessment in terms of its origin and was placed within a regional framework.

Some zones may have limited evidence relating to First Nations objects, but yield other significant deposits, such as hearths, oven/fire pits, heat-retaining stone, etc. Archaeological investigation of these features was considered, irrespective of the associated stone artefact deposit, as they could reflect domiciliary areas.

The Frame for Sampling

With reference to the units of sampling, Orton states that:

> *… surveys does not have to be based on grid squares or transects: other shapes (even ones without straight lines) are statistically permitted.*[14]

Heritage NSW's requirements for sampling are fairly basic—the sampling framework for the test excavation was based upon 20m grids (where TUs were excavated in transects with 20m spacing [intervals] between TUs). Each sample transect was defined according to soil landscape, landform within that landscape, and avoiding all known limitations (eg trees). The sample transects were positioned to intersect known surface expressions of archaeology and to sample areas identified as potentially associated with First Nations traditions and activity.

In order to locate archaeological deposits in each landform, a number of parallel transects were established for most sample locations. The offset between transects was 20 metres, thus allowing for a regular pattern of sample TUs. Orton has examined the relationship between site diameter to grid interval and the probability of discovering a site. He contrasted a square grid against a staggered square grid and found that 'a staggered grid is considerably more efficient than a square grid…' with an increased probability of discovering sites using the staggered grid. Thus, a staggered grid pattern was to be employed during test excavation if additional TUs were to be located following excavation of the initial 394 TUs. The layout of the sample transects across the study area, and the TUs on each transect is shown in Figure 3.18 to Figure 3.22. GML proposed to excavate up to 500 TUs, but only 394 were planned during the original layout. Up to an additional 106 could therefore be excavated, once the initial 394 were completed. Additional TU locations were guided by:

- the presence of an archaeological deposit;
- suitable locations where further TUs could be placed in order to precisely define the extent of a deposit; and

- in response to field team discussions around the results of initial testing.

If excavation in one area of PAD was not proving a reliable deposit, the excavation team ceased excavation in this area and moved onto a new transect of the TU.

A breakdown of TUs and transects, by landform and soil landscape, is presented in Table 3.7. As can be seen, a wide variety of landforms and locations were test excavated.

Table 3.7 Number of Transects and Test Units, by Soil Landscape and Landform.

Soil landscape (based on Figure 2.6)	Landforms (based on Figure 2.5)	Number of PADs	Number of TUs (approx.)
Hunter	Low hilltop	1	12
	Raised flat	1	12
Branxton	Hilltop	3	22
	Raised flat	4	32
	Ridge	1	12
	Slope	3	25
	Terrace	1	9
Rothbury	Low hilltop	1	47
	Raised flat	5	61
	Slope	3	34
	Terrace	5	128
Total		28	394

The Pre-Test or Pilot Survey

Orton notes that the best field research designs can be made when the activity is over and that a pilot can serve to remove some of the 'bugs' from the sampling process.[15] The test excavation design was based on detailed background research and was updated with any new information arising from the field survey, with GPS-based identification of areas that were suitable for subsurface sampling.

During the test excavation, First Nations representatives and field archaeologists were able to respond to the initial results of excavation and determine whether further transects and/or TUs should be sampled.

Where a sample transect yielded no cultural evidence, excavation on that transect could be terminated prior to the completion of all TUs on that transect. That is, some TUs were 'skipped' in order to proceed to a location that might yield richer results, but only if both archaeologists and RAPs agreed on this course of action. If significant earthworks were identified as having occurred in a sample transect, thus removing the artefact-bearing portion of the soil horizon, then that TU was abandoned.

Organisation

The test excavation was undertaken over two seasons—the first between 1–22 November 2012 and the second between 13–20 March 2013.

Table 3.8 Excavation Seasons and Excavation Team.

Season	Archaeological Staff	RAP Representatives
Season 1	1 Excavation Director 4 Archaeologists	Maximum of 12 per day on a roster.
Season 2	1 Excavation Director 3 Archaeologists	22 RAPs invited but a maximum of 20 attended per day (mostly 18–20 attendees).

Excavation teams of two people hand-excavated sequential 500mm by 500mm TUs along each sample transect (in accordance with the requirements of the Code of Practice). All deposits were individually wet sieved through nested 7mm and 5mm or 3mm sieves and any archaeological material was retained with respect to its TU and context layer. Following recording by the excavation director, each TU was backfilled with clean fill by a Stockland. All information relating to each TU was recorded on a context sheet.

Running totals of artefacts and features were kept in order to keep track of yields on a sample transect, so that a logical progression to expanding a sample transect could be made if required.

Summary and Analysis

Following test excavation, all recovered First Nations stone objects (artefacts) were subject to analysis by one of GML's stone artefact specialists. Recording of all relevant attributes was undertaken in a comparable manner to other studies from the region in accordance with Requirement 19 of the Code of Practice.[16] This technical report was prepared to address the research questions presented above and contrasts the Anambah study area stone materials against other recent excavations in the region, especially that from excavations at McKeachie's Run.

A management approach to the artefacts following analysis is laid out in the Anambah Plan of Management and requires further discussion and planning with the First Nations community.

If shell material and/or human skeletal material had been identified during the test excavation, work would have ceased in the immediate area and the Heritage NSW would have been notified. In the case of human remains, the New South Wales Police Department would have been notified.

If recovered, carbon samples associated with cultural features would have been submitted for carbon dating.

Landscape analysis and all other reporting was undertaken by GML, assisted by the field archaeologists present during the test excavation. All results were analysed with the assistance of GIS, and consequential mapping of sites, places, landscapes and heritage values was GIS based.

In accordance with Heritage NSW requirements, this report will be provided to the RAPs for review and comment (with a minimum period of 28 days to comment). Following RAP review, the report will be forwarded to Heritage NSW.

Information Gained for Future Study

The information derived from test excavation has been used to expand the heritage values assessment of the study area. The report will provide direction for conservation of First Nations heritage and an impact analysis for all known objects, sites, places and values within the study area. The report will detail any sites and places that require further study and excavation (if they cannot be conserved during the development process).

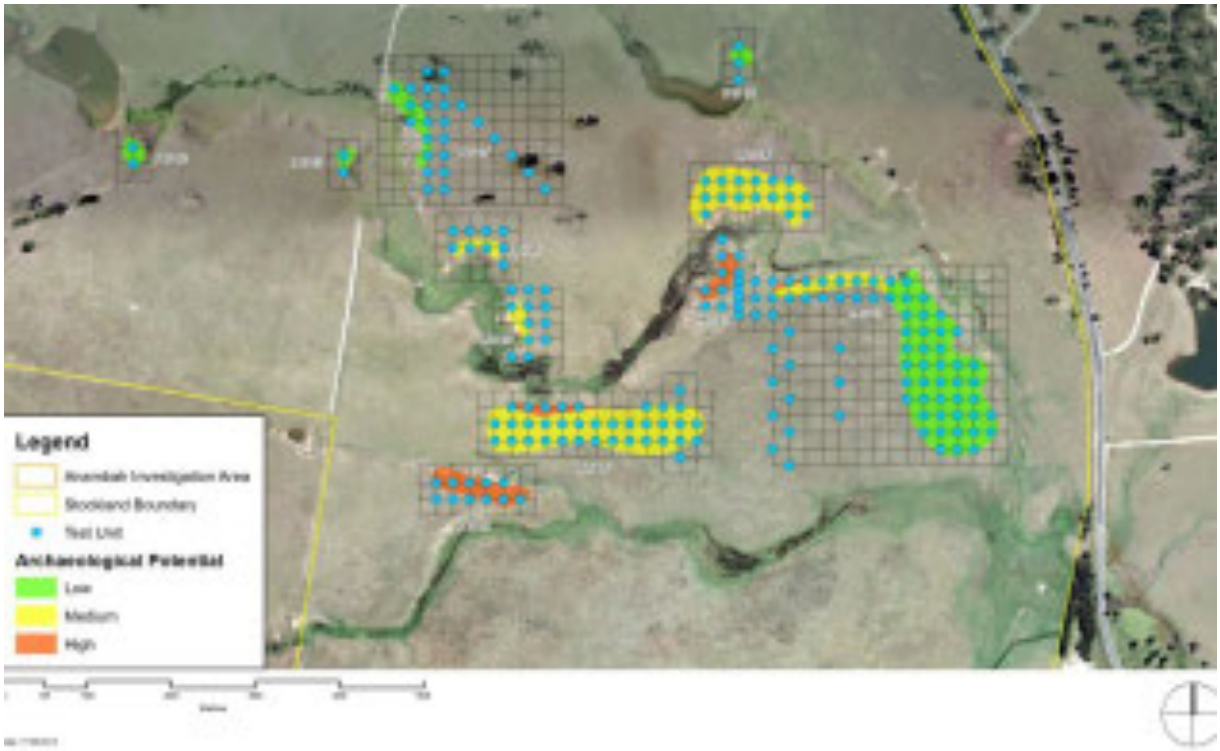


Figure 3.18 Proposed TU sampling pattern, with recorded archaeological sites and areas with PAD. (Source: GML 2021)

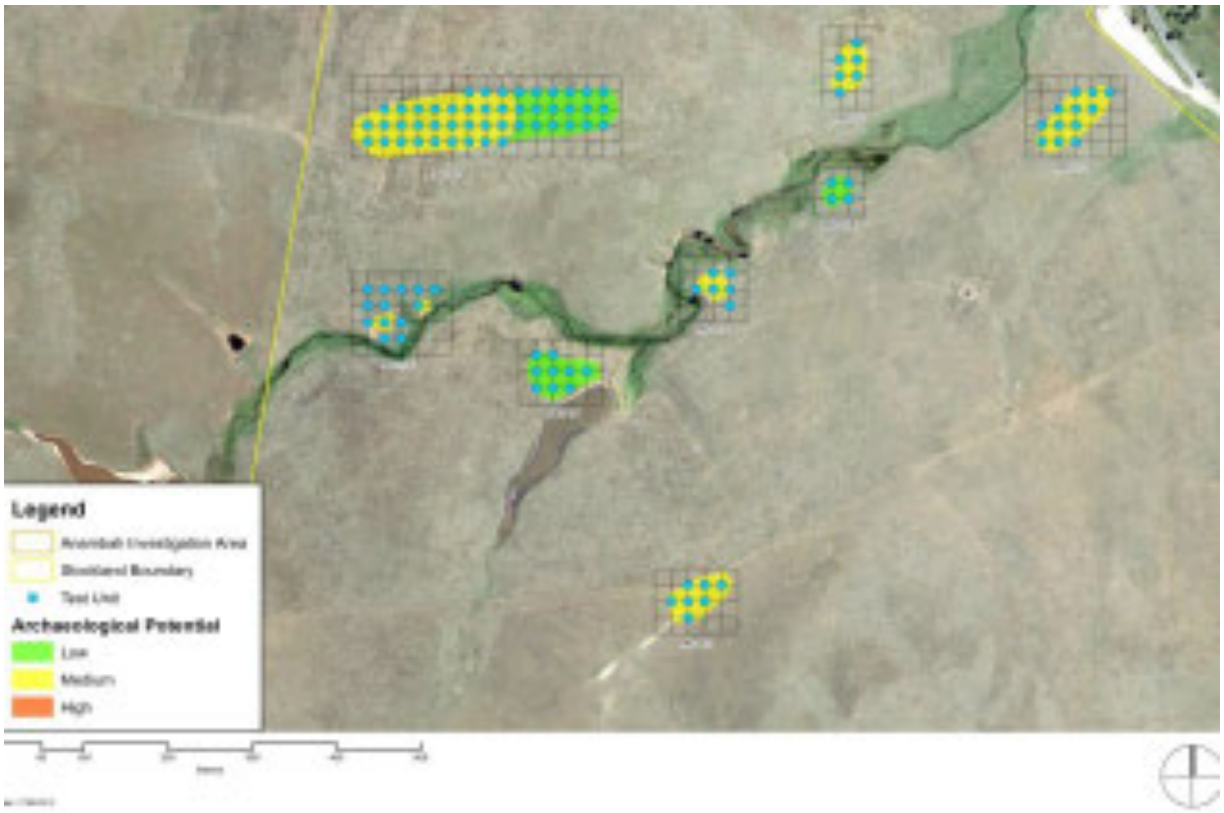


Figure 3.19 Proposed TU sampling pattern, with recorded archaeological sites and areas with PAD. (Source: GML 2021)

Figure 3.20 Proposed TU sampling pattern, with recorded archaeological sites and areas with PAD. (Source: GML 2021)

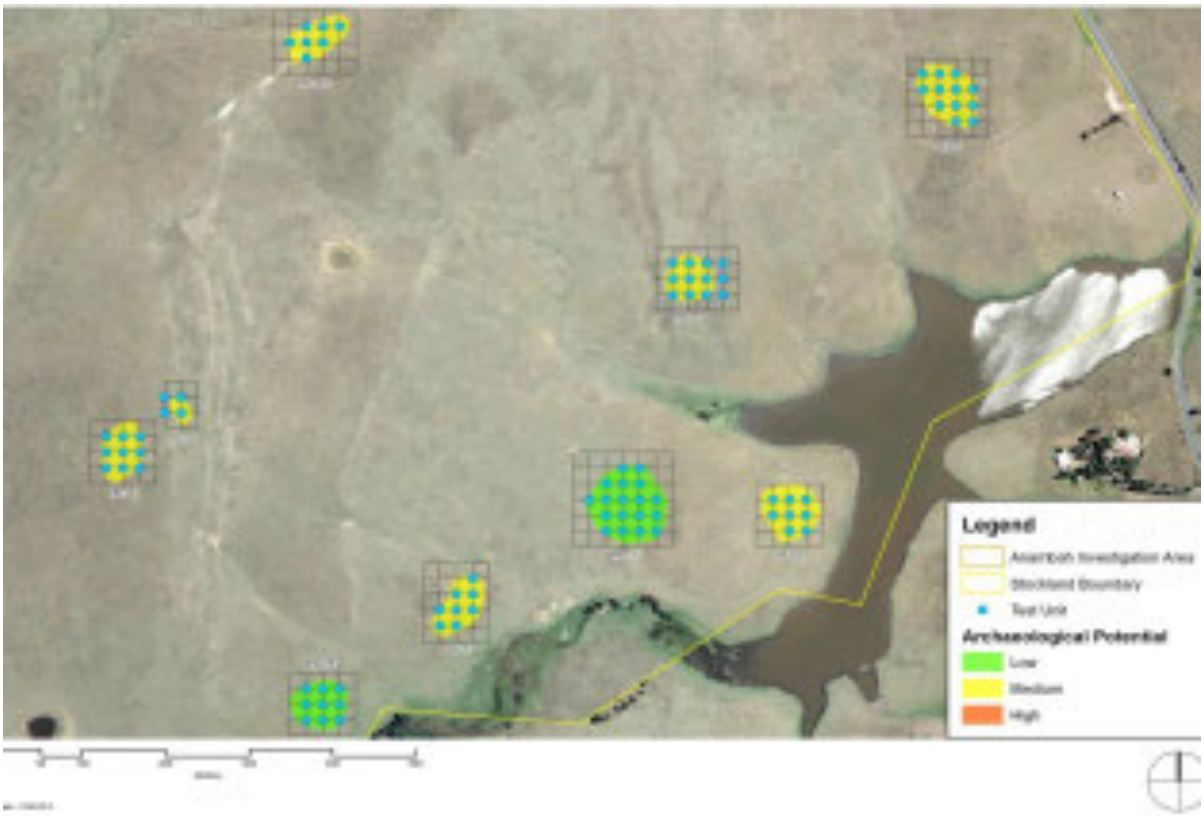


Figure 3.21 Proposed TU sampling pattern, with recorded archaeological sites and areas with PAD. (Source: GML 2021)

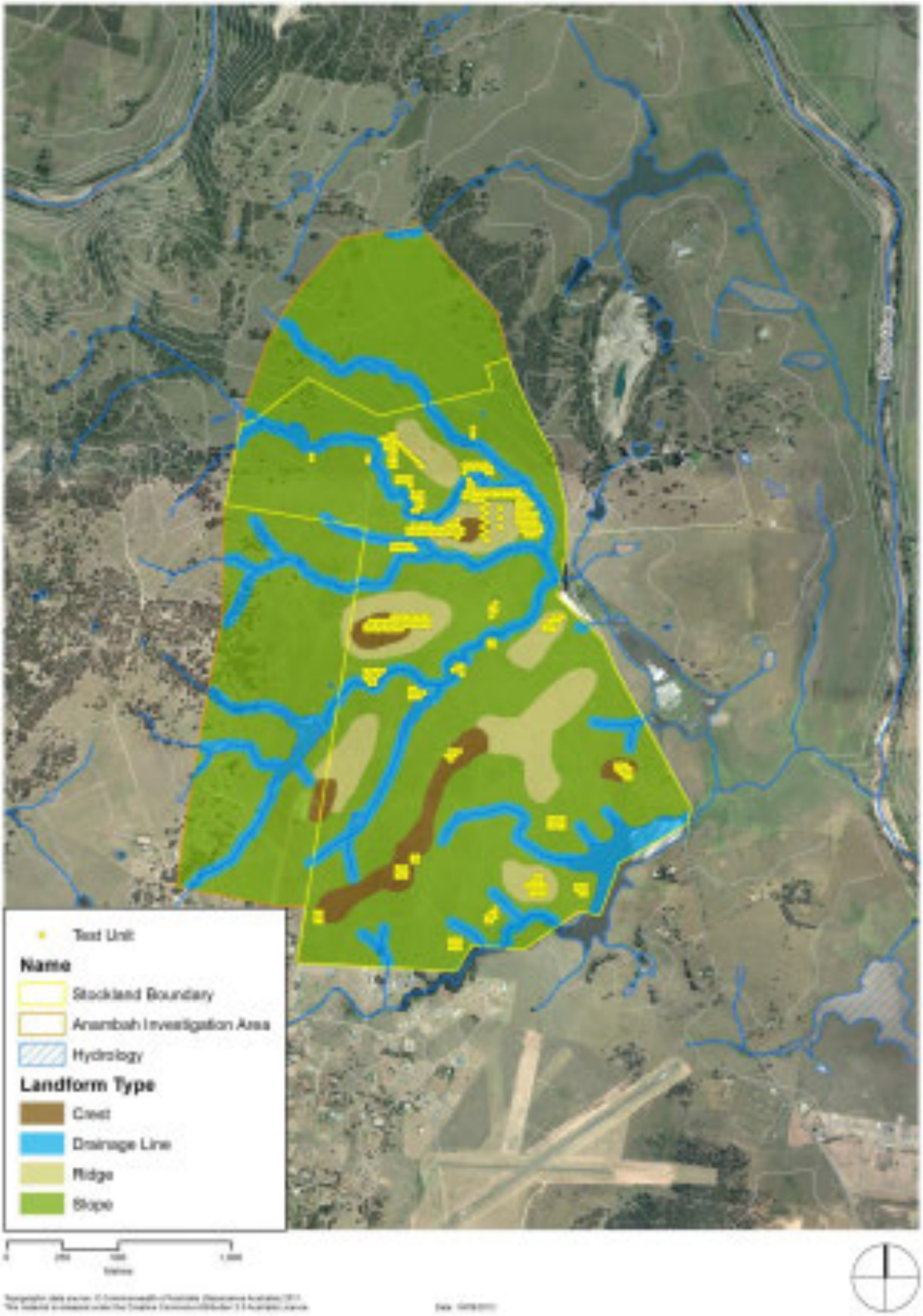


Figure 3.22 Proposed TU sampling pattern, against landforms and hydrology. (Source: GML 2012)

3.9 Test Excavation Results

Two seasons of archaeological excavation were undertaken: Season 1 between 22 November and 7 December 2012 (12 days), and Season 2 between 13 March and 20 March 2013 (6 days). The roster of RAP and archaeologists present on both excavation seasons is provided in Appendix D. The excavation of both seasons was directed by Mr Franz Reidel (GML).

The ARD had proposed test excavation of up to 400 TU. Over the time period available a total of 318 TU were excavated. A few areas were not sampled to the full potential extent, and the testing strategy was modified during the work to ensure that all landforms were tested. This resulted in some modification to the density of TU in some PAD areas. This alteration to the testing strategy has not impacted the overarching outcomes of the testing programming.

Test Units Excavated

A total of 318 TU were excavated across the three soil landscapes (Table 3.9 and Figure 3.23 to Figure 3.26). A total area of159m^2 was excavated, representing approximately 0.006% of the study area's total surface area. The context recording sheets for five TUs are missing from field work archive, although the results of lithic counts from these TU is known.

TUs were located on every type of landform within the study area, in locations with and without archaeological potential. All TUs were excavated to sterile B horizon clay in a series of 100mm spits. A few of the initial TUs were excavated into the B horizon clay in order to establish the sterile nature of this stratum.

Table 3.9 Location of TUs Excavated and a Summary of Stone Objects (TU Description Taken from the Context Created by Three Separate Archaeologists).

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
1	22	0	0	Not Excavated.	0
2	22	0	0	Not Excavated.	0
3	23	0	0	Not Excavated.	0
4	23	0	0	Not Excavated.	0
5	27	200	2	A1—light brown loam topsoil, moderately soft; A2—brown clayey loam + ironstone gravel; B—mottled orange/cream clay, moderately clear differentiation between A2 and B (increasing clay and moisture content with depth).	2
6	27	270	3	A1—light brown loam topsoil, moderately soft; A2—brown clayey loam + ironstone gravel; B—mottled orange/cream clay, moderately clear differentiation between A2 and B (increasing clay and moisture content with depth, particle size fine to moderate).	9
7	27	240	3	A1—light brown loam topsoil, moderately soft; A2—brown clayey loam + ironstone gravel; B—mottled orange/cream clay, moderately clear differentiation between A2 and B (increasing clay and moisture content with depth).	6

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
8	27	270	3	A1—moderately soft brown loam topsoil (moderately rich in organics); A2—brown clayey loam (charcoal flecks); B—mottled cream/orange clay (increasing clay and moisture content with depth).	2
9	27	200	2	A1—dark brown-black very fine sandy loam (111mm deep) (sand interface—clear); A2—light grey-brown fine sandy loam with <20% charcoal + gravel inclusions; B—brown clay, mottled, light and brown.	1
10	27	210	2	A1—light grey-brown loosely compact sandy loam, <20% gravel inclusions; A2—corner down onto thick, compact brown clay with gravels pushed in (soil generally disturbed as on the verge of a road).	0
11	18	340	4	A1—light greyish brown loam topsoil with charcoal flecks throughout; A2 light yellowish brown sandy loam with charcoal flecks throughout; B—mottled orange/brown/cream clay (all moderately compact, transition between units fairly clear).	0
12	18	300	3	A1—light greyish brown loam topsoil with charcoal flecks throughout; A2 light yellowish brown sandy loam with charcoal flecks throughout; B—mottled orange/brown/cream clay (all moderately compact, transition between units fairly clear).	2
13	28	490	4	A1—dark brown-black loam with high clay content; A2—same as A1; B—orangey brown (orange flecking) + degraded sandstone gravel at base.	0
14	28	310	3	A1—brown moderately compact loam with charcoal flecks; A2—orangey brown moderately compact clayey loam with ironstone gravel; B—orangey brown clay (increasing clay content with depth).	7
15	28	300	3	A1—light brown moderately compact loam topsoil (artefacts clearly evident while digging); A2 brown compact silty loam with high clay content; B—brown moist sticky clay (transition from A1–A2 not particularly clear, charcoal flecks in A1 and A2).	23
16	28	300	2	A1—light brown moderately compact silty loam (like 24), <10% charcoal flecks/fragments; A2—brown compact loam with very high clay content (increasing with depth); B—brown clay with same description as A2 (clay more compact with depth).	19
17	28	300	2	A1—light brown moderately compact silt with c10% charcoal inclusions; A2—brown compact silty loam with high clay content (increasing with depth); B—brown moderately compact clay (as per 23).	12
18	28	320	3	A1—light brown moderately compact silty loam; A2—brown compact loam with high clay content; B—brown very loose clay, not particularly moist and crumblier than previous pits.	0
19	28	300	3	A1—light brown moderately compact loam; A2—dark brown moderately compact loam; B—dark orangey brown moderately compact clay.	9
20	28	300	2	A1—light brown fine grained sandy silt, moderately compact (interface to A2 not clear); A2—brown compact clayey loam with some silt and high clay content increasing with depth; B—brown clay as per other TUs in mid-low area of AREA Q.	3
21	28	300	3	A1—light brown compact silty loam topsoil; A2—brown compact silty loam with high clay content increasing with depth, <20% ironstone gravel; B—brown compact clay.	2

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
22	28	200	2	A1—brown moderately compact loam (fine–medium particle size) with increasing moisture content with depth, good condition, moderate to low integrity (mixing of loam and clay evident); A2—orangey brown moderately compact clayey loam (fine–medium particle size), condition good, moderate to low integrity (mixing of loam and clay evident; B—orangey brown compact clay (clay and moisture content increase with depth, charcoal flecks in A1 and A2).	0
23	28	200	2	A1—light brown moderately compact silty loam topsoil + charcoal flecks; A2—orangey brown moderately compact clayey loam; B—orangey brown moderately compact sticky clay (particle size ranging from medium to fine, integrity = moderate, clay and moisture increasing with depth).	1
24	28	320	3	A1—light brown moderately compact silty loam topsoil with <10% charcoal flecks; A2—brown compact loam with <10% charcoal flecks and ironstone gravel; B—brown compact sticky clay (loose at top but becoming increasingly compact with depth).	0
25	28	300	3	A1—brown moderately compact loam topsoil; A2—dark brown moderately compact clayey loam with charcoal flecks; B—dark brown clayey loam (northeast corner of pit had high number of artefacts).	3
26	28	300	3	A1—light brown moderately compact silty loam topsoil (fine particle size and unclear transition to A2); A2—orangey brown compact clayey loam; B—orangey brown clay.	0
27	28	130	1	A1—light brown moderately compact mixed topsoil (very shallow—130mm); B—red sticky clay.	0
28	28	120	1	A1—light brown moderately compact mixed topsoil (very shallow—130mm); B—red sticky clay.	0
29	24	0	0	Not excavated.	0
30	24	660	6	A1—(strata 1) brown loose silt (silty loam?); A2—Strata 2: light brown loose silt (255mm), A2 Strata 3: light grey-brown loose sand + creek gravel (orange and black) (340mm), Strata 4: dark greyish brown loose sand + creek gravel (orange and black) (460mm), ;Strata 5: brown moderately compact sand with c50% brown gravel (creek) **Excavation did not reach clay due to physical limitations of pit depth and dimensions (50 x 50).	0
31	24	0	0	Not excavated.	0
32	24	150	2	A1—very light grey powdery silt (loose) (65mm); A2—brown loose silty loam with clay content of 40–50% (increasing with depth); B—light brown dry compact (friable) poorly structured clay.	11
33	19	0	0	Not excavated.	0
34	19	0	0	Not excavated.	0
35	19	0	0	Not excavated.	0
36	19	0	0	Not excavated.	0
37	19	0	0	Not excavated.	0
38	19	0	0	Not excavated.	0
39	19	0	0	Not excavated.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
40	19	420	4	A1—Strata 1: light grey very loose silty loam topsoil with <50% charcoal flecks/fragments; A2—Strata 1: dark brown very loose silty loam with c90% charcoal content and 40% burnt clay, Strata 2: light orangey brown silty loam with c90% charcoal and 40% burnt clay; B—light greyish brown sticky moist clay (dips in southwest corner, full of charcoal and organic material).	0
41	19	0	0	Not excavated.	0
42	19	0	0	Not excavated.	0
43	19	260	3	A1—light grey powdery sandy silt (fine); A2—Strata 1: mottled light greyish brown sandy silt (powdery and fine grained), c75% orange and black flecks, Strata 2: brown moderately compact sandy silt (fine grained), mottled with c50% clay; B—brown moderately compact clay.	0
44	19	0	0	Not excavated.	0
45	19	0	0	Not excavated.	0
46	19	0	0	Not excavated.	0
47	19	0	0	Not excavated.	0
48	19	300	3	A1—greyish brown sandy loam (increasing clay content with depth, charcoal flecks c<20%); A2—light brown sandy clay; B—brown clay.	0
49	19	0	0	Not excavated.	0
50	19	260	2	A1—light grey powdery silty sand (50mm deep); A2—reddish brown loose silty loam (50mm); B—orangey brown compact clay.	3
51	19	0	0	Not excavated.	0
52	19	0	0	Not excavated.	0
53	19	0	0	Not excavated.	0
54	19	0	0	Not excavated.	0
55	19	0	0	Not excavated.	0
56	19	0	0	Not excavated.	0
57	19	200	2	A1—light grey loose silty sand with c<20% black and grey flecks (100mm deep); A2—brown moderately compact silty loam with c<50% clay particles (100–200mm deep); B—brown compact clay.	3
58	19	0	0	Not excavated.	0
59	19	0	0	Not excavated.	0
60	19	0	0	Not excavated.	0
61	19	0	0	Not excavated.	0
62	19	0	0	Not excavated.	0
63	19	0	0	Not excavated.	0
64	19	0	0	Not excavated.	0
65	19	0	0	Not excavated.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
66	19	0	0	Not excavated.	0
67	19	0	0	Not excavated.	0
68	19	200	2	A1—dark grey-brown loose silty sand (60mm deep), clear transition to A2; A2—dark brown moderately compact fine grained sandy loam (60–200mm deep), clay mixed in from 130mm, orange and white gravels forming c<30%; B—dark brown compact sticky clay.	0
69	19	0	0	Not excavated.	0
70	19	0	0	Not excavated.	0
71	19	0	0	Not excavated.	0
72	19	0	0	Not excavated.	0
73	19	0	0	Not excavated.	0
74	19	0	0	Not excavated.	0
75	19	0	0	Not excavated.	0
76	19	0	0	Not excavated.	0
77	19	0	0	Not excavated.	0
78	19	0	0	Not excavated.	0
79	19	0	0	Not excavated.	0
80	19	0	0	Not excavated.	0
81	19	0	0	Not excavated.	0
82	26	300	3	A1—brown moderately compact loam topsoil (top 50mm) + river stone fragments; A2—brown moderately compact clayey loam + river stone pebbles/fragments; B—orangey brown clay + river stone pebbles/fragments (increasing clay and moisture content with depth, orange tint increasing with depth with clay content).	3
83	26	270	3	A1—dark grey moderately compact sandy loam (120mm deep) (clear transition to A2); A2—light grey compact sandy loam; B—dark brown clay.	13
84	25	600	6	A1—Strata 1: brown moderately soft (fine) loam topsoil (top 50mm); A2—Strata 2: light yellowish brown silty clay, Strata 3: light yellowish brown silty clay; A3—Strata 4: orangey/reddish brown soft clayey sand (coarse/massive), Strata 5: same as Strata 4 + charcoal flecks and gravel, Strata 6: same as Strata 4 + charcoal flecks and gravel; B—did not hit pure clay due to physical limitations of pit depth and dimensions (50 x 50) (moisture and clay content increasing with depth).	2
85	25	250	3	A1—brown moderately dry/compact loam topsoil; A2—brown (slight orange tint) moderately compact clayey loam; B—orangey brown moderately compact clay (clay and moisture content increasing with depth).	3
86	25	300	3	A1—light brown dry/soft loam topsoil; A2—brown slightly compact clayey loam; B—orangey brown moderately compact clay (clay and moisture content increasing with depth).	1

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
87	20	80	1	A1—light brown compact sandy clay loam topsoil (fine grained) (20mm deep); A2—non-existent; B—brown compact sticky clay.	0
88	20	0	0	Not excavated.	0
89	20	80	1	A1—light greyish brown powdery (extremely fine) sandy loam topsoil; A2—non-existent; B—light brown compact/dry clay.	0
90	20	0	0	Not excavated.	0
91	20	120	1	A1—light greyish brown compact/fine sandy loam; A2—non-existent (erosion); B—brown compact clay + some gravel.	0
92	20	240	3	A1—light brownish grey moderately soft loam topsoil; A2—brown moderately compact clayey loam + river pebbles/gravel + charcoal flecks; B—mottled orange/brown/cream moderately compact clay (increasing clay and moisture content with depth + increasing river pebbles/gravel with depth).	13
93	20	0	0	Not excavated.	0
94	20	160	2	A1—light greyish brown fine sandy loam topsoil; A2—brown compact/fine sandy clay loam; B—brown compact sticky clay (clay and moisture content increasing with depth).	0
95	20	0	0	Not excavated.	0
96	20	80	1	A1—light brown moderately soft loam topsoil; A2—non-existent; B—orangey brown moderately compact clay (clay and moisture content increasing with depth + charcoal flecks throughout).	3
97	20	200	2	A1—light greyish brown moderately soft loam topsoil; A2—greyish brown moderately compact clayey loam + charcoal flecks and fragments + burnt clay; B—grey compact clay + charcoal flecks/fragments on western side of pit and burnt clay on eastern side of pit (A2 almost non-existent in northeast corner—burnt clay comes to just below topsoil or clay content in A2 looks like pure clay due to heat treatment, making A2 and B very difficult to differentiate).	4
98	20	0	0	Not excavated.	0
99	20	0	0	Not excavated.	0
100	20	200	2	A1—brown moderately compact loam topsoil; A2—orangey brown moderately compact clayey loam; B—orangey brown moderately compact clay (clay and moisture content increasing with depth).	3
101	20	0	0	Not excavated.	0
102	20	140	2	A1—light greyish brown moderately compact loam topsoil; A2—orangey brown moderately compact clayey loam; B—mottled orange/cream compact clay (condition: fair, integrity: moderate [some mixing evident], clay content increasing with depth).	1
103	20	0	0	Not excavated.	0
104	20	200	2	A1—brown moderately compact loam topsoil; A2—brown moderately compact clayey loam; B—orangey brown compact clay (transition from A2 to B = fair, some mixing evident, clay and moisture content increasing with depth).	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
105	20	100	1	A1—light greyish brown moderately compact loam topsoil (very thin 20–30mm thick); A2—orangey brown moderately compact clayey loam; B—orangey brown compact clay (clay content increasing with depth).	0
106	20	0	0	Not excavated.	0
107	20	100	1	A1—light greyish brown moderately compact/fine loam topsoil (thin 30–50mm) + ironstone gravel; A2—brown moderately compact clayey loam + ironstone gravel; B—mottled brown (with orange) moderately compact clay (transition between soil units = poor).	0
108	20	160	2	A1—light greyish brown moderately compact loam topsoil; A2—dark brown compact clayey loam; B—dark brown compact clay with orange mottling (<10%) (clay and moisture content increasing with depth, transition to clay from A2 unclear).	0
109	20	0	0	Not excavated.	0
110	20	100	1	A1—brown moderately compact loam topsoil; A2—dark brown moderately compact clayey loam, rich in organics + fragment of silcrete with quartz identified; B—dark brown compact clay, rich in organics (clay and moisture content increasing with depth).	0
111	20	0	0	Not excavated.	0
112	20	0	0	Not excavated.	0
113	20	100	1	A1—light greyish brown slightly moderately compact loam topsoil (A1 almost non-existent <20mm thick—probably due to erosion); A2—brown moderately compact clayey loam; B—orangey brown compact clay (particle size = fine-medium, transition from loam units to B = unclear).	0
114	20	150	2	A1—light greyish brown moderately compact loam topsoil; brown moderately compact clayey loam; B—orangey brown compact clay + ironstone gravel <10% evident near interface between A2 and B (transition to clay not clear) (pit placed with post at northeast corner).	0
115	20	0	0	Not excavated.	0
116	20	230	2	A1—light greyish brown moderately compact sandy loam with charcoal flecks near interface to A2; A2—mid brown compact/fine sandy loam with charcoal flecks and evidence of burnt clay; B—brown compact sticky clay.	0
117	20	200	2	A1—brown moderately dry/compact loam topsoil; A2—brown (slight orange tint) moderately compact clayey loam; B—orangey brown moderately compact clay (clay and moisture content increasing with depth, transition from A2 to B moderately clear).	5
118	20	300	3	A1—light brown moderately compact loam topsoil (50–100mm); A2 orangey brown moderately compact clayey loam + river pebbles, gravel, burnt clay and charcoal flecks; B—orangey brown compact clay + burnt clay and charcoal flecks (increasing clay and moisture content with depth + transition from A2 to B fairly unclear).	3
119	20	270	2	A1—light greyish brown moderately compact loam topsoil + river pebbles and gravel (<10%); A2—brown compact clayey loam + river pebbles and gravel + burnt clay; B—orangey brown compact clay (increasing clay and moisture with depth + increasing river pebbles and gravel (<5%-<10%).	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
120	21	300	3	A1—Strata 1: light greyish brown moderately soft loam topsoil; A2—Strata 2: orangey brown moderately soft clayey loam + small river pebbles and gravel, Strata 3: light yellowish brown sandy clay + small river pebbles and gravel; B—Strata 4: mottled orange/brown compact clay (clay and moisture content increasing with depth).	4
121	21	300	3	A1—brown moderately compact loam topsoil (top 50–100mm); A2—brown moderately compact clayey loam + charcoal flecks near interface to B; B—brown with orange mottling compact clay (clay and moisture content increasing with depth, integrity poor = mixing of loam and clay evident).	0
122	21	270	3	A1—light greyish brown moderately soft loam topsoil+ charcoal flecks; A2—greyish brown moderately compact clayey loam + river pebbles and charcoal flecks/fragments; B—orangey brown compact clay with evidence of charcoal flecks, river pebbles and gravel (increasing clay and moisture content with depth, transition from A2 to B fairly clear).	0
123	21	200	2	A1—light brown moderately soft loam topsoil; A2—brown moderately compact silty loam (very dry); B—mottled orange/brown/cream compact clay (increasing clay and moisture content with depth, moderately sharp transition from A2 to B).	0
124	21	0	0	Not excavated.	0
125	21	0	0	Not excavated.	0
126	21	0	0	Not excavated.	0
127	17	160	2	A1—non-existent; A2—brown mottled compact (moist) clayey loam + ironstone gravel and limestone deposits; B—brown mottled compact (moist) clay (A2 and B almost homogenous—compacted by long-term trampling by cattle).	0
128	17	150	2	A1/A2?—dark brown very hard/compact clayey loam topsoil (ploughed); A2/B?—same as above.	0
129	17	180	2	A1, A2 and B homogenous due to ploughing; Spit 1 and Spit 2: dark brown moderately soft homogenous loam; Spit 2: same as Spit 1 + dark brown waxy clay (mixing due to ploughing).	0
130	13	200	2	No detail recorded—dark brown clayey loam topsoil—slightly lighter with depth—homogenous brown clay.	11
131	13	240	3	Spit 1: mixed A1 and A2—light grey silt mixed with mid brown loam + gravel (c5%); Spit 2 and Spit 3: A2—mid brown loam in clay context with gravel and organic rich clay; B—mottled yellow/brown soft waxy clay (evidence of ploughing, very disturbed).	0
132	13	100	1	Dark brown clayey loam topsoil, heavily ploughed, some slightly lighter clay at bottom of Spit 2, with some specks of decaying sandstone (one piece of quart recovered from bottom of Spit 1).	0
133	13	240	3	A1—non-existent (probably due to erosion); A2—rich mottled brown compacted clay with evidence of burnt clay and limestone deposits; B—brown compacted clay (homogenous) clay.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
134	13	190	2	Spit 1: mixed A1 and A2—light grey silt mixed with mid brown clayey loam + gravel (c5%); Spit 2: A2—dark brown clayey loam (orange mottling) + gravel dispersed throughout; B—dark brown waxy clay with orange mottling (pit shows evidence of heavy ploughing).	2
135	13	200	2	Spit 1 and Spit 2: A1 to A2—no clear differentiation in soil horizons, very disturbed—brown silt mixed with loam and clay; B—orangey brown soft clay with cracks (very disturbed due to ploughing).	0
136	13	200	2	Spit 1: very clayey loam topsoil with lighter reddish clay at bottom of Spit 2, cracks evident in clay.	1
137	13	180	2	A1 to A2—below the surface to a depth of approx. 60mm a moist horizon of silty clay is encountered. It contains burnt clay fragments and isolated limestone deposits as well as roots with approx. diameter of 1mm; B—At approx. 160–180mm depth below surface a densely compacted homogenous moist + sticky clay is encountered. Multiple roots (<1mm–>2mm) penetrate the soil horizon.	0
138	13	210	2	Spit 1 and Spit 2: heavily disturbed/mixed (0–20mm light grey silt mixed with brown loam), (20–210mm brown, soft loam with burnt organic material and gravel throughout), compaction increasing with depth, along with clay; B—orangey brown waxy clay.	0
139	13	200	2	Clayey brown topsoil, slightly lighter at bottom, some fragments of degraded sandstone.	0
140	14	350	4	0–50mm—greyish brown silty clay topsoil, loose, few inclusions, 0% visibility; 50–250mm—dark brown clay, moderately compact, sparse orange-black and white flecking, few inclusions; 250–300mm—transition from clay above to horizon below, orange and white decayed limestone inclusions beginning to appear; 300–350mm—dark brown clay, moister and softer than horizon above, distinguished by presence of white decayed limestone inclusions (about 5–10%).	3
141	14	200	2	Spit 1 and Spit 2: A1 and A2—blurred, clay content increasing with depth; B—very compact dark brown clay with few inclusions (very disturbed by ploughing).	0
142	14	240	3	Heavily impacted, very dense, and hard clay in large pockets characterise this test pit. Minimal evidence of burning, eg burnt clay and fragments of charcoal that appear mottled within the clay horizon. Clay is dry and forms lumps at the surface up to a depth of 60–70mm, but then becomes slightly moister and stickier at lower depths. Soil horizon is continuous from the surface to a depth of at least 240mm, no change, abandoned.	0
143	12	100	1	Beneath grass, soil is characterized by very dense, very compacted and sticky clay with no discernible silt. Clay forms in large homogenous pockets with channels of finer, crumble-like clay particles approx. 3–4mm in size. Clay is relatively moist but dies out quickly after exposure. Rare, isolated inclusions of burnt clay are visible.	0
144	12	320	4	Spit 1: A1—soft silt with grass root to depth of 90mm; spits 2–4: A2—very compact silty loam + gravel and bleached clay, slightly deeper in west end; B—very hard brown clay with orange clay inclusions and occasional gravels.	6

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
145	12	200	2	Topsoil down to a depth of 50–60mm is characterised by dry fine and powdery dense clay with few particles of silt present (*moist and compact below). Burnt clay and charcoal are frequent and are visible + mottled clay with coloured streaks. Silcrete artefacts found at depth of 90mm in southwest quadrant of spit. Spit 2 was dug to ensure that dry lens was not just an overlay. At a depth of 200mm, clay is still densely compacted, moist and difficult to penetrate, with a few fine clumps of crumbling clay. Clay more homogenous.	3
146	12	240	3	Surface find: mudstone flake, approx. 6m west of 144 and 7m southeast of 146—very exposed mudstone pieces evident, photo taken. Spit 1: light brown silt with loam and clay inclusions + grass roots, at 0–40mm A2 (dark brown loam very compact with brown and orange clay with depth). Spit 2: A2; Spit 3: A2 + clay in bottom 20mm; B—dark brown compact clay.	0
147	16	80	1	A1 to A2—predominantly clay with few inclusions of silt. Clay is extremely dense and especially compacted, almost impenetrable, with a pliable consistency until it dries when it becomes rock hard. Some pockets of less dense but equally moist and sticky clay were encountered. The clay is heavily cracked, where roots and more crumbly particles of clayey loam (?) can be seen. Evidently compacted over many years.	0
148	16	120	1	A1 to A2—mixed 0–20mm holding grass roots and mixed silty loam of light grey/brown, very shallow, giving way to a compact dark brown clay. Clay is cracked due to both ploughing and the construction of the horizon, due to the lack of moisture (evidence of ploughing).	0
149	16	150	2	A1—thin lens of predominantly silt that has relatively dry and crumbly particles, no more than 20–30mm deep; A2—soil is characterised by a mix of silty loam and larger pockets of clay, the stratigraphic layer contains more silt than clay (up to a depth of 120mm); B (at 120mm and lower)—dense, compact and sticky homogenous dark drown clay is encountered, and few silty channels are visible.	2
150	16	160	2	Spit 1: A1 to A2—mixed in through the clay, clay coming through; B—very compact cracked clay with silt in the cracked clay. Did not proceed with digging further down due to the likelihood of unintentionally expanding beyond the 50 x 50 limits.	1
151	16	150	2	0–50mm—dark greyish brown silty clay topsoil, loose, few inclusions, 0% surface visibility; 50–120mm—dark brown clay, compact, clumpy, few inclusions, little flecking; 120–150mm—dark brown clay, compact, more consistent and less clumpy than stratum above, few inclusions and little flecking ***Note: A1/A2 horizons probably truncated and B clay horizon probably ploughed to about 120mm below the current surface level.	0
152	16	150	1	0–40mm—dark greyish brown silty clay, loose, few inclusions, 0% surface visibility; 49–130mm—dark brown clay, compact, clumpy, few inclusions, little flecking; 130–150mm (end of excavation)—dark brown clay, compact, few inclusions, little flecking, more consistent texture and less clumpy compared to stratum above **Note: A1/A2 horizons probably truncated and B horizon clay probably ploughed to a depth of about 130mm below the current surface.	0
153	16	150	2	Heavy compact loamy clay with overlying dark brown clay—large cracks evident in the clay.	1

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
154	16	200	2	0–50mm—shallow, loose dark greyish brown topsoil, few inclusions, 0% surface visibility; 50–120/180mm—very dark brown clay, moderately compact to compact, clumpy, few inclusions and little flecking; 120/180–200mm (end of excavation)—very dark brown clay, compact, few inclusions and little flecking, texture is more consistent than stratum above **Note: A1/A2 horizons appear to have been truncated and the underlying B horizon ploughed over to a depth of 120–180mm below the surface.	0
155	16	100	1	A1—thin lens of fine and crumbly silty loam topsoil to a depth of no more than 20mm; A2—mix of silty loam and larger clay pockets, clay dominates the soil matrix (which is dense and compacted and sticky), disturbed by roots and an ant nest; B—larger clay pockets that are homogenous are encountered at a depth of approx. 80–100mm, silt channels are less prevalent.	1
156	16	110	1	Spit 1: no A1 or A2 horizons due to ploughing; B—clay excavated until depth where clay was consistently across the pit (natural).	0
157	16	180	2	0–40mm—shallow clayey topsoil, very dark brown, loose, few inclusions, 0% surface visibility; 40–150mm—very dark brown clay, moderately compact and clumpy, few inclusions, little orange and buff flecking; 150–180mm—very dark brown clay, compact, few inclusions and little flecking, more consistent texture compared to stratum above **Note: A1/A2 horizons appear to have been truncated, having a disturbed B horizon, possibly due to ploughing, to a depth of 150mm.	0
158	16	90	1	Heavy compact loamy clay with overlying dark brown clay—large cracks evident in the clay, very shallow soils, impacted by ploughing.	0
159	16	80	1	Heavy compact loamy clay with overlying dark brown clay—large cracks evident in the clay, very shallow soils, impacted by ploughing.	0
160	16	190	2	A1 to A2—truncated and ploughed off the surface; Spit 1 to 2: clay context increasing in density and consistency with depth (stopped at 190mm due to compactness of clay).	0
161	16	100	1	A1—thin lens (20–30mm) of loose, fine, and crumbly silt topsoil; A2/B—mixed layer of silt and clay, predominantly clay that is sticky, dense and compacted in large pockets, silt runs in channels and cracks along clay pockets; A2/B—dense, homogenous clay dominates the spit, 90% clay at a depth of 90–100mm.	0
162	16	100	1	A1—thin lens, 20mm deep, of fine silt and crumbly silty loam, relatively moist; A2—mix of silty loam and large pockets of homogenous dense and compacted clay, channels of loam that have formed cracks in the clay; B—at a depth of 80–100mm a dense homogenous clay is encountered.	0
163	16	150	2	0–30mm—shallow, loose clay topsoil, dark greyish brown, few inclusions, 9% surface visibility; 30–130mm—dark brown clay (slight yellowish tint), compact, few inclusions and little flecking, clumpy; 130-150mm (end of excavation)—similar to stratum above but texture is more consistent **Note: A1/A2 horizons appear to have been truncated and the B horizon probably ploughed over to a depth of c130mm below the surface.	0
164	16	140	2	Spit 1 and Spit 2—loam with increasing clay content with depth; A1 and A2—truncated and ploughed off until a clay consistency throughout with c5% grainy light brown silt in the clay cracking.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
165	16	200	2	A1—a very fine (thin) layer of predominantly silty loam, particles tend to be fine to medium sized, extends for approx. 20–30mm; A2—below the silt unit, a mix of silt and clay is present. It is predominantly moist and sticky and compact, with clay pockets and channels of softer, less dense silty clay that forms in clumps about 3–4mm thick; B—base consistency of dense and compacted especially sticky dark brown homogenous clay. Roots do not appear to penetrate those large pockets of clay.	0
166	16	120	2	A1—thick lens of silt with particles 2–3mm in thickness that extends for approx. 20–30mm below surface, relatively moist but powdery and contains roots larger than 2mm and smaller roots <1mm; A2—lens of silty loam that crumbles intermixed with large pockets of very dense and compacted, homogenous clay, silt forms in channels within pockets of clay; B—unmodified homogenous clay horizon. Sticky, dense and compacted dark brown clay.	0
167	16	170	2	0–40mm—shallow topsoil, very dark brown clay, loose, 0% surface visibility; 40–130mm—very dark brown clay, compact, few inclusions, little orange and manganese flecking, clumpy; 130–170mm—very dark brown clay, moderately compact, few inclusions, little flecking, more consistent texture than compared to stratum above, moister **Note: it appears that A1 and A2 horizons have been truncated. The strata from 0–130mm appears to be B horizon clay that has been ploughed over.	0
168	16	180	2	Spit 1: A1 (0–40mm)—brown slightly humic grainy silt. Has grass root inclusions and is mixed with A1, a dark brown loam with increasing clay content with depth, plough cracking evident; Spit 2: A2—clay evident at 160mm; B—dark brown compact clay with cracking due to moisture (lack of) retention.	0
169	16	100	1	Heavy compact dark brown sandy loam overlying dark red brown clay. Clay has cracks and a waxy lustre.	0
170	16	100	1	Dark brown dry sandy loam, reaching dark brown-red clay at 100mm, clay has large cracks and waxy appearance.	0
171	16	150	2	Spit 1: dark brown sandy loam, compact and dry; Spit 2: dark brown sandy loam, leading to red brown clay base.	0
172	16	240	2	Spit 1: A1 (0–50mm)—light brown grainy silt with grass root inclusions mixed with an A2 of dark brown loam with increasing clay content with depth; Spit 2: A2—still very disturbed; B—very compact dark brown clay.	0
173	16	170	2	Spit 1: A1 to A2 mixed; A1—light brown grainy silt; A2—dark brown loam with clay content increasing with depth, grass roots throughout; B—mid brown compact clay with occasional bleached clay inclusions, evidence of ploughing and general disturbance.	1
174	16	160	2	A1–A2—dry silty clayey soil of medium particle size that contains a high frequency of siltstone and other stone inclusions. Transition to a predominantly clayey matrix, which still contains root matter, as does the soil towards the surface. An ant's nest is visible in the southwest quadrant of the pit; B—at depth of 120–160mm the mixed silty clay has been replaced by a dense and compacted homogenous clay that exhibits a waxy texture, and is easily dried out.	1

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
175	16	200	2	A1—up to a depth of approx. 20mm soil is characterized by predominantly silty loam, where particles are medium-small sized and waxy, moist; A2—below 20mm, the soil is a mix of silt and clay but transitions to predominantly clay. The clay is moist and compacted and at times sticky, but still contains small channels silt. Small roots <1mm are present; B—at a depth of approx. 200mm, a homogenous, compact, moist and sticky clay is encountered.	0
176	16	210	2	Heavy compact dark brown sandy loam overlying dark red brown clay. Clay has cracks and a waxy lustre.	0
177	16	100	1	A dry, fine and powdery silty clay is encountered. Roots 1mm thick are common, as are siltstone and other stone nodules. At a depth of 90 to 100mm below the surface is a dense and compacted, almost waxy textured clay. It is quickly dried out and cracks appear shortly after exposure. It is homogenous in nature and a light brown even colour.	0
178	16	200	2	A1 to A2—dry, silty, clayey, with frequent inclusions of siltstone, ironstone and other rocks. At depth of approx. 180mm the dry powdery silt begins to transition to dried-out dense, almost waxy clay, which is homogenous and contains fewer rocky inclusions and limestone powder; B—clay reached at approx. 180–200mm depth **Note: stone artefacts found at depth of 130mm in southwest quadrant of Spit 2.	2
179	16	200	2	Spit 1: A1—at 0–100mm, light brown soft silt with grass root inclusions and occasional gravel; Spit 2: A2—light grey fine silt with bedrock gravel inclusions and bleached clay; B—southwest end is bedrock gravels, mid to northern end is red clay, east end is slightly browner in colour.	1
180	16	190	2	Spit 1: A1 (0–100mm)—light brown/grey fine silt with grass roots and occasional bedrock gravel; Spit 2: A2—light grey alluvial silt with c30% bedrock gravel; B—western end is orange clay, eastern end is orange bedrock, pit is mildly disturbed.	0
181	16	190	2	Spit 1: A1 to A2—light brown grainy silt with grass root inclusions 0–50mm onto an A2 of mid brown loam with decaying rock, clay lumps and bleached clay inclusions, very mixed and compact; B—a mixture of mid brown compact clay and decaying rock and bleached clay, pit is very disturbed.	1
182	16	180	2	Spit 1: A1 to A2 (0–40mm)—light grey fine silt with grass roots onto an A2 of mid brown loam with bleached clay inclusions, very compacted with increasing clay inclusions with depth; B—compact yet waxy in places, brown/green-yellow clay, cracked and dry in most places.	1
183	16	200	2	Spit 1: A1 to A2 (0–40mm)—a mid-brown-green silt holding grass roots onto an A2 of light brown compact loam with increasing clay content with depth + bleached clay and gravel inclusions; B—a hard compact undulating clay surface, pit is mildly disturbed.	0
184	16	200	2	A1—a layer of fine, powdery and dry silty clay that is relatively compacted, siltstone and other stones are present; A2—at a depth of 70mm a white powdery lens is encountered (probably a calcified limestone deposit); B—at depth of 120mm below the limestone an exceptionally dense, compacted and almost waxy textured clay is encountered.	1

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
185	16	240	3	A1—a dry powdery fine silty, clayey soil that contains frequent inclusions of siltstone, ironstone, and other rocks. At a depth of 110mm the soil begins to transition to a dry and almost waxy dense clay, consisting predominantly of siltstone and other rocks; B—at 240mm a homogenous dense waxy clay is encountered.	0
186	16	200	2	A1 to A2—dry fine and powdery silty clayey soil containing frequent inclusions of ironstone, siltstone, and other rocks. At a depth of approx. 90-100mm, the soil is visibly lighter grey and contains more clay and limestone deposits, as well as a greater abundance of siltstone and other rock nodules; B—a hard, compacted and fairly dense but dry almost waxy layer is encountered at approx. 180mm below surface.	3
187	16	100	1	A1—non-existent; A2—a thin layer of silty clay with inclusions of siltstone and limestone + other stone is encountered to a depth of between 30 and 90mm below the surface. Roots are present; B—a dense compacted clay with very few channels of silt is encountered just below the surface. It is homogenous and contains few roots -1mm in diameter.	1
188	16	210	2	Spit 1: A1—at 0–40mm, light brown granulated silt with grass root inclusions onto an A2 of mid brown loam with bleached clay and gravel inclusions with lumps of clay throughout; Spit 2: A2—increasing clay content (clumps) with depth; B—undulating compact dark brown clay with occasional inclusions, pit is very disturbed, probably due to ploughing.	1
189	16	560	5	Spit 1 (A1 and A2 present): A1—40mm light brown/grey silt holding grass roots; Spits 2 to 5: A2—light grey fine silt, very uniform throughout with increasing gravel with depth, at 500–560mm clay and bedrock reached, silt soil likely to be alluvial deposit; B—northern end of pit = bedrock (shale), clay = orange/brown clay with inclusions.	6
190	16	500	5	A1—non-existent; A2—dry fine powdered soil (silty?), characterised by frequent deposits of shale-like limestone and ironstone. This rocky deposit extends to a depth of about 480–500mm below the surface, where a light brown clay and natural bedrock is encountered; B—characterised by a light brown moist and compacted homogenous clay, and large outcrops of shale-like (bunded, crumbling into slivers?) rock.	1
191	16	420	4	Spit 1: A1 (0–40mm)—light brown silt holding grass root inclusions, A2—light grey alluvial silt with c15% gravel material, no other evidence of disturbance; spits 2 to 4: A2 (as above), Spit 4 onto a dark yellow/brown hard compacted alluvial clay, undulating and with no evidence of ploughing; B—yellow/brown compact hard alluvial undulating clay.	13
192	16	250	3	Spit 1: A1—light grey granulated silt mixed with A2 (a dark brown compacted loam, grass root inclusions throughout); Spit 2 and Spit 3—dark brown loam with increasing clay content with depth and few inclusions of gravel; B—cracked hard and dry dark brown clay with few inclusions.	0
193	16	120	2	Spit 1: mixed fine grained silt and dark brown compacted loam, grass roots in top 0–40mm; Spit 2: very loamy dark brown soil with clay at approx. 100mm in some sections; B—dark brown very compacted cracked clay with occasional inclusions, pit is very disturbed throughout.	1

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
194	15	450	5	0–70mm—greyish brown silty clay topsoil, loose, c10% surface visibility, few inclusions; 70–350/380mm is dark brown clay, moderately compact, high proportion of orange, black, and white flecking, especially the latter (decomposed limestone); 350/380–400/450mm (end of excavation)—dark brown clay matrix, compact, with a high proportion (about 50%) of decomposing stone (orange, white and some black) **Note: due to compactness of soil, difficult to excavate beyond this depth. Not certain that the natural horizon has been reached. The raised mound on which the test unit is situated could be artificial.	4
195	15	100	1	Dark brown sand onto red brown compact clay **Note: two silcrete flakes found in TU.	7
196	11	280	3	0–50mm—greyish brown silty clay topsoil, loose, few inclusions, 0% visibility; 50–200mm—brown to greyish brown clay, very compact, some orange, white and black flecking, few inclusions; 200–280mm—transition to a softer moderately compact to moderately soft clay, brown, a much higher proportion of inclusions (orange, black and white), including fine and coarse sub-angular inclusions (up to about 20%), the clay is much more moist, **Note: possible heat-affected mudstone recovered at the interface between the compact clay and the underlying moist clay with inclusions.	3
197	11	200	2	0–40mm—greyish brown silty clay, loose, 0% surface visibility, few inclusions; 40–180mm—brown clay, moderately compact, orange and black flecking, few inclusions; 180–200mm (end of excavation)—yellowish brown compact clay with orange buff and black flecking, few inclusions.	1
198	11	260	3	A1 to A2—a fine and crumbly silt with clay inclusions and frequent root material (some as thick as 8mm, but generally 1mm in thickness). Silty clay is moist and generally pliable up to a depth of 200–260mm; B—at 260mm, a homogenous dense and sticky compacted clay is encountered across 90% of the spit. This clay is less pliable and has evidently been disturbed by ploughing and erosion.	0
199	11	220	3	A1 to A2—dense compacted layer of moist sticky and compacted clay with very little silt topsoil, probably due to erosion of the slope. Clay is largely homogenous in large pockets with few pockets of loose, crumbly clay that holds its shape when pressed. At a depth of approx. 220mm the spit is almost exclusively a uniform moist and densely compacted clay.	1
200	11	180	2	0–50mm—greyish brown silty clay, moderately soft to moderately compact topsoil layer, loose, visibility 0%; 50–150mm—brown to greyish brown clay, compact, high proportion of orange and black flecking but few inclusions, carbonised wood fragments; 150–180mm—brown clay, moderately soft and moist (compared to layer above), orange and black flecking, few inclusions.	1
201	11	200	2	0–30mm—light brown grassy topsoil; 30–170mm—light brown loamy clay, compacted, orange and grey flecking throughout; 170–200mm—light brown compacted clay.	4
202	11	230	2	0–30—light brown grassy topsoil; 30–200mm—compacted light brown loam with soft orange stone (do not know what sort) (degraded sandstone? LB) throughout, very dry and with evidence of cracking; 200–230mm—light orangey brown clay.	6

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
203	11	100	1	A1 to A2—dense compacted layer of predominantly clay which is moist and sticky. Large homogenous pockets of clay are contracted with loose, medium sized clumps (approx. 3–4mm wide) of clay that fall away from the larger clumps, creating channels and gullies. Small and larger inclusions of burnt orange-red, yet powdery (upon inspection) clay, as well as isolated particles of charcoal, are present within the soil horizon.	0
204	11	180	2	A1 to A2—soil predominantly clay that is compacted and dense, has obviously been suppressed and not recently ploughed. Soil is moist and typically consists of large pockets of clay, with finer crumbling clay that clumps together and holds its shape when pressed together. An ant's nest is nearby, given the presence of ants in the southwest corner of the pit, and roots 2mm are common. At depth of between 150 and 280mm, the clay is more compacted and denser, forming larger homogenous pockets than before (eg as opposed to higher spits). Clay is dark and rich in colour.	1
205	10	80	1	0–80mm—dark brown shallow clay topsoil coming down onto dark brown clay, very compacted with some cracks.	0
206	10	40	1	0–40mm—dark brown grassy topsoil coming down onto dark brown clay—large cracks evident in the clay. Considering how shallow the topsoil is, and the fact that the surface has not been ploughed, it appears unlikely to have remnant original soil horizons.	0
207	10	200	2	0–60/80mm—greyish brown silty clay topsoil, dense root system, moderately soft, few inclusions; 60/80–120/180mm—greyish brown silty clay, moderately compact, with few inclusions, orange and buff flecking; 120/180–200mm—dark brown clay, compact, few inclusions, orange buff and black flecking.	0
208	10	280	2	A1—thin lens of silty, fine topsoil, extending to a depth of 90mm below the surface; A2—an undisturbed limestone deposit is encountered at 90–100mm and continues for the next c200mm. It is characterised by dry crumbly and powdery limestone particles, and a larger rocky outcrop with root material at a depth of 270mm.	0
209	10	280	2	Spit 1 and Spit 2: dark black degraded organic matter and silt, grass roots, ploughed throughout. Clay increasing with depth, with clay nodules evident throughout; Spit 3: brown waxy clay with degraded organic material throughout, ploughing marks evident in the clay surface.	0
210	10	180	2	0–20mm—dark brown grassy topsoil; 20–160mm—dark brown silty clay very compact, disturbed by ploughing; 160–180mm—dry dark brown clay.	0
211	10	140	2	A1 to A2—a dry and crumbly silty soil with roots common to a depth of 80mm. The soil below 80mm is moist and crumbly, containing few pockets of moist, sticky and pliable clay that is the same colour as the silt. Evidence of mixing; B—at a depth of approx. 140mm, larger patches of homogenous, dense and heavily compacted clay is encountered.	0
212	2	300	3	0–40/70mm—shallow topsoil with 0% surface visibility; 40/70–250mm—dark brown compact clay with few inclusions (angular gravel), and orange and black flecking; 250–300mm (end of excavated)—brown compact clay with sight yellowish tint, orange and black flecking evident, more homogenous than clay above + decomposing buff coloured soft stone fragments appearing.	1

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
213	2	390	4	Spits 1 to 3: turned over A2 horizon with very few inclusions, A1 churned into the A2 within the first 40mm where grass roots were evident; Spit 4: from 300mm onwards soil is dark brown waxy clay, at the base of the pit there was evidence of corroded limestone/bedrock, entire pit shows evidence of disturbance.	0
214	2	190	2	Spit 1: dark brown loam with grass and occasional gravels; Spit 2: increasing clay content with depth, cracks identified in the clay, clay brown and waxy with increasing clay content and occasional gravel dispersed throughout, entire pit highly disturbed.	1
215	2	380	4	A1—no clear A or B horizon due to disturbance; Spit 1: grass roots, gravel; Spit 2: large amount of gravel; Spit 3: increasing clay content, Spit 4: patches of burnt clay identified in northwest corner of pit, clay content very high c90% **Note: entire pit highly disturbed, with clay content increasing beyond c60% at approximately 190mm. Organics and gravels decreasing beyond this level, with light flecking observed throughout.	0
216	2	375	4	Spit 1: no clear A1 or A2 due to disturbance; spits 2 to 4: increasing clay content with depth, very compact and dry loam with cracks observed. Grass roots and occasional gravels in spits 2 and 3, with clay nodules found throughout; Spit 4: B—natural clay hit at c250mm, a dark brown waxy natural clay with occasional smears of read gravel from context above.	0
217	2	380	4	A1 to A2—land has been extensively ploughed as evidenced by the mixing of rich, dark, moist, compact clay and silt. The clay is sticky and roots are common for the first 150mm below the surface. Disturbance is highly probable from both ploughing and worm activity at a depth of approx. 280mm. At about 290mm, a powdery, crumbling clay is encountered in small pockets (eg 10%). It has been burnt; A2 to B—rich moist clay transitioning to homogenous, light tan coloured marbled clay. Chalk line is powdery (probably calcified limestone deposit). Inclusions are also present (5% of horizon).	0
218	2	380	4	A1 to A2—rich dark silty clay (little silt, mostly compacted clay). Clay varies in consistency between compact and finer particles of silty clay (roughly 70% clay, 30% silt). Heavily disturbed by ploughing, no clear differentiation of surface soil and the subsequent horizon. B—homogenous dense compacted moist clay encountered 350–380mm below the surface.	0
219	2	350	4	Compact brown sticky loam (high clay content). Spits 2 and 3 contain a high amount of crushed yellow rock with brown clay and come down onto brown clay mixed with shale (natural).	0
220	1	350	4	Spit 1: A1grassy silty loam with clay content of c5%, grass roots present; spits 2 to 4: A2—dark brown/black loam with increasing clay content with depth. Very compact soil with few inclusions. At 150mm in northeast corner, charcoal flecks associated with thick grass root clumps. Clay clumps found throughout and associated with disturbance—probably due to ploughing; B—dark brown waxy clay.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
221	1	400	4	A1—heavily compacted, dense, dry soil, with no evidence of manipulation. Sil (dry, clay) transitioning to clay within 100mm spit, but still has clay content. Roots present within first 100–200mm (0.22mm thick). Soil is dry, crumbly, and contains medium-sized powdery grains; A2 to A3—dense, heavily compacted clay loam with few roots. Some inclusions of charcoal (<0.5%). Stone flake found in southeast quadrant at approx. 300mm. Largely dense, compact large clay matrix with finer silty loam present (3mm); A3 to A4—compact clay silt loam transitioning to clay, no visible charcoal.	13
222	1	300	3	A1—fairly loose, dry, powdery loam topsoil transitioning to pockets of dense, compacted clay and loam, with evidence of disturbance. Roots of c2mm diameter common; A2—silty loam transitioning to pockets of compacted silty clay in spits 2 and 3. Roots and charcoal (1%) present; B—dense compact clay with few loam pockets, ie homogenous clay.	1
223	1	300	3	0–50mm—shallow topsoil, loose, 0% surface visibility; 50–150mm—compact brown clay with orange and black flecking, few inclusions (rounded); 150mm+ (end of excavation)—yellowish brown compact clay with orange flecking and inclusions (few, sub-angular).	0
224	1	400	4	0–70mm—shallow topsoil to varying depths, loose, 0% surface visibility, greyish brown; 70–200/250mm—clay subsoil, compact, dark brown with orange and black flecking, few inclusions (rounded); 200/250–400mm (end of excavation)—yellowish brown clay, compact, few inclusions (rounded), orange flecking.	0
225	1	220	3	A1—disturbed horizon of granulated light grey silty loam with grass roots throughout 0–30mm; A2—dark brown loam with c15% charcoal flecking and increasing clay content with depth; B—waxy brown clay slightly overlapping with surface **Note: entire pit shows evidence of disturbance, probably heavily ploughed leading to high degree of mixing.	1
226	1	270	3	A1 (0–100mm)—granulated silty loam with grass root inclusions and burnt clay in the eastern wall (c5%); A2—granulated loam with clay content increasing with depth on the northern side of the pit; spits 2 and 3—orangey brown clay along the eastern wall, sloping down towards the west. Clay = orangey brown and waxy, with cracks throughout **Note: entire pit disturbed.	1
227	1	450	5	Topsoil—compact dark gritting loam, some brick inclusions; clay—dark brown clay mixed with dark brown loam (beneath topsoil but is redeposited from ploughing), includes sandy stone (with some shale) from 210mm, mixed into clay (redeposited) (density increases with depth).	23
228	1	160	2	A1—compact sticky loam with high clay content.	0
229	1	200	2	0–60/200mm—greyish brown clay, compact, few inclusions, some orange flecking, varying depth; 60/200mm+—yellowish brown compact clay, natural, few inclusions, some orange flecking (soil deeply cracked).	2
230	1	170	2	A1—compact sticky brown loam with clay content and grass roots.	1
231	1	250	3	0–50mm—very shallow topsoil, sticky clay, loose, 0% surface visibility; 50–120/200mm—clay subsoil, compact, dark brown, occasional orange flecking, few inclusions, possibly ploughed; 120/200–250mm (end of excavation)—yellowish brown compact clay, few inclusions, some orange flecking, disturbed and discoloured, in part by an ant's nest.	1

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
232	4	180	2	Spit 1: A1 and A2—mixed and with no clear distinction (A1 identifiable in patches: gravel and root inclusions, dark brown loam); Spit 2: dark brown loam mixed with yellow/brown clay, clay reached at 150mm, no inclusions; B—undulated dry and cracked clay.	0
233	4	220	3	Spit 1: granulated light grey silt with A2 from 70mm; Spit 2: dark brown loam in north of pit, clay content increasing with depth, flecking of gravels and clumps of clay throughout; Spit 3: loam and clay at approx. 210mm; B—waxy brown/yellow clay undulating and cracked throughout **Note: entire pit disturbed.	0
234	4	320	4	Spit 1: compact loam heavily ploughed with grass roots and gravel inclusions; spits 2 and 3: dark brown loam with increasing clay with depth, and occasional charcoal flecking and orange clay flecking onto a dark brown waxy clay; Spit 4: dark brown waxy clay with flecking of orange clay c2%.	1
235	4	120	2	Spit 1: very clayey/possible ploughing, with small clumps of burnt clay and brown silt; Spit 2: clay within 20mm, dark brown.	1
236	4	250	2	0–40mm—shallow topsoil, 0% surface visibility, loose dark brown clay; 40–100/150mm—dark brown compact clay with orange and black flecking, few inclusions; 100/150–200/250mm (end of excavation)—natural dark yellowish-brown clay, compact, orange and back flecking with few inclusions.	0
237	4	250	3	0–60mm—shallow topsoil, 0% surface visibility; 60–150/200mm—dark brown clay, orange and black flecking, few inclusions, compact; 150/200–250mm (end of excavation)—yellowish brown, compact clay, orange flecking, few inclusions.	2
238	4	140	2	A1—loosely compacted dry silty clay with fine crumbly texture and roots (<2mm). Multiple patches of darker clay and burnt, powdery clay suggests burning might have occurred? More moist and crumbly as depth increases; B—the soil horizon transitions to homogenous moist and compact clay with root material (<1mm) present throughout a great portion of the layer (30% contains root shoots).	0
239	4	120	1	A1—rich dark but dry loosely packed silty clay with pockets of finer silt (crumblier) and roots of <1mm thickness. Most of the silt has eroded away to the creek—the soil horizon is a mere 100–200mm in depth; B—homogenous, compact, moist and sticky clay with root material 1mm in diameter.	1
240	3	250	3	Spit 1: clearly defined A1 becomes mixed with A2 horizon, grass roots and gravels present; Spit 2: dark brown loam with gravel and orange clay + brown waxy clay inclusions, in northwest corner bleached clay from approx. 120–190mm; Spit 3: hard waxy dry cracked clay with clay inclusions **Note: pit disturbed throughout due to ploughing.	0
241	3	240	3	Spit 1: dark brown silty loam with large grains, grass roots and gravel inclusions (A1 and A2 mixed together through ploughing); Spit 2: dark brown very compact loam with gravel and orange clay inclusions at approx. 180mm; Spit 3: B—waxy brown clay with orange inclusions, very dry and cracked **Note: highly disturbed.	0
242	3	160	2	Spit 1: dark brown very clayey loam (lumpy), with some dry silt mixed throughout; Spit 2: dark brown clay with evidence of ploughing.	1

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
243	3	180	2	Spit 1: A1 (0–20mm)—grainy light brown silt mixed with light brown loam (A2 context), orange clay present on northern side of pit; Spit 2: southern and central areas of pit contain light brown loam coming down onto dark brown/orange waxy clay **Note: pit highly disturbed.	0
244	3	0	0	Not excavated.	0
245	3	330	4	Spit 1: light grey fine grained silt (A1) mixed with A2 loam; Spit 2: A1 to 100–120mm then A2—light brown soft to lightly compacted silt with increasing clay content with depth, orange clay and charcoal flecking increasing with depth; pits 3 and 4: same as spit 2; B—orangey brown soft waxy wet clay.	0
246	3	360	4	Topsoil is dry but consists of crumbly silt with a few pockets of sticky compacted clay that has evidence of insect activity (ants). The material has been ploughed as evidenced by the mixing of fertile silt and compacted clay. At a depth of approx. 360mm, the soil horizon transitions to homogenous, dense, compacted and moist clay.	0
247	3	200	2	0–20—light brown silty topsoil with grass roots; 20–180mm—compacted very dry and friable light brown silty clay; 180–200mm—orangey brown clay with small ironstone gravel inclusions.	0
248	3	150	2	0–20mm—shallow topsoil with grass roots; 20–100mm—light brown silty clay, very dry and compacted; 100–175mm—compacted light brown clay with yellow sandy/ironstone inclusions throughout, no changes.	0
249	3	160	2	0–30mm—topsoil with grass roots; 30–100mm—compacted dark brown silty clay (mainly clay); 100–160mm—clay content increasing with depth.	0
250	3	350	4	0–50mm—shallow topsoil of loose silty clay with 0% surface visibility; 50–200/300mm—greyish brown silty clay, moderately compact, with orange and buff (soft) stone inclusions (<10%), 200/300–350mm—brown clay with orange and black flecking, compact with few inclusions.	4
251	3	200	2	0–50mm—shallow clayey topsoil with 0% surface visibility; 50–100/150mm—dark brown compact clay with orange, black and buff flecking, few inclusions; 100/150–200mm—yellowish brown clay, compact, orange, black and buff flecking evident, few inclusions, more homogenous than clay unit above.	0
252	3	140	2	0–90mm—dark brown silty clay with grass roots (topsoil shows evidence of disturbance, probably through ploughing); 90–140mm—dark brown clay with silty interface to natural clay beneath **Note: all of the soil has been highly compacted and dried, due to cattle trampling etc.	0
253	3	190	2	Spit 1: A1—light grey silt (fine) mixed with brown loam (A2). Clay inclusions throughout. Very compacted and disturbed; Spit 2: dark brown loam with gravels and orange clay inclusions (compacted); B—brown waxy clay with cracks (compacted).	0
254	3	100	1	0–30mm—shallow topsoil, loose, 0% surface visibility; 30–60/80mm—brown compact clay with orange flecking and few inclusions; 60/80–100mm—yellowish brown clay with orange and black flecking, compact, few inclusions **Note: the natural clay appeared at a very shallow depth, between 60–80mm below the surface. The TU is located towards the edge of the raised flat and gently sloping. The topsoil horizons appear to have largely been eroded away.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
255	3	400	4	0–50mm—shallow clay topsoil, loose, 0% surface visibility; 50–250/350mm—dark brown compact clay with few inclusions, clumpy, possibly ploughed over; 250/350–400mm—dark brown compact clay with yellow/buff coloured soft stone inclusions (probable natural soil horizon).	0
256	3	200	2	0–80mm—shallow greyish brown topsoil, loose, 0% surface visibility; 80–150/200mm—dark brown compact clay with orange and black flecking. Also, gravel and soft buff coloured stone inclusions, gravel is angular. Dense concentration in southwest corner of the pit; 150/200mm+—probable natural clay, brown with a yellowish tinge, orange and black flecking, few inclusions, compact.	0
257	3	250	2	0–40mm—shallow greyish brown loose topsoil with 0% surface visibility; 40–120/150mm—compact dark brown clay with orange and black flecking, few inclusions, very clumpy; 120/150–200/250mm—compact yellowish-brown clay with orange and black flecking, few inclusions, cracks evident.	0
258	5	150	2	0–20mm—topsoil with grass roots; 20–130mm—brown silty clay, very dry and compacted; 130–150mm—orangey brown clay.	0
259	5	140	2	0–10mm—shallow topsoil with grass roots; 10–100mm—mixed brown silty clay, very dry and compacted; 100–140mm—light orangey brown clay **Note: ironstone flecking throughout pit.	1
260	5	250	3	0–50mm—shallow greyish brown silty clay topsoil, loose, few inclusions, 0% surface visibility; 50–200/220mm—moderately compact to moderately soft greyish brown silty clay with orange and back manganese pebbles (<5mm); 200/220–250mm—compact yellowish-brown clay with orange flecking and soft stone inclusions, manganese pebbles (sub-angular, >10mm length), more homogenous than clay above.	0
261	5	180	2	Spit 1: light brown silt with A2 clay clumps throughout (mixing); Spit 2: light brown loam without clear interface, orange and brown clay waxy and cracked (at c150mm) **Note: entire pit shows evidence of disturbance.	0
262	5	150	2	0–40mm—shallow greyish brown loose topsoil with 0% surface visibility; 40–120mm—moderately compact greyish brown clay with orange and black flecking, few inclusions, clumpy; 120–150mm—compact yellowish-brown clay with orange and black flecking, few inclusions, evidence of cracking.	0
263	5	180	2	Spit 1: A1 to A2—A1 light grey grainy silt mixed through an A2 horizon (clay clumps throughout); Spit 2: A2—dark brown silt with increasing clay content with depth, orange clay mottling and gravels throughout; B—brown waxy clay with orange clay flecking and cracks throughout **Note: entire pit disturbed, probably due to ploughing.	1
264	5	0	0	Not excavated.	0
265	5	180	2	A1 to A2—dry powdery topsoil up to a depth of 70–80mm, roots present, crumbly fine and medium-sized granules of predominantly silt with rare patches of clay; B—at depth of approximately 140–180mm, dense compacted homogenous 'sticky' moist clay encountered.	0
266	6	250	3	0–40mm—shallow topsoil, loose, greyish brown with 0% surface visibility; 40–200/220mm—dark brown to greyish brown clay, moderately compact, soft orange and buff stone inclusions (<10%) and charcoal fragments (especially towards southwest corner); 200/220–250mm—dark reddish-brown clay, moderately compact, homogenous and a little moist, tew inclusions.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
267	6	200	2	0–50mm—shallow topsoil, dark brown loam, loose, 0% surface visibility; 50–150/180mm—dark brown compact clay with orange and buff flecking and few inclusions; 150/180–200mm—dark brown clay (slight reddish tinge), compact, homogenous, and a little moist. Orange, buff and black flecking.	0
268	6	150	2	0–30mm—dark brown topsoil, very compact; 30–140mm—dark brown silty clay, heavily ploughed and with grass roots throughout + insect burrows; 140–150mm—dark brown clay.	0
269	6	280	3	Spit 1: A1 to A2—mixed through top 0–20mm (dark brown loam with increasing clay content with depth;) spits 2 to 3—dark brown loam with increasing clay content with depth, Spit 3 at c250mm (clay starts coming through), at 210–250mm, gravel, stone and clay inclusions observed; B—dark brown cracked waxy clay **Note: northwest corner has bleached orange hard brittle clay from Spit 1 to B. The entire pit is disturbed.	0
270	6	150	2	0–20mm—dark brown topsoil; 20–110mm—dark brown silty clay (ploughed); 110–150mm—dark brown clay with some silt, becoming more clayey with depth.	0
271	6	350	3	0–40mm—greyish brown clay topsoil, loose, 0% surface visibility; 40–180mm—dark greyish brown clay, moderately compact, orange and black flecking, few inclusions; 180–250mm—brown clay with slight reddish tint, moderately compact, homogenous and a little moist, few inclusions **Note: one mudstone flake recovered from Spit 1 during excavation.	1
272	6	180	2	Spit 1: light grey silt with orange/brown clay mixing, grass roots and occasional burnt organics throughout; Spit 2: same as spit 1 + gravels on surface of the clay; B—orangey brown hard clay, slightly sloping to east.	0
273	6	310	4	Spit 1: dark brown loam with grass root inclusions, compact, very disturbed; spits 2 to 3: very dark compact loam with increasing clay content with depth, very disturbed; B—cracked waxy dark brown clay.	0
274	6	270	3	A1 to A2—topsoil (silt) is powdery, crumbly and dry. Forms clumps around roots (<1mm-40mm). Soil horizon has been heavily ploughed, as evidenced by moist, rich and dark silt intermixed with pockets of similarly moist, rich and dark clay that is dense, compacted and especially sticky; B—at approximately 190mm and continuing down to 270mm depth, dense sticky compacted clay is encountered. At 240mm, this clay forms at least 70–80% of matrix, at 270mm almost 95%.	0
275	9	200	2	Spit 1: light brown silt with grass roots and natural gravel inclusions (A1: 0–50mm, A2: 50mm, slightly darker); Spit 2: mid brown silty loam with increasing gravel content with depth. At 170mm, an orange-brown waxy clay with many natural stone and gravel inclusions **Note: Pit 275 was much dryer than other TUs in area H—may be due to slope.	0
276	9	250	3	0–80mm—deeper than typical topsoil level, greyish brown silty clay, moderately soft to moderately compact (angular and sub-angular gravel inclusions up to 50mm length [<10%]); 80–200/250mm—greyish brown silty clay, moderately compact, high proportion of gravel and charcoal fragments, orange, red and buff stone, soft, especially concentrated in southwest corner (up to 30%); 200/250–250mm—yellowish brown clay with orange and black flecking, compact, few inclusions.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
277	8	190	2	0–10mm—thin dark brown topsoil layer with grass roots; 10–80mm—dark brown silty clay with evidence of ploughing (mixing) (some limestone, crumbly); 180–190mm—dark brown clay.	0
278	8	300	3	0–50mm—shallow clayey topsoil with 0% surface visibility; 50–200/250mm—brown compact clay with buff flecking, few inclusions; 200/2500–300mm—reddish brown clay, compact, orange flecking, moist, homogenous.	0
279	8	260	3	0–30mm—dark brown topsoil; 30–200mm—dark brown silty clay, very compact, with evidence of ploughing (mixing); 200–260mm—dark brown silty clay becoming increasing clayey with depth **Note: southern half mixed with limestone from 100mm onwards, becoming more uniform with depth.	0
280	8	100	1	0–20mm—dark brown silty clay topsoil; 20–100mm—dark brown silty clay transitioning to purer clay.	0
281	8	160	2	0–40mm—dark brown silt; 40–130mm—dark brown silty clay, compacted; 130–160mm—dark brown silty clay becoming increasingly clayey with depth; 160mm—clay.	0
282	8	210	2	Spit: 1 A1—mid brown silty loam with grass root inclusions, blending into A2 of dark brown loam with increasing clay content with depth + c5% gravel inclusions; Spit 2: dark brown loam (A2 as above); B—dark brown cracked waxy clay with orange clay flecking.	0
283	8	0	0	Not excavated.	0
284	7	200	2	0–60mm—loose brown clay loam topsoil with 0% surface visibility; 60–130/150mm—moderately compact dark brown clay with buff coloured flecking and few inclusions; 130/150–200mm—compact reddish-brown clay, homogenous, moist, and with few inclusions.	0
285	7	210	2	0–30mm—topsoil; 30–150mm—reddish brown silt, compacted and friable; 150–210mm—gradual change to silty clay to clay.	0
286	7	200	2	0–20mm—topsoil; 0–120mm—reddish brown silt, friable; 120–180mm—reddish brown silt becoming more clayey with depth; 180–200mm—reddish brown clay.	0
287	27	270	3	A1—brown loam topsoil (50–100mm thick) with dispersed charcoal flecks throughout; A2—brown sandy clay loam with dispersed charcoal flecks throughout; B—mottled brown/orange clay with dispersed charcoal flecks at interface to A, clay and moisture content increasing with depth, transition between units moderately clear.	0
288	27	260	3	A1—sandy loose dark brown soil (transition to A2 clear); A2—light brown sandy loose compact soil; B—brown compact clay.	2
289	27	300	3	A1—dark brown moderately compact sandy loam (60mm); A2—lighter brown (mid brown) moderately compact sandy loam with <10% gravel inclusions; B—brown clay, compact, sticky.	12
290	27	300	3	A1—very dark brown/black sandy loam to 180mm; A2—lighter brown sandy loam with <40% charcoal. Eastern side of spit consists of burnt clay (50% in A2 soil horizon); B—burnt clay.	12

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
291	27	200	2	A1—brown loam topsoil with charcoal flecks throughout; A2—brown sandy clay loam with charcoal flecks throughout; B—mottled brown/cream clay; increasing clay and moisture content with depth; transition between soil units not particularly clear.	0
292	27	320	4	A1—brown loan topsoil (c50–100mm) with some charcoal flecks (<10%); A2—brown sandy clay loam with charcoal flecks (<10%); B—mottled brown/cream clay, increasing clay and moisture content with depth, transition between units moderately clear, compaction moderate.	2
293	27	240	2	A1—loose dark sandy loam (50–100mm thick); A2—moderately loose dark brown/black clayey loam, southwest corner contains charcoal (160–240mm); B—compact black/brown.	0
294	27	200	2	A1—moderately loose brown loam topsoil (50–100mm thick) with charcoal flecks (<10%); A2—moderately compact light yellowish brown sandy loam with charcoal flecks (<10%); B—compact mottled cream/brown clay; clay and moisture content increasing with depth; transition between units moderately clear.	5
295	27	280	3	A1—moderately soft brown loam topsoil (50–100mm) with charcoal flecks (<10%); A2—moderately soft light yellowish brown sandy loam to sandy clay loam with depth + charcoal flecks throughout (<10%); B—moderately compact mottled brown/cream clay, clay and moisture content increase with depth.	27
296	27	260	3	A1—moderately soft light brown loam topsoil (50–100mm thick) with charcoal flecks dispersed throughout (<10%); A2—moderately compact sandy loam with pockets of clay in north section, + charcoal concentration near southeast corner + ironstone gravel (<20%) towards bottom of the unit/interface to clay; B—moderately compact mottled brown/cream clay with ironstone gravel near interface to A2 (<20%); clay and moisture content increase with depth; transition between units moderately clear.	0
297	27	300	2	A1—moderately soft brown loam topsoil (50–100mm thick, thickest in northwest corner + layer of organic rich dark loam); A2—moderately compact light brownish yellow sandy loam sitting on top of clay (northeast corner deeper due to undulating B surface); B—compact mottled brown/cream undulating clay (natural clay hit at lowest point in northwest corner); transition between units moderately clear + integrity of soils generally better than TUs excavated prior to this area.	73
298	27	200	2	A1 and A2—mid brown loosely compact sandy loam, well mixed with little distinction between two units (very fine grained as per all soils); B—moderately compact brown clay.	0
299	27	250	3	A1—light brown moderately soft topsoil (50–100mm) with charcoal flecks (<5%); A2—moderately compact brown sandy clay loam with charcoal flecks (<5%); B—compact mottled brown/cream clay; clay and moisture content increasing with depth; transition between units moderately clear compared to 298.	2
300	27	300	3	A1—mid to dark brown loose sandy loam; A2—light greyish brown loose sandy loam with <10% gravel inclusions; B—brown moderately compact sticky/waxy clay.	3

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
301	27	260	3	A1—light brown loose to moderately loose fine grained sandy soil with <5% orange gravel inclusions (90mm deep); A2—dark brown compact fine grained sandy soil with high clay content.	0
302	27	200	2	A1—mottled dark and light grey/brown loose fine sandy loam (112mm deep); A2—mottled dark and light grey/brown loose fine sandy loam; B—brown sticky compact clay.	2
303	27	200	2	A1—light grey/brown loose fine sandy loam (85mm deep) (transition clear); A2—mid brown loose fine sandy loam with clay content, clay content increasing with depth; B—mottled light and dark brown compact sticky clay.	2
304	27	300	3	A1—loose light grey sandy, very fined grained, with gravel inclusions at interface to A2; A2—<50% gravels (ironstone etc), light grey-brown moderately compact sandy soil, very fined grained; B—moderately sticky and compact brown clay.	7
305	27	230	3	A1—light brown loose sandy, very fined grained with clear transition to A2 (60mm deep); A2—brown moderately compact sandy loam (very fine) with high clay content; B—moderately compact sticky brown clay.	0
306	27	200	2	A1—moderately compact organic brown fine grained sandy loam (50mm deep); A2—moderately compact brown sandy loam with high clay content (clay increasing with depth); B—sticky red compact clay.	14
307	26	200	2	A1—brown loose sandy loam; A2—slightly lighter more compact sandy loam than A1, transition between A1 and A2 is not clear; B—sticky brown moderately compact clay.	3
308	26	300	3	A1—light grey moderately compact sandy, fine grained, with <30% gravels, burnt clay and charcoal (180mm deep); A2—dark greyish brown compact stick moist loam with high clay content and gravels + burnt clay <30%; B—dark brown clay with charcoal and gravels at interface to A2.	0
309	26	300	3	A1—light brown moderately soft loam topsoil (top 50mm) with transition to brown clayey loam and river stone pebbles/gravels dispersed throughout (<20%); A2—moderately soft brown clay loam with river pebbles and gravels throughout (<20%); B—moderately soft brown clay, increasing clay and moisture content with depth.	1
310	26	200	2	A1—light greyish brown moderately compact sandy loam (5mm deep); A2—brown compact loam with high clay content, clay content increasing with depth; B—dark brown compact sticky clay.	0
311	26	300	3	A1—brown moderately soft loam topsoil; A2—brown moderately soft clayey loam with gravels (<10%); B—brown moderately compact clay loam to clay, clay surface undulating, clay and moisture content increasing with depth.	0
312	26	500	5	A1—brown moderately soft loam topsoil; A2—brown moderately soft clayey loam with charcoal fragments/flecks in spits 3 and 4 (towards clay); B—orangey brown moderately compact clay with fragments of orangey yellow degraded sandstone, clay and moisture content increasing with depth.	5
313	26	200	2	A1—dark brown compact sandy loam with clay inclusions at interface to A2; A2—dark brown compact sandy loam with extremely high clay content; B—dark brown compact clay with light brown streaking throughout.	0
314	25	0	0	Not excavated.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
315	25	300	3	A1 and A2—mid brown moderately compact mixed sandy loam with <10% gravel/charcoal inclusions; B—light brown moderately compact sticky clay.	2
316	25	200	2	A1—light brown moderately soft fine grained sandy loam; A2—brown moderately compact sandy loam with high clay content + increasing with depth; B—brown loose clay, transition from A2 to B quite clear.	2
317	25	300	3	A1—well mixed with little distinction between A1 and A2; A2—clay content increasing significantly from 200mm onwards; B—brown highly compact clay, increasingly dense/sticky with depth.	0
318	25	300	3	A1–brown moderately soft loam topsoil (top 50mm); A2—brown moderately compact clay loam; B—brown/orangey brown moderately soft clay, increasing clay and moisture content with depth, condition low to moderate, integrity of soil affected by cattle trampling.	0
319	25	300	3	A1—light brown sandy loam, moderately compact; A2—brown compact sandy loam with high clay content which increases with depth; B—brown loose to moderately compact clay.	1
320	25	300	3	A1—light brown moderately soft loam topsoil; A2—brown moderately soft clayey loam; B—brown clayey loam to clay, increasing clay and moisture content with depth, particle size fine to medium, transition between units not particularly clear.	16
321	25	300	3	A1—light brown moderately soft loam topsoil; A2—brown moderately compact clayey loam; B—brown compact clay with charcoal flecks, burnt clay and gravels (10–20%) towards bottom of Spit 3 (south side of pit, running in east west direction), some larger river pebbles associated with these inclusions.	0
322	25	70	1	A1—mid brown loose sandy loam; A2—non-existent; B—brown compact clay.	0
323	20	0	0	Not excavated.	0
324	20	0	0	Not excavated.	0
325	20	0	0	Not excavated.	0
326	21	0	0	Not excavated.	0
327	21	0	0	Not excavated.	0
328	21	160	2	A1—light greyish brown moderately compact loam topsoil with charcoal flecks (<10%); A2—light greyish brown moderately compact loam transitioning to clayey loam with charcoal flecks (<10%); B—orange slightly softer clay (than A2), transition to clay moderately clear, increasing clay and moisture content with depth.	63
329	21	200	2	A1—light greyish brown moderately compact loam topsoil with charcoal flecks (<10%); A2—light greyish brown moderately compact loam transitioning to clayey loam with charcoal flecks (<10%); B—orange slightly softer clay (than A2), transition to clay moderately clear, increasing clay and moisture content with depth.	2

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
330	24	470	5	A1—grey loose extremely fine grained sandy silt (95mm); A2—Strata 1 (95–145mm): greyish brown fine grained sandy silt with <10% charcoal flecking, Strata 2 (145–260mm): light greyish brown with 50% charcoal and orange flecking, Strata 3 (260–350mm): brown fine grained sandy silt with very few inclusions, Strata 4: same as Strata 3, with clay mixed in; B—weak brown clay.	0
331	24	0	0	Not excavated.	0
332	24	230	2	A1—greyish brown loose very fine (powdery) loam; A2—very light greyish brown loose (powdery) silty loam with <30% burnt clay; B—greyish brown loose clay, sticky with poor strength/structure with burnt clay lumps.	0
333	24	300	3	A1—light grey loose silt (powdery) (90mm deep, transition 40mm thick); A2—Strata 1 (160–220mm): light grey loose silt with <30% orange and black flecking, Strata 2 (220–300mm): same as Strata 1 but mixed with clay; B—weak brown clay as per other pits.	4
334	24	334	4	A1—dark brown loose silty sandy loam, A2 Strata 1 (125–230mm): light greyish brown silty sandy loam (?) with 50% orange and black flecking, Strata 2 (230–330/340mm): clay mixed with Strata 1, contains burnt tree root which impacted pit depth (deeper in southern end); B—bright brown loose orangey brown clay.	1
335	24	300	3	A1—110mm brown loose silt with black and orange flecks (<40%); A2—Strata 1 (110–190mm): light greyish brown loose silt with black flecks <40%, Strata 2 (190–300mm)—brown moderately compact silt mixed with clay; B—brown moderately compact sticky clay (weak strength).	0
336	24	340	4	A1—70mm dark brown to black loose and very fine silty loam; A2—Strata 1 (70–230mm): light brown loose very fine sandy silt with <20% charcoal flecking, Strata 2 (230–330mm): light brown loose silt mixed with clay particles, <10% gravels; B—brown, moderately compact clay with weak composition as per pits 30, 335, 32 and 332.	0
337	19	0	0	Not excavated.	0
338	19	280	2	A1—light greyish brown loose silty sand with <10% gravels (ironstone) 80mm in depth, clear transition to A2; A2—brown moderately compact silty loam with clay mixed through 80–180mm; B—brown moderately strong/compact clay.	3
339	19	0	0	Not excavated.	0
340	19	0	0	Not excavated.	0
341	19	230	2	A1—light greyish brown loose silty loam (50mm deep); A2—brown loose silty loam, 50–120mm transition to clay (mixing from 120mm onwards); B—brown compact clay, silcrete cobbles throughout this area.	0
342	19	0	0	Not excavated.	0
343	19	300	2	A1—thin layer (45mm) of greyish brown silty loam; A2—thin layer of greyish brown silty loam with orange and black flecking, clay content present from 170mm, <20–30% gravels; B—brown moderately compact stick clay with weak structure.	0
344	19	0	0	Not excavated.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
345	19	0	0	Not excavated.	0
346	19	0	0	Not excavated.	0
347	19	0	0	Not excavated.	0
348	19	200	2	A1—light greyish brown compact loam topsoil with distinct band of ironstone gravel <40% sitting above A2; A2—light greyish brown moderately soft sandy loam with charcoal flecks (<10%) sitting on top of natural clay; B—orangey brown moderately compact clay with iron manganese staining and charcoal flecks/fragments <40%.	0
349	19	0	0	Not excavated.	0
350	19	180	2	A1—light greyish brown moderately soft loam topsoil with charcoal and clay flecks (<20%); A2—brown moderately compact clayey loam with charcoal and clay flecks (<20%); B—slight orangey brown compact clay with charcoal and clay flecks at/near interface to A2. Moderately clear transition from A2 to B, transition from A1 to A2 not as clear—typical across the site **Note: orientation of pit incorrect, post at southwest corner.	0
351	19	0	0	Not excavated.	0
352	19	0	0	Not excavated.	0
353	19	0	0	Not excavated.	0
354	19	0	0	Not excavated.	0
355	19	0	0	Not excavated.	0
356	19	0	0	Not excavated.	0
357	19	200	2	A1—light grey loose silty sand (very powdery) with <50% gravel, clear interface to A2; A2—brown moderately compact silty loam with clay mixed in <50%; B—brown moderately compact clay (medium strength).	0
358	19	190	2	A1—light greyish brown loose silty sand 60mm; A2—Strata 1 (120mm): light greyish brown sandy silt with 50% charcoal and orange flecking, Strata 2 (160–190mm): Strata 1 mixed with clay, mid brown moderately compact; B—brown clay (weak structure).	0
359	19	0	0	Not excavated.	0
360	19	0	0	Not excavated.	0
361	19	0	0	Not excavated.	0
362	19	0	0	Not excavated.	0
363	19	280	2	A1—grey loose silty sand (powdery) to 90mm; A2—light grey loose silt (powdery) with <10% orange and black flecking; B—brown compact clay with high strength.	0
364	18	0	0	Not excavated.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
365	13	220	3	A1 to A2—predominantly clay soil with silt particles present. Top 60mm is powdery and dry, but as depth increases soil transitions more toward moist, sticky, loose and pliable clay. This contains multiple burnt clay fragments, limestone and other rock deposits, and roots <1mm are common. Stone artefacts found in northeast quadrant of Spit 2. This was found in a silty clay deposit. Clear evidence of ploughing; B— at depth of 200–220mm an easily pliable homogenous light-coloured clay is encountered.	1
366	13	160	2	A2 to B—characterised by patches of dense, compact + softer, more pliable clay intermixed with small, individual clumps of clay 3–4mm in diameter. Roots + worm activity are obvious, as are a few, isolated fragments of burnt clay.	0
367	14	250	3	Spit 1 and Spit 2: dark brown loam with increasing clay content with depth; Spit 3: dark brown clay; B—dark brown clay, waxy and cracked. Area shows evidence of ploughing.	1
368	17	270	3	Spit 1 and Spit 2: no clear A1 or A2, very loamy dark brown soil with grass roots throughout, increasing clay content with depth; Spit 3: very loamy with a large amount of clay (increasing with depth); B—dark brown cracked waxy clay.	0
369	17	270	3	Spits 1 to 3—no clear differentiation in horizons, very mixed due to ploughing, clay content increasing with depth, occasional gravels and orange clay flecking + brown clay clumps and organics; B—dark brown waxy clay with occasional inclusions **Note: entire pit very disturbed.	0
370	19	140	2	Soil is especially dry and powdery and is predominantly silt due to (probable) erosion (deposition of silt from upper slope). At a depth of approx. 90mm the silt is transitioning to a dense and compacted relatively moist clay. Roots <2mm are prevalent, as are deposits of ironstone and other stone (limestone?); B—from about 90mm depth, dense and compacted, homogenous clay is encountered and makes up a large part of the soil (80%). At a depth of 140mm, large pockets of dense, homogenous and compacted clay are encountered.	1
371	15	220	3	Compact dark brown loam, tending to dark brown clay at base, condition fair, no evidence of burning (no other notes).	0
372	15	350	3	0–50mm—greyish brown loose silty clay with 0% surface visibility; 50–220/280mm—dark brown moderately compact clay with orange and black flecking, few inclusions; 220/280–300/350mm—mostly brown clay with little evidence of flecking and even fewer inclusions than stratum above, moderately soft to moderately compact, homogenous texture.	1
373	15	290	3	Spit 1: A1 (0–40mm)—mid brown silt with grass root inclusions + occasional gravels. Mixed with A2 (A2 dark brown loam with increasing clay content at depth and orange flecking throughout); Spit 2 and Spit 3: A2—clay content increasing with depth. Pit located approximately 60m from creek line, on an undulating heavily ploughed surface.	1
374	15	290	3	Spit 1 and Spit 2: light grey silt heavily mixed with A2 (darker brown loam). Inclusions of grass roots and occasional gravels + clumps of clay (clay content increasing with depth); Spit 3: as above; B—yellow/brown waxy soft cracked clay **Note: TU is in an area of alluvial and fluvial flow and near a soil dump.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
375	15	320	3	Spit 1 and Spit 2: A1—light brown grainy silt. A2 dark brown compacted loam. Very mixed due to ploughing. Grass roots and gravels throughout. Clay content increasing with depth; Spit 3: dark brown loam with clay content increasing with depth + gravels; B—dark brown/yellow clay, waxy and cracked **Note: TU on a slope in a fluvial zone, heading southeast to creek.	2
376	15	300	3	0–60mm—loose, greyish brown silty clay topsoil with 0% surface visibility; 60–300mm—greyish brown clay with orange, black and white flecking, few inclusions, compact **Note: no obvious change at 300mm. TU is situated on the edge of a raised mound which may be artificial and the test unit may comprise redeposited clay (?).	0
377	15	340	4	Spit 1: A1—light brown silt onto an A2 of dark brown loam, with grass roots and occasional gravel inclusions; Spit 2 and Spit 3: light brown with increasing gravel and clay content with depth. Clay clumps coming up at base, gravel at interface; Spit 4: gravel interface plus clay; B—orangey brown waxy clay with a lot of inclusions. Pit shows evidence of disturbance, gravels possibly alluvial.	6
378	15	100	1	Dry compact sand mid brown (A) coming down onto red brown compact clay with large crack. Shallow skeletal soil on rise next to small creek.	7
379	15	300	3	Dark brown dry sand, quite loose (Spit 1), dark brown sand, some moisture, compact (Spit 2), dark brown sandy loam tending to dark brown compact clay at base (Spit 3).	0
380	15	400	4	0–80mm—slightly deeper than usual topsoil, greyish brown, loose and moderately soft, silty clay, 0% surface visibility; 80–400mm—dark brown to greyish brown clay with some orange, black and buff flecking, few inclusions, moderately compact. Becomes moister from about 350mm to 400mm but no change in matrix at 400mm. Has the feel of a clay that has been under water/in boggy ground and has possibly been trampled.	0
381	15	360	4	Spit 1 and Spit 2: light brown silty clay, loose, friable; Spit 3: same as Spit 2; Spit 4: same as 2; Spit 4—Context 2: change in soil at 330mm deep, orange silty clay, slightly more compact than above, increasing clay with depth, possibly A2 or mixture with clay.	0
382	12	280	3	0–50mm—silty clay topsoil, loose, moderately soft to moderately compact, dark greyish brown, 0% surface visibility; 50–200/250mm—brown clay with orange and black flecking, some charcoal and mica fragments, few inclusions, compact; 200/250–280/300—brown clay, softer and moister than clay above (moderately soft to moderately compact), distinguished by decayed limestone inclusions (10%) up to about 10mm length.	4
383	12	200	2	0–50mm—very dark brown silty clay topsoil, loose and moderately soft to moderately compact, possibly ploughed, 0% surface visibility; 50–120/150mm—very dark brown clay with some silt, orange, soft stone inclusions (5–10%), very compact; 120/150–200—very dark brown clay, very compact, homogenous, orange flecking and few inclusions.	0
384		0	0	TU ID not allocated during excavation.	0
385		0	0	TU ID not allocated during excavation.	0
386		0	0	TU ID not allocated during excavation.	0
387		0	0	TU ID not allocated during excavation.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
388	2	150	2	0–50mm—shallow topsoil with 0% surface visibility; 50–70/100mm—compact brown clay with orange and black flecking, few inclusions; 70/100–150mm—yellowish brown clay, compact, orange flecking, few inclusions.	0
389	2	300	3	0–50mm—shallow topsoil, 0% surface visibility; 50–200/220mm—compact brown clay with orange flecking and few inclusions; 200/220–300mm—compact brown clay with orange and black flecking, more homogenous and a little lighter than the horizon above.	1
390	2	250	3	0–50mm—shallow, loose topsoil, clay, 0% surface visibility; 50–200mm—dark brown compact clay, orange flecking with few inclusions; 200–250mm—dark yellowish-brown clay with orange and black flecking, compact.	0
391	2	220	2	A1 and A2—surface is dry and powdery clay transitioning to slightly more moist, sticky clay at a depth of 80–90mm. Roots are present. Burnt clay fragments occur rarely (brick-like in texture); B—at a depth of 180–220mm a compacted silty homogenous moist clay is encountered.	0
392	7	250	3	A1 and A2—topsoil and horizon to a depth of 180–250mm is predominantly medium-sized particles and clumps of moist, rich dark silt. At a depth of approx. 180mm, pockets of clay that is compacted and sticky begin to form, predominantly in southwest corner; B—at approx. 250mm depth below surface, a dense, compacted, stick and moist homogenous light brown clay is encountered.	0
393	7	220	2	0–50mm—shallow clay topsoil, loose, 0% surface visibility; 50–100/150mm—brown clay with a reddish tint, varying depth, moderately compacted, orange and black flecking, few inclusions; 100/150–200/220mm—reddish brown clay, moderately compact, orange, buff, and black flecking, inclusions concentrated in northwest corner (soft, buff-coloured stone fragments averaging 5–20mm in length).	0
394	7	240	3	Spit 1: dark brown compacted loam with A1 and A2 + clay mixed together; Spit 2 and Spit 3: dark brown loam mixed with orange/brown clay base. No inclusions in the layers besides clay.	0
395	8	350	4	0–50mm—topsoil, brown clay, loose, 10% surface visibility; 50–250mm—dark brown moderately compact clay with few inclusions, orange and buff flecking; 250–350mm—brown clay matrix, moderately compact, with high proportion of fine and coarse inclusions, possibly decayed limestone/dolomite. About 30% clay in matrix.	0
396	8	300	3	Spit 1: A1—0–50mm dark brown silty loam with grass roots onto A2 of dark brown loam; Spit 2 and Spit 3: A2—southern area of TU degraded limestone with increasing clay content with depth; B—excavated into c35% degraded limestone, 50% dark brown waxy clay, no cracking.	0
397	9	190	2	0–30mm—grassy topsoil; 30–170mm—dark brown silty clay, compacted; 170–190mm— dark brown silty clay, compacted; southern half of Spit 2: roundish pieces of timber (most likely to be historical [sample taken]).	0
398	9	270	3	Spit 1: A1—0–40mm mixed with A2, light brown silt mixed with mid brown loam + occasional gravel; Spit 2 and Spit 3: A2—clay content increasing with depth; B—waxy brown/yellow/orange clay with cracks. Pit shows evidence of ploughing, very disturbed.	0

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
The numbers for TU 399 to 499 were not allocated during test excavation. This appears to have been a counting error in the field. To maintain consistency between the context recording sheets and this report, we have retained the numbering system applied.					
500	1	350	4	0–70mm—dark greyish brown topsoil, loose and moderately soft, silty clay, 0% surface visibility; 70–200/250mm—dark brown clay, moderately compact,10% inclusions (soft orange stone, manganese, and rounded pebbles), possible plough zone; 200/250–250mm—dark brown clay, moderately compact, few inclusions compared to stratum above and more homogenous, moister with depth, buff, orange and black flecking.	0
501	1	300	3	0–60mm—dark greyish brown silty clay, loose and moderately soft, few inclusions, 0% surface visibility; 60–200mm—dark greyish brown clay, moderately compact, orange, buff and black flecking, few inclusions, possible plough zone; 200–300mm—dark brown clay, slight yellowish tint, orange and black flecking, few inclusions, more homogenous and consistent matrix than stratum above, moister.	0
502	1	200	2	0–50mm—dark greyish brown silty clay topsoil, loose and moderately soft, few inclusions, 0% surface visibility; 50–150/180mm—dark brown clay, moderately compact, few inclusions, orange flecking mostly; 150/180–200mm—brown to yellowish brown clay, orange flecking, consistent texture, few inclusions **Note: the topsoil and A2 horizons appear to have been truncated, leaving the underlying clay less than 200mm below the surface.	0
503	1	350	4	0–60mm—dark brown silty clay topsoil, loose and moderately soft, 0% surface visibility, few inclusions; 60–300mm—dark brown clay, moderately compact and clumpy, few inclusions and little flecking; 300–350mm—dark brown clay with decayed limestone (buff coloured) inclusions in concentrated patches (about 10%), compact.	0
504	1	150	2	0–60mm—greyish brown topsoil (silty clay) loose and moderately soft, few inclusions, 0% surface visibility; 60–80/100mm—dark brown moderately compact, orange flecking, rounded pebble inclusions (few in number), possible remnant plough zone; 80/100–150mm—yellowish brown clay, compact, some orange flecking, few inclusions, consistent texture **Note: topsoil and A2 appear to have been truncated, and a shallow plough zone remains above the underlying clay.	5
505	1	200	2	0–70mm—dark greyish brown silty clay, loose and moderately soft, few inclusions, 0% surface visibility; 70–160mm—dark brown clay, moderately compact, little presence of flecking, few inclusions; 160–200mm—dark brown clay with slight yellowish tint, orange and buff flecking, moderately compact, few inclusions **Note: A1/A2 horizons appear to have been truncated.	0
506	1	250	3	0–50mm—greyish brown silty soil, loose and moderately soft, few inclusions; 50–200mm—dark greyish brown clay, few inclusions, moderately compact; 200–250mm—brown clay with slight yellowish tint, moderately compact, few inclusions and little flecking, consistent texture.	0
507	16	400	4	Spit 1 and Spit 2: light brown soft aerated silt with grass roots between 0–40mm + gravels starting at 50mm and increasing with depth; Spit 3: light grey silt with inclusions increasing with depth; Spit 4: light grey silt with inclusions occurring at approx. 350mm. Pit is alluvial in the ridgeline area, rock deposits in the surface.	3

Test Unit (TU)	PAD #	Final Depth (mm)	Number of Spits	TU Description	Stone Object Count
508	16	160	2	A1 and A2—pockets of soft, powdery silty loam with pockets of dense, compacted clay. Clay is sticky and large cracks are present. It is here that the loam is trapped and builds up to form channels of softer material. Throughout the silty loamy channels, roots <1mm are common. At a depth of 160mm, few silt channels are present. The base consists of dense, homogenous sticky dark brown clay.	0
509	16	200	2	0–30mm—light greyish brown topsoil, silt with very low clay content, loose, few inclusions, 10% surface visibility; 30–120mm—light greyish brown silty soil, moderately soft, few inclusions; 12–150/200mm—interface between silt above and bedrock below, comprises decomposing bedrock within a silt matrix, 50% + stone content, fragmentary; 150/200mm—bedrock (uneven, broken and friable surface).	2
510	16	310	3	Spit 1: light brown silt with grass root inclusions (0–30mm), gravels at 40mm (alluvial, aerated and soft); Spit 2: A1 (from 100–150mm) and A2—light grey soft aerated soft silt with increasing gravel content with depth; Spit 3: A2—bedrock chunks and slabs occurring at c270mm.	4
511	16	100	1	A1—layer of predominantly clay with few silt particles. Silt forms within cracks in clay as channels. Clay is moist and sticky, and especially dense and compact. At depth of 80–100mm, the clay pockets dominate. Clay is homogenous and dark brown in colour. Few silt channels remain.	0
512	13	180	2	0–60mm—dark brown clay topsoil, loose and moderately soft, few inclusions, 0% surface visibility. 60–150mm—dark brown clay, moderately soft and moist, few inclusions and little flecking; 150–180mm—reddish brown clay, moderately soft and moist, few inclusions and some orange and black flecking.	2
513	13	200	2	Compact brown clayey loam (A horizon) coming down onto dark brown clay (B horizon) at base—soil quite dry. Clay contains cracks.	2
514	13	200	2	0–50mm—greyish brown silty clay, loose, few inclusions, 0% surface visibility; 50–170mm—greyish brown silty clay, more clay content with depth, moderately soft to moderately compact, few inclusions, little flecking; 150–200mm—yellowish brown clay, moderately soft and moist, some orange and black flecking, few inclusions, one rounded pebble (70mm).	4
					582

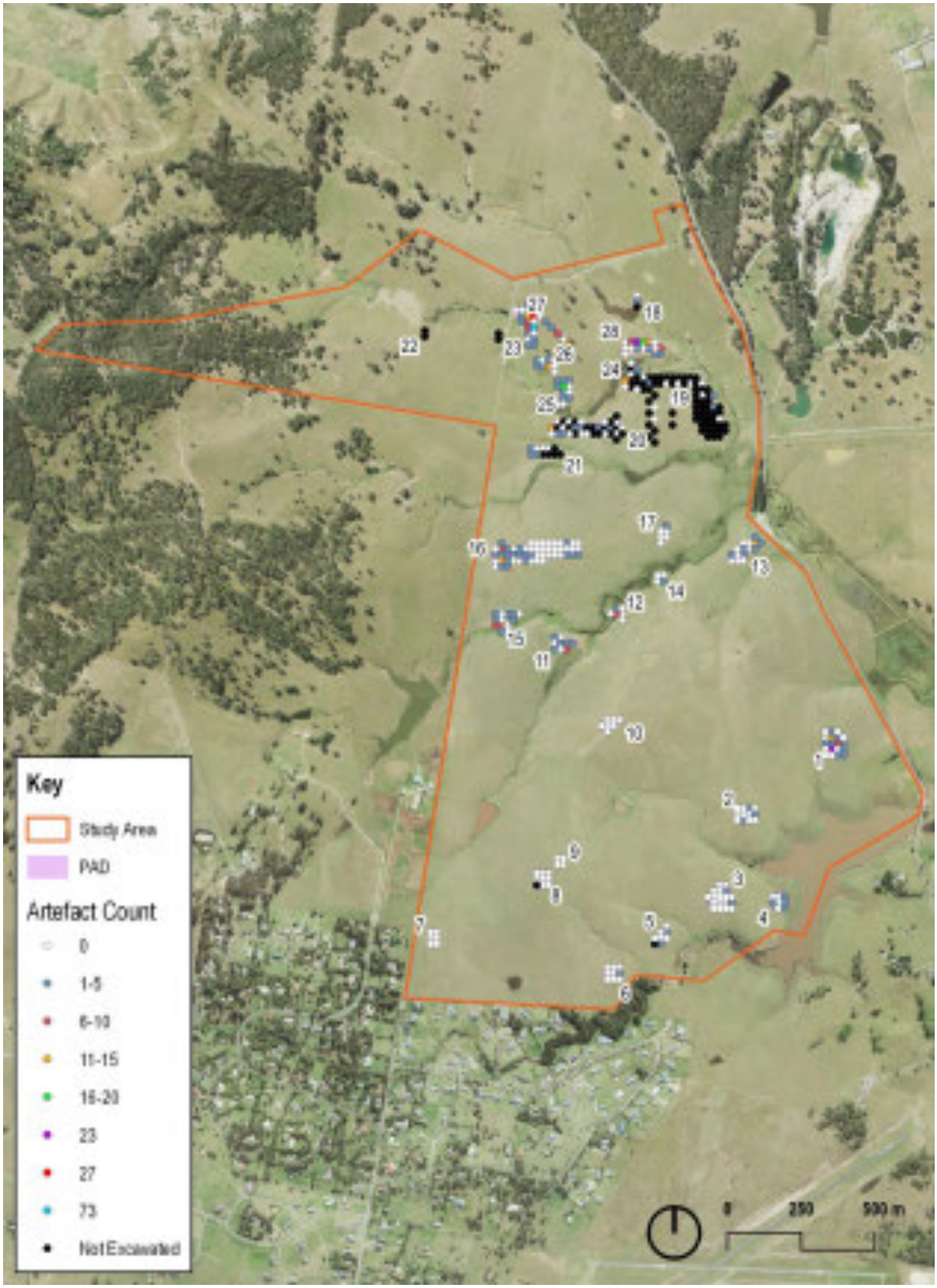


Figure 3.23 Artefact numbers and TU locations across the study area. (Source: Nearmaps with GML additions, 2021)

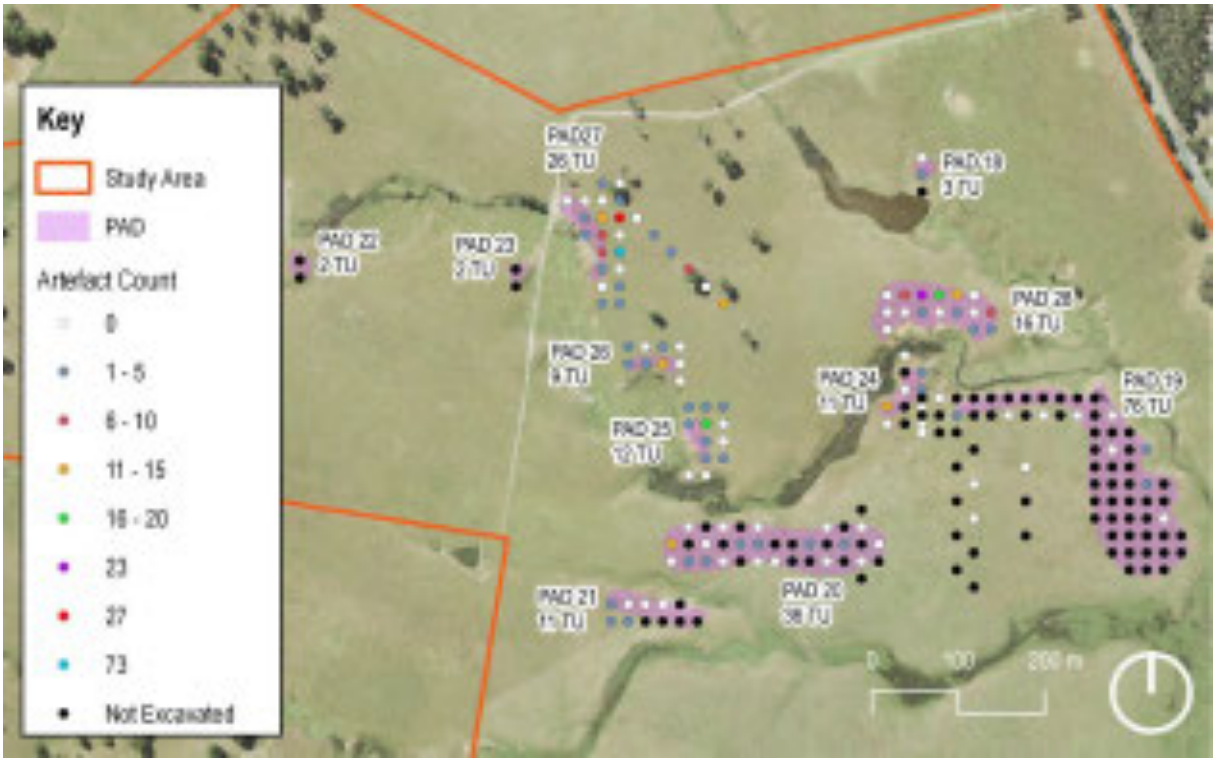


Figure 3.24 Artefact numbers and TU location, northern portion of the study area. (Source: GML, 2021)

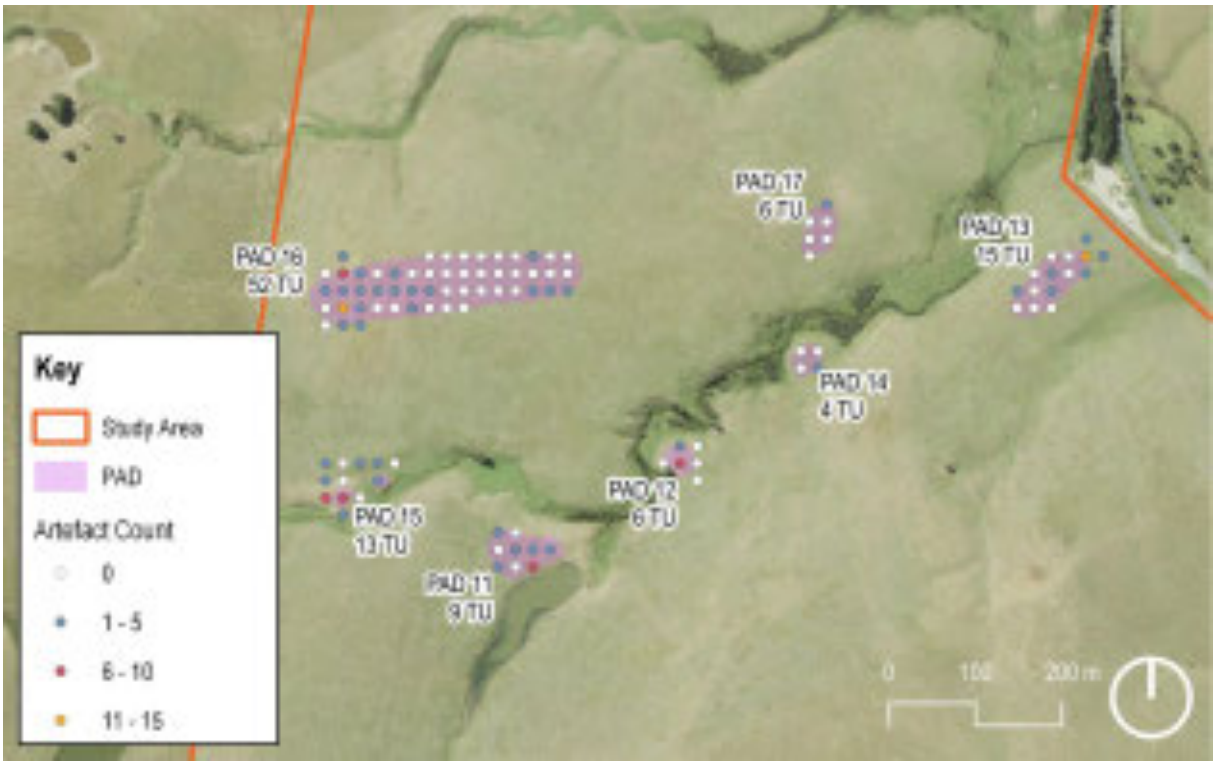


Figure 3.25 Artefact numbers and TU location, central portion of the study area. (Source: GML, 2021)

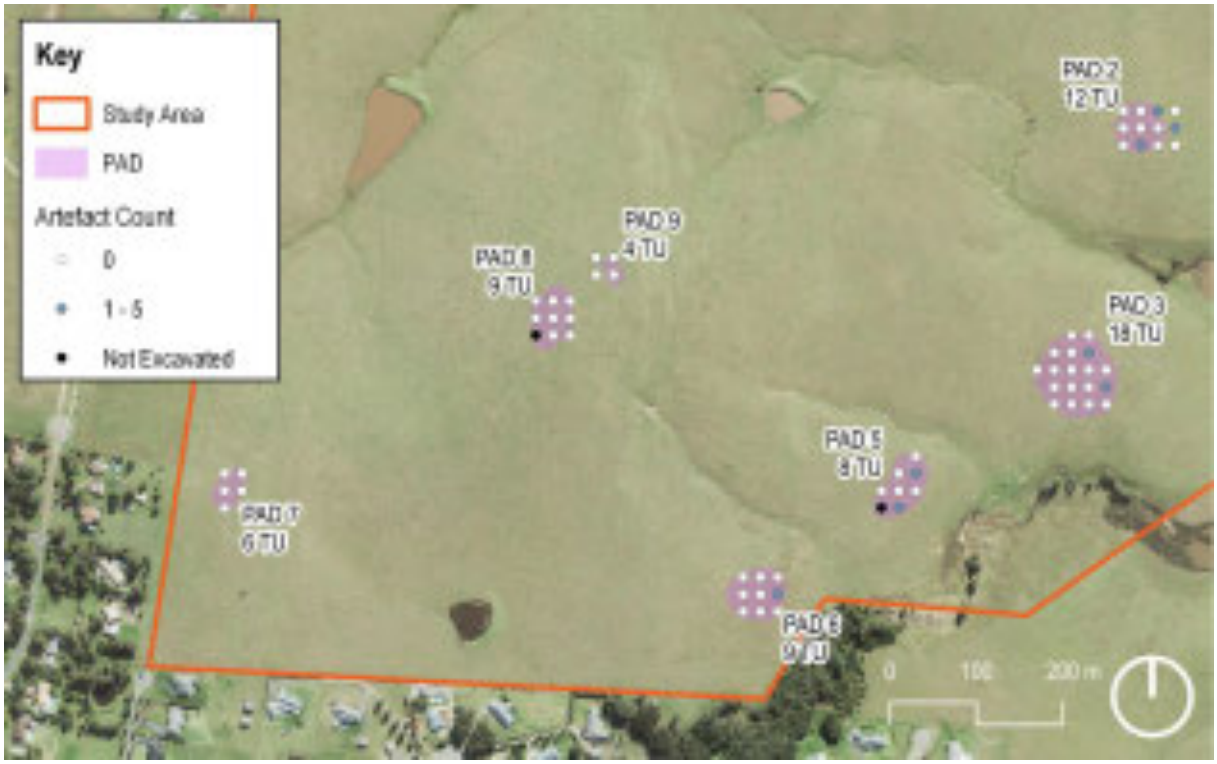


Figure 3.26 Artefact numbers and TU location, southwestern portion of the study area. (Source: GML, 2021)

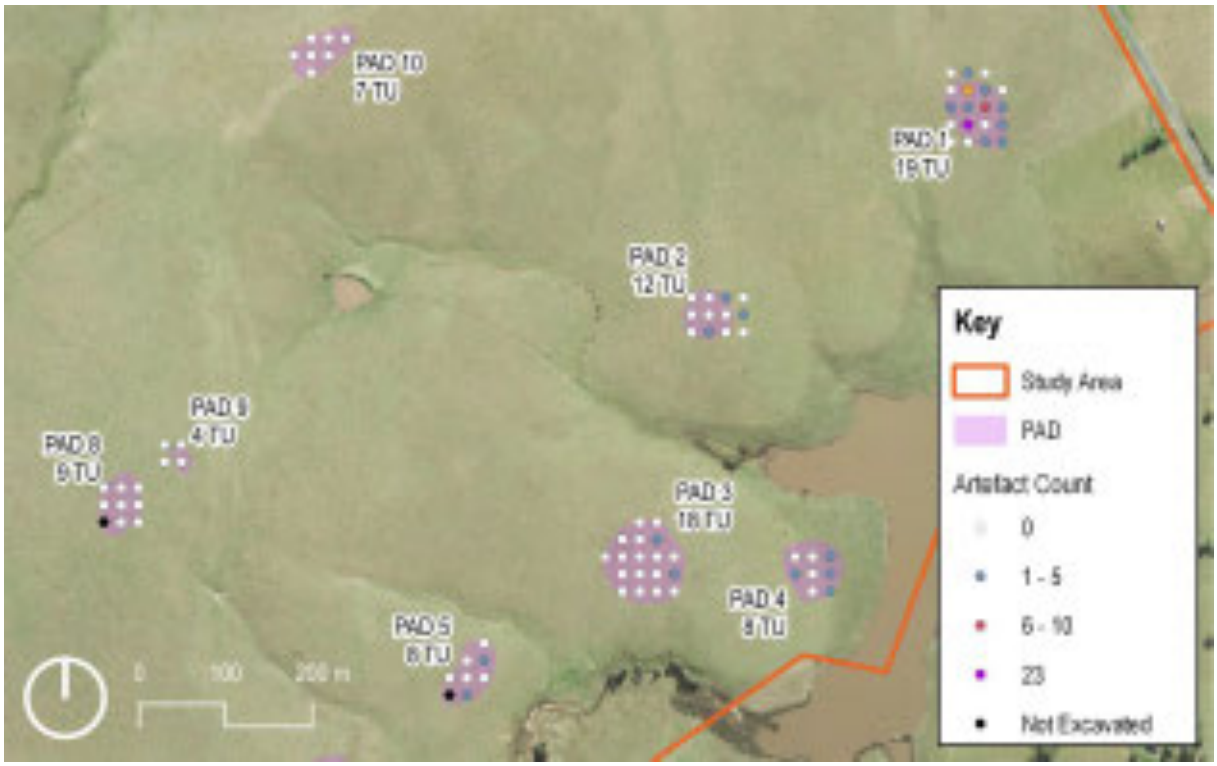


Figure 3.27 Artefact numbers and TU location, southeastern portion of the study area. (Source: GML, 2021)

3.9.1 Landscape and Landforms vs Soil Landscape

The study area is located across three soil landscapes as defined by Kovac and Lawrie[17]—the Hunter, Branxton and Rothbury landscapes (Figure 2.6). Each of these landscapes was subject to archaeological testing. Correlation between the numbers of TU excavated, their mean excavated depth, soil landscape and landform is presented in Table 3.10.

It was found that Branxton soils covered the greatest proportion of the study area and, as such, 50% (n=158) of TUs were excavated on this soil landscape. The Hunter soil landscape covered the second largest portion of the study area, with a total of 108 (35%) TU excavated. The remaining TU were excavated on the Rothbury soil landscape, with 47 (15%) TU excavated.

Rothbury soils were present on all but one of the 10 landforms (90%) identified across the study area. Branxton soils were identified on eight of the 10 landforms (80%), while Hunter soils were only identified on six of the 10 landforms (60%).

Table 3.10 TU by Landform and Soil Type. Number of TU Excavated and Average TU Depth (mm).

Landform	Hunter Soils		Branxton Soils		Rothbury Soils	
	# TU	Depth	# TU	Depth	# TU	Depth
Creek Bank	5	196	19	267	1	600
Flat	2	280	0	–	0	–
Hilltop	3	280	3	250	4	230
Lower Gully	0	—	1	340	0	—
Lower Slope	5	274	23	243	2	275
Mid Slope	6	189	22	262	1	270
Raised Flat	59	275	41	229	3	267
Ridgeline	6	289	27	152	27	209
Upper Slope	22	227	22	196	9	226
Total TU	108		158		47	
Average depth		251		242		297

3.9.2 Soil Conditions (Integrity and Condition)

As expected, the depth of soil across the study area varied according to the soil landscape, the level of erosion and the extent of historical impact any particular location had been subject to. The mean depth of TU excavation was 263mm, thus an average of just over two and a half spits per TU was excavated (Table 3.11). As can be seen, the minimum and maximum depths of spits across the study area varied greatly, where some initial spits were only 10mm in depth—a consequence of soil erosion, a small number of spits were greater than 150mm—the result of lack of precision in the excavation of those units. Most TUs required the excavation of two or more spits before sterile B horizon clay was reached, whilst two TU reached over 600mm (the deepest TU was 660mm).

Table 3.11 Overview of all TU Spits and Depths (mm). NB data not available for five TU.

	Spit 1	Spit 2	Spit 3	Spit 4	Spit 5	Spit 6
Count of TU	313	280	133	39	8	2
Min	40	20	20	20	50	100
Max	150	200	150	190	160	160
Average	101	94	83	74	91	130

Soil Stratigraphy

Whilst examining three soil landscapes, the stratigraphic sequence of soil horizons followed that normally observed within the Sydney and Hunter regions—that is, a typical duplex soil. An organic A1 horizon overlay a bleached A2, which abutted sharply against B horizon clay. There was evidence of impacts and/or mixing of soil, for example lack of A1 and A2 in some cases (eg TU 28, 206 and 322). Classification of stratigraphic horizons associated with the soil landscapes occurred in the field following the formal definitions in Bannerman and Hazelton.[18]

Branxton

The Branxton soil landscape comprises undulating low hills and contains small drainage lines. A lack of erosion is associated with this landscape type. The Branxton soil landscape is located in the central portion of the study area and was largely uniform, as predicted by Kovac and Lawrie[19] in their definition of the soil landscapes of the region. The Branxton soil recorded during excavation can be described as follows:

- A1—light to dark brown, soft to moderately compact, sandy loam topsoil (fine-to-medium particle size) which is approximately two to 130 millimetres deep. Twenty-two per cent of pits contained charcoal flecking. Grass root inclusions occurred throughout this layer.
- A2—light grey-brown to brown, generally moderately compact to compact clayey loam/fine grained sandy clay loam/silty loam with high clay content that was approximately 100 to 6000 millimetres deep. Fifteen pits contained ironstone gravels or river pebbles, 14 pits contained charcoal and six contained both. Clay content tends to increase with depth and pits that have more compact soils tend to correspond with high clay content. Charcoal and burnt clay were present in three pits, but no hearth features were identified.
- B—brown, mottled light and mid-to-dark brown/orange, dense, sticky compact clay. The moisture content and compaction of the clay increased with depth. Some gravel was present in approximately 30% of pits at the interface between A2 and B. The clay in some pits showed evidence of burning in its discolouration (to orange) or the presence of charcoal on the interface between A2 and B.

The transition from A1 to A2 horizons was unclear in the majority of TUs. In addition, 18 pits (21%) exhibited mixing, clay and/or river stone/unusual gravel inclusions in the A1 horizon. This may reflect ploughing regimes mixing the A1 and A2 horizons, and, in areas of exposure, erosion and mixing caused by trampling (cattle). Near to the drainage lines, it likely shows minor deposition and erosion of material through flood events leading to soil movement, deposition and mixing.

In some cases little to no evidence of an A1 horizon was identified, as it had been entirely removed through erosion processes. In five cases little to no evidence of an A2 horizon could be identified, as it had been entirely removed, along with the A1 horizon, through erosion processes. In these cases,

younger deposits were found to have been deposited to form a new A1 (ie windblown and slope transported deposits), leaving little to no evidence of the residual soil.

Unlike the transition from A1 to A2, the transition from A2, and in some cases, from A1 to B (natural clay), was moderately clear across the study area, with significantly less evidence of soil mixing. Overall, the condition of the Branxton soils is good, with moderate to low integrity (mixing of loam and clay evident).

Hunter

The Hunter soil landscape is located within the Hunter River floodplain, in the southeastern portion of the study area. It comprises alluvial soils. Minor erosion occurs on watercourse banks, and the landscape is an aggrading one. One-hundred-and-ten TU were excavated and soil units identified within the Hunter soil landscape zone of the study area. The Hunter soil recorded during excavation can be described as follows:

- A1—light greyish, brown, fine grained, loam with charcoal flecks throughout, loosely compact, silty loam. Many TUs have clay content in this topsoil as a result of being heavily ploughed, and the topsoil is thus often dark brown in colour (eg TU 132 and 136).
- A2—light brown loose sandy/silty loam with charcoal flecks throughout, moderately compact; or dark brown clayey loam. TUs 32, 43, 48, 57 and 127 for example, exhibited clay content of 40–50%, increasing with depth within the A2. In some cases, gravel was also mixed into this stratum with the clay, indicating disturbance.
- B—dark orange or brown clay, sometimes mottled but mostly brown, dry, compact but friable and poorly structured. There is a clear transition between A2 and B. At TU 30, the excavation did not reach clay, due to the physical limitations of pit depth (c500mm) and pit dimensions (500 x 500mm).

The transition from A1 to A2 horizons was unclear in the majority of TU, reflecting a significant degree of disturbance caused by historical land use practices, and natural deposition and erosion processes. These include:

- compaction and mixing caused by trampling (cattle);
- acceleration of erosion processes through trampling;
- transportation/erosion of material from hilltops and slopes; and
- deposition and erosion of material through flood events leading to soil removal and mixing.

In some cases, little to no evidence of an A1 horizon was identified, as it had been entirely removed through erosion processes (TU 127, 128 and 133). In other cases, little to no evidence of an A2 horizon could be identified, as it had been entirely removed, along with the A1 horizon, through erosion processes. In these cases, younger deposits were found to have been deposited to form a new A1 (ie windblown and slope transported deposits), leaving little to no evidence of the residual soil. Some TUs, for example 129, 131, 134, 135, 138, 141, 213, 215, 216, 217, exhibited homogenous soil above the clay, indicating ploughing and mixing of the A1 and 2 horizons.

Unlike the transition from A1 to A2, the transition from A2, and in some cases, from A1 to B (natural clay), was moderately clear across the study area, with significantly less evidence of soil mixing. Most

pits contained gravel at various densities in various strata. Gravel in the Hunter soil landscape was noticeably correlated with disturbed soils from ploughing (TU 134).

Rothbury

The Rothbury soil landscape covers the northern and northwestern portion of the study area and comprises undulating to rolling hills. Minor sheet erosion occurs on slopes, while moderate sheet and gully erosion occurs on lower slopes. Forty-seven TUs were excavated in the Rothbury soil landscape. The Rothbury soil recorded during excavation can be described as follows:

- A1—light to dark brown, soft to moderately compact, sandy loam, approximately 50–100mm deep. Grass roots and gravel inclusions occurred in a small number of TUs.
- A2—light to dark brown, moderately compact, sandy to clay loam. Clay content increasing with depth (TU 310) and gravel inclusions.
- B—mid to dark brown clay. Interface between A2 and B was clear—some TUs had gravel inclusions in the interface (TU 308). Few to no inclusion within the B horizon.

Taphonomy

An assessment of erosion associated with the three soil landscapes indicates that, in general, where soils remain in a context undisturbed by historical activities, archaeological deposits should be recoverable from their original depositional location.

Cropping activities across the study area were generally found to have resulted in not only the mixing of A1 and upper part of the A2 soil horizons, but also led to an acceleration of natural erosion processes (wind, water, cattle etc), resulting in the removal of all A1 soil in some cases. Excavation of TUs in the northern portion of the study area identified an absence of the A2 soil horizon in a zone between two second order water courses. The removal of the A2 soil horizon is probably the result of a major flood event(s) associated with these watercourses.

Evidence of ploughing was identified in all three soil landscapes, but the distribution of evidence was significantly biased towards the southern two-thirds of the study area (Branxton and Hunter soil landscapes). Only 4% of the TU on the Rothbury soil landscape presented evidence for ploughing. The relative lack of evidence (of ploughing) across the Rothbury soil landscape is likely to reflect a combination of the following factors:

- relatively little cropping activity across the northern third of the study area due to the unsuitable nature of the landscape (prone to flooding etc); and
- the destruction of evidence (of ploughing) by flood events.

Evidence of ploughing was primarily identified on elevated landforms (Table 3.12), supporting the hypothesis that evidence of ploughing in low-lying flood prone areas had either not occurred to any great degree, or soils had been remixed through other morphological processes such as water action and some sheet wash erosion.

Table 3.12 Evidence of Ploughing by Landforms.

Landform	Branxton	Rothbury	Hunter	Count	%
Creek Bank	1		2	3	5
Flat			1	1	2
Hilltop			2	2	4
Lower Slope	1			1	2
Mid Slope	5		1	6	11
Raised Flat	4		17	21	38
Ridgeline	12	2		14	25
Upper Slope	3		5	8	14
COUNT	26	2	28	56	100
%	46	4	50	100	

3.10 Stone Artefact (Object) Analysis

The artefacts excavated during test excavation were analysed by Mr Neville Baker of Baker Archaeology. The results of the artefact analysis is summarised below, the full report is in Appendix I.

3.10.1 Artefact Recording

Requirement 19 of Heritage NSW's Code of Practice states that a range of prescribed stone artefact attributes must be recorded. These attributes include the number of artefacts found, recording date, artefact material, artefact type, platform surface, platform type, termination, cross-section and measurements of length, width and thickness. These attributes have been recorded for the stone artefact assemblage recovered during testing, with additional attributes added as necessary to allow for additional analysis. A description of the attributes recorded for each artefact is provided in Table 3.13 below. The data for each artefact is listed in Appendix I.

Table 3.13 Methodology for Stone Artefact Analysis.

Attribute	Description
Provenance Data	Provenance data recorded included the zone, TU and spit. A separate ID number was assigned to each artefact. The excavation date and names of the excavators were also recorded.
Raw Material Data	Stone raw materials were placed into the following categories: • other fine-grained siliceous rocks (FGS): these include chert, chalcedonic chert and one unknown stone raw material, possibly basalt. • quartz: a silica-based mineral. • quartzite: metamorphosed sandstone. • sandstone: sedimentary rock composed of sand. • silcrete: an indurated soil duricrust, formed when silica cemented soil sediments. • indurated mudstone/silicified tuff/chert (IMSTC): fine-grained siliceous rock formed when volcanic ash fell into water or fell onto land and was washed into water. The tuff and other sediments subsequently hardened and silicified. Chert is formed through the impregnation of silica through sedimentation caused by the process of deep weathering. This category is assigned when these vast range of materials cannot be distinguished from one another. • silicified wood, fossil wood: the original wood structure was replaced by silica in solution. • unidentified: other rock types which could not be identified.

Attribute	Description
Cortex	Cortex describes the 'weathered' outer skin of a raw cobble or stone material. An estimate of the amount of cortex on each artefact was recorded.
Size and Weight	The maximum size of each artefact along its longest dimension was measured and recorded to the nearest 0.5mm. The maximum dimension of artefacts was then grouped into 5mm interval categories. The length, width and thickness of each artefact was also recorded to the nearest 0.5mm.
Artefact Type	Artefacts were placed into grouped categories of the artefact 'type' which included: • flakes: has a complete set of flake landmarks, including a bulb, termination, most of the lateral margins and platform. • bipolar flake: a flake formed by an anvil which is characterised by crushed opposable ends. • proximal flake fragment: the initiation of a flake consisting of platform, but with no termination. • longitudinal split: a split flake which occurs during the process of production. • distal flake fragment: a broken flake fragment from its distal end. • medial flake fragment: a broken flake fragment without a platform or distal end, but with an identifiable ventral surface. • flaked piece: where dorsal scars are present but with no striking platform. • retouched artefact: these were recorded where scars from retouch occurred more recently in the reduction sequence than the artefact being retouched. • cores: a piece of stone used to produce flakes which have one or more remnant flake scars. • modified cobble: this included cobbles which appeared to be modified to be used as a tool (eg chopper), rather than as a core. • hammerstone. • grinding plate.
Flake Shape	The shape of flakes was recorded using length and width measurements according to the following definitions: • wide: wider than long (W>L). • length equals width (L=W). • long: longer than wide (L>W). • elongate (El): flakes twice as long as they were wide, or more than twice as long as wide
Flake Platform	Flake platforms were identified in the categories listed below. • cortex: where the platform is covered in cortex. • plain (AHIMS category Flake Scar): where the platform has a smooth surface. • scarred (AHIMS category 'More than one flake scar'): where multiple flake scars are on the platform surface. • faceted: where the platform has many small flake scars. • focal: where the platform is very small. • partly crushed or crushed (AHIMS category 'shattered'): where the platform has been crushed during knapping.
Flake Terminations	Several flake termination types were recorded for this assemblage and are listed below. • feather: where the termination tapered to a thin end. • hinge: where the termination formed a rounded end. • step: where the termination formed an abrupt end. • plunging: where the termination removed the bottom of a core.

Attribute	Description
Flake Cross-section	The cross-section was recorded for each flake and included the following categories: • high angle/strong ridge. • high angle/weak ridge. • low angle/strong ridge. • low angle/weak ridge.

3.10.2 The assemblage generally

In total, 575 flaked stone artefacts and 35 shattered fragments of raw material were recovered during the test excavation. The dominant raw material across the Anambah study area is silcrete, totalling three-quarters of the assemblage (Figure 3.28). The assemblage is made up of 262 flakes, 222 flake fragments, 57 flaked pieces, 15 retouched artefacts, 19 cores and 35 shattered fragments. The majority of artefacts were less than 30mm in size.

Barker[20] found evidence of backed artefact manufacture on site, consistent with other Holocene sites across the Hunter Valley. The assemblage contained 13 backed artefacts in varying stages of completeness. This included seven Bondi points and one geometric microlith. Detailed classification of the remaining five backed artefacts was not possible.

Raw Material	Count	% Count	Total Weight (g)	% Weight
Silcrete	429	74.6%	4196.9	89.90%
IMT	128	22.3%	340.0	7.28%
Quartz	11	1.9%	101.3	2.17%
Quartzite	4	0.7%	28.4	0.61%
Chert	2	0.3%	1.6	0.03%
Petrified Wood	1	0.2%	0.3	0.01%
Grand Total	575	100.0%	4668.5	100.00%

Figure 3.28 Artefact raw material proportions (excluding shatter and gravel). (Source: Barker Archaeology 2015)

3.10.3 Lithic distribution

Artefact data revealed that the northern portion of the study area contained the highest artefact density per TU. The Rothbury soil landscape averaged 17 artefacts/m^2, whereas Hunter soil landscape averaged five artefacts/m^2, and Braxton soil landscape three artefacts/m^2. A high proportion of artefacts were recovered from Spit 2, although this patterning was not consistent across the study area. The spatial distribution of lithics by TU is shown in Figure 3.23 to Figure 3.27. With respect to the patterning Barker[21] concluded:

> *Test pits have identified a contrast between a south western area with no archaeological evidence and a northern group of sites mainly associated with Rothbury soil landscape where there is abundant archaeological evidence of primary extraction of local terrestrial silcrete cobble sources and associated backed artefact manufacture. The test excavation evidence points to extensive artefact distributions in the middle to northern areas with artefact density highest in the northern area.*
>
> *The northern group of sites offers the greatest conservation and research potential owing to the presence of relatively uncommon evidence of primary silcrete reduction. While no one site has distinctive archaeological quarrying evidence, the silcrete cobble sources should be considered quarry sites following the definition of Hiscock and Mitchell 1993 and any recommendation for site conservation should consider their inclusion with associated archaeological evidence.*

3.11 Excavation Interpretation and Discussion

3.11.1 Addressing Research Questions

A series of research questions were posed to guide the investigation of the First Nations archaeological resources within the study area. The test excavation results allow us to answer key aspects of these questions, as outlined below.

9. What are the characteristics of soil horizons across the study area?

a. How has the land use history impacted the study area and survival of soils and thus, archaeological material?

b. Is there a difference in the soil landscape's integrity across the study area due to different ploughing regimes?

The following statements can be made with respect to the levels of impact associated with the study area:

- the northern third may not have been impacted by cropping to the same extent as the southern two-thirds of the study area—it is more likely that this reflects a lack of cropping activity in this portion of the site, although it could be a result of the loss of ploughing impact due to post ploughing flood events and other erosion processes;
- the central and southern thirds have been cropped repeatedly over the past 50 years and have a moderate to high level of soil disturbance through the A1 and upper A2 horizons;
- erosion by watercourses has resulted in a high level of localised impact;
- all dam construction has resulted in a high level of localised impact;
- all 4WD tracks have resulted in a high level of localised linear impact; and
- fence construction and animal tracks have resulted in a moderate to high level of impact along their courses.

Collectively, the localised impacts have had a moderate to high impact to the integrity of soil landscapes. Analysis of aerial imagery for the central and southern two-thirds of the study area suggests that these areas have been repeatedly ploughed over a period of c39 years—resulting in a moderate to high impact on a significant portion of the study area. Evidence of ploughing was identified in 56 (18%) test units, with a number of landform-associated impact zones. The highest concentration of TUs impacted by ploughing were associated with the following landforms:

- mid-slope landforms (six TUs);
- raised flat landforms (21 TUs);
- ridgeline landforms (14 TUs); and
- upper slope landforms (eight TUs).

The integrity of soil across these landforms varied from low to moderate, with the highest impact areas located on ridge landforms. The landforms in the northern portion of the study area have greater levels of integrity and condition.

a. At each location, is the deposit consistent? Or does it possess characteristics that tell of different depositional events?

The deposits were consistent across the study area, with an organic A1 horizon overlay a bleached A2, which abutted sharply against B horizon clay. Variations in depth did occur, based on the soil landscape. The test excavation program did not find evidence of different depositional events.

a. Are there three soil landscapes (Hunter, Branxton and Rothbury) present? Are these found where they are mapped at the regional level? Does the archaeological deposit vary on each landscape? How do these soil landscapes interact and does the archaeological deposit vary by soil landscape?

The three soil landscapes (Hunter, Branxton and Rothbury) were identified during the course of excavation, with little deviancy from the original mapping (Figure 2.6). The archaeological deposit (lithics) identified on each soil landscape did vary considerably (Table 3.14), with the largest number of stone artefacts recovered from TUs located on the Branxton soil landscape (65%), followed by Hunter (22%) and Rothbury (12%).

Table 3.14 Artefacts Excavated across Soil Landscapes.

Soil Landscape	Surface Area m2 (approx.)	% of total surface area for study area	# TUs	% of total TUs excavated	# Artefacts	% of total number of artefacts recovered
Branxton	1,235,000	51	158	50	365	65
Rothbury	700,000	29	47	15	68	12
Hunter	490,000	20	108	35	125	22
Total	2,425,000	100	313	100	558	100

The number of cultural lithics recovered from the Hunter soil landscape was approximately triple that recovered from the Rothbury soil landscape. The spatial distribution of artefacts potentially reflects preferential landform and soil landscape use. Differences in the landforms are apparent between the north, centre and south of the study area. In general, the steeper, higher and southwest facing slopes in the southern third do not appear to have been used for activities which resulted in an archaeological signature. The central zone with its broad crest and slopes east contains localised deposits of cultural lithics. The flat terraces adjacent to the incised waterways in the northern part of the study area yielded the highest densities of material. An initial hypothesis for this concentration associated use of this zone with extraction and processing of raw silcrete cobbles.

Use of these landforms may also be associated with other factors, such as annual solar (heat) levels, leading to preferential landform selection (eg Figure 3.8), the availability of water, proximity to other natural resources, such as flora and fauna, and other traditions associated with intangible aspects.

a. Is there alluvium present (other than that identified through field survey)? How deep is the alluvium and, what are its characteristics? Is there evidence for former alluvial terraces and

'ancient' modifications to the water courses? How does the alluvium interact with the associated soil landscape?

Alluvium was identified (during the survey and test excavation) across three landforms: a lower gully, ridgeline and upper slope. When present on lower gully landforms, alluvium was generally 310–340mm deep. The deposit was light brown silt with gravel. Gravel and clay content was found to increase with depth. On ridgelines, alluvium was approximately 90–560mm deep and was a light grey silt with bedrock gravel. The gravel content also increased with depth. When present on upper slopes, alluvium was 40–200mm deep and a light brown soft aerated silt. Gravel inclusions were present, increasing with depth. Across all landforms, the alluvium appeared to be associated with the Hunter soil landscape, despite the formal mapping (refer to Figure 2.6) in some areas indicating the Rothbury soil landscape being present.

a. Are buried sand sheets or buried alluvial terraces present within the study area? If so, is any archaeological material associated with them? Is stratigraphy present in alluvial deposits?

Buried sand sheets or buried alluvial terraces were identified during the test excavations. PAD 16 contained artefact rich buried alluvium, which was not identified during the archaeological survey.

10. What are the characteristics of archaeological deposits across the study area?

a. What types and densities of archaeological materials are present? What is the nature (type) of the deposit? Is the deposit stratified? Is the deposit associated with a particular flood event? Does the deposit have different degrees of archaeological potential with depth?

The predominant archaeological material excavated from the study area were silcrete and IMT flaked stone artefacts. There was a small proportion of large primary reduction flakes. Backed artefacts and manufacturing debitage were found across the study area. Artefact densities were highest in the northern portion of the study area, in the Rothbury soil landscape where there was a greater availability of (raw) silcrete. No artefacts were found in the TU in the southwestern portion of the study area. Test excavation did not find evidence of stratified deposits. Nor was there any a consistent variation with depth.

a. What, if any, evidence other than stone is present for First Nations occupation of this region? Is it correct to infer that stone equates to First Nations use of a landform? Or were other landforms without stone used by First Nations people?

b. How was stone used on site? Is there a relationship between artefact creation and use of landscape and/or landform?

c. Are stone deposits spatially discrete within areas of PAD? Does this provide information in terms of First Nations social laws and patterning of site use?

Stone artefacts were the only type of archaeological evidence recorded during test excavation. However, RAPs on site discussed the four viewing locations detailed in Section 3.4.2. Whilst stone artefacts were found across all landforms of the study area, suggesting the entire study area was used by First Nations people, there was preference for undertaking activities associated with stone manufacturer, use and discard on some specific landforms in the northern part of the study area.

a. Can deposits be dated? What is the antiquity of the evidence?

No specific archaeological feature or deposit was identified that could be carbon dated. The current project did not have scope for OSL dating. A chronology for site use has been inferred through the functional analysis of the lithics recovered. This provides a general broad understanding of site use.

Given that backed artefacts were recovered during test excavation, it is suggested the primary manufacture and use of dates to the middle to later Holocene (Eastern Regional Sequence Phase 2), from say 5,000 BP onward. Whilst the area was likely used by from dates prior to this time point, there is not a substantial archaeological deposit associated with earlier raw materials, and/or technology which suggest intense habitation, from say the Pleistocene.

a. What is the source of the artefactual stone at any particular site? How does this correlate with the regional research into stone resources undertaken (Appendix C)?

The test excavation results indicate that some of the silcrete, particularly in the northern part of the site, had been derived from a local source. The artefact analysis indicates that these sources can be classified as quarries. This concurs with the regional stone resource study (prepared prior to test excavation), that identified remnant terraces with a height datum between 10m and 20m AHD could contain sources of raw silcrete suitable for artefact manufacture. This hypothesis concurs with the outcomes from test excavation (contrast Figure 2.7, with AHD, against the outcomes from PAD 28, Figure 3.24).

11. How can the deposit be interpreted?

a. Is there evidence of archaeological spatial patterning of deposits on continuous landforms? How long has it taken for such evidence to be created?

b. Does spatial patterning, if present, provide any evidence for First Nations social rules and laws?

A general pattern of higher artefact density in sites in the northern portion of the study area was observed during test excavation. This is in contrast with a low density of artefacts in the southeastern portion of the study area and an absence of artefacts in the southwestern portion of the study area. A large variation in artefact numbers was found within each site. This patterning requires additional open area excavation to recover sufficient artefact numbers to allow for statistical analysis associated with functional use.

a. How do archaeological deposits relate to the hill-slope shade analysis? Can this analysis be used to inform seasonal use of this landscape?

In general, those locations in the northern part of the study area have higher levels of solar energy. There could be a link between this factor and seasonal use, although at the current time it is not possible to draw any definitive conclusions.

a. If archaeological deposits are absent from a landform in which they were expected to exist (ie soils have good condition and integrity), what does this mean in terms of First Nations landscape use?

Archaeological deposits were predicted in the southwestern portion of the study area. The general low density and absence of artefacts in the southwest and small number of artefacts in the southeast portion of the study area suggests these areas were not regularly used by First Nations people for activities that resulted in artefact discard. The high number of artefacts recovered in the northern portion of the study area indicates that this area was more favoured by First Nations people for these activities. Within the northern portion of the study area, spatial patterning of artefacts aligns with the predictive model, with artefacts were located in close proximity to water.

Further study and investigation is required to draw detailed conclusions from this patterning, but this can form the basis for future research into cultural landscape use.

a. What are the physical attributes of the deposit (stone, carbon, clay or other)?

b. For stone deposits, what are their physical characteristics and do they indicate a specialised use? Is there a difference in stone tool types between the different locations tested?

Stone tools were the only artefacts recovered during test excavation. The majority of stone artefacts were silcrete. Significant artefact concentrations were found in the northern portion of the study area, and the evidence suggested primary reduction of silcrete for artefact manufacture. This contrasted against the evidence from the centre of the study area, which could be connected with use of artefacts.

12. What does the archaeological deposit tell us about First Nations use of this specific landscape?

a. How do long-term patterns of First Nations population movement through this valley (as described by First Nations Elders and early ethnographers) correlate with archaeological deposits?

b. Was the study area used for large-scale First Nations gatherings? Does landform use correlate with the number of people inhabiting the study area (ie if large groups gathered, then did they use the larger landforms for habitation)?

Discussions during consultation (ACHAR Section 3) revealed that First Nations people travelled into this region from the northwest for ceremonies. These ceremonies may relate (but have not been confirmed) to the restricted site located within the 2021 study area (AHIMS site 37-6-2777). No TUs were placed near the restricted site and no archaeological evidence was identified which would indicate population size within the study area.

Consultation also revealed that the study area would most likely have been used for hunting during flooding events. During or following these events, wild game would congregate on the high ridges, and could have been driven downhill towards the flooded locations (thereby preventing its escape). No archaeological evidence was discovered during test excavations to corroborate these facets of landscape use (nor was it expected).

13. Can the archaeology be interpreted in a regional context?

a. Where did raw stone materials originate from? Have they been brought into the study area? From how far away has the stone been brought?

b. How old is the archaeological deposit and how does this relate to regional use of this landscape?

c. What is the relationship of the archaeological material within the study area to the region; in particular, the Pleistocene/Holocene relationship with Stockton Bight and other sites of great antiquity in the region?

d. Is there evidence of trade in connection to stone deposits?

Silcrete is the dominate material found in the study area. It was most likely originated from local sources. The archaeological deposit in the study area date to the Holocene period. This is consistent with regional archaeology. Insufficient evidence was recovered to comment on potential trade routes, but again this could form the basis for future investigations into the cultural landscape connections of this place.

14. Is the archaeological deposit culturally significant?

a. What is the heritage value of the deposit, both scientifically and culturally?

b. How does the First Nations community view and value the deposit identified?

The northern portion of the study area hold both cultural and scientific value. PADs 19, 20, 21, 24, 25, 26, 27 and 28 in particular have scientific value as they contained evidence of a full range of reduction stages. This included high knapping concentrations and evidence of primary reduction. The area surrounding the restricted area has significant cultural value—its scientific value has not been assessed, as it was not part of the test excavation program.

15. Is there a deposit worthy of conservation or of future research?

a. Where and what deposits should be conserved for future generations?

b. Which deposits should be subject to more extensive investigations?

c. How should a boundary be drawn around a site? Are identifiable places present within a cultural landscape?

The restricted AHIMS site should be conserved. Where possible, archaeological deposits within the northern portion of the study area could also be conserved if possible conserved with the planned development. Some PADs require test excavation to confirm or determine their archaeological significance. Table 3.15 list the PADs which require further investigation.

16. Does the deposit provide a link between scientific hypotheses and First Nations cultural views?

Further consultation is required to determine this.

3.11.2 Identified First Nations Archaeological Sites

The results of the survey and consequent test excavation have confirmed a range of archaeological sites, some with further archaeological potential. Some area with archaeological potential require further archaeological exploration to confirm the precise nature and extent of archaeological deposits. A list of all identified First Nations archaeological sites, and sites with archaeological potential (that is locations with First Nations objects) is presented in Table 3.15.

Table 3.15 List of PAD areas and Archaeological Sites Identified during Archaeological Survey and Test Excavation.

Site and PAD #	AHIMS #	Number of Surface Lithics	Number of Subsurface Lithics	TUs Excavated	TU Proposed but Not Excavated
PAD 1 & SAC 17	37-6-3574	0	43	220–231, 500–506	—
PAD 2 & SAC 18	37-6-3575	0	2	212–219,388–391	—
PAD 3 & SAC 19	37-6-3578	0	5	240–257, 396–398	—
PAD 4 & SAC 20	37-6-3579	0	1	232–239, 395	—
PAD 5 & SAC 21	37-6-3580	0	2	258–265	—
PAD 6	None	0	0	266–274	—

Site and PAD #	AHIMS #	Number of Surface Lithics	Number of Subsurface Lithics	TUs Excavated	TU Proposed but Not Excavated
PAD 7	None	0	0	284–286, 392–394	—
PAD 8	None	0	0	277–283	—
PAD 9	None	0	0	275–276	—
PAD 10	None	0	0	205–211	—
PAD 11	37-6-3581	0	15	196–204	—
PAD 12 & SAC 13	37-6-3570	1	5	143–146, 382–383	—
PAD 13 & SAC 23	37-6-3582	0	21	130–139, 365–366, 512–514	—
PAD 14 & IF 11	37-6-3558	1	1	140–142, 367	—
PAD 15 & SAC 14	37-6-3571	1	14	194–195, 371–381	—
PAD 16 & SAC 15	37-6-3572	1	34	147–193, 507–511	—
PAD 17 & IF 12	37-6-3559	1	0	127–129, 368–369	—
PAD 18 & IF 7	37-6-3573	1	2	11–12	364
PAD 19 & SAC 7	37-6-3564	+50	39	40, 43, 48, 50, 57, 68, 338, 341, 343, 348, 350, 357–358, 363, 370	33–39, 41–42, 44–47, 49, 51–56, 58–67, 69–81, 337, 339–340, 342, 343–347, 349, 351–356, 359–362
PAD 20 & SAC 5	37-6-3563	+45	105	87, 89, 91–97, 100, 102, 104–105, 107–108, 110, 113–114, 116–119	88, 90, 98–99, 101, 103, 106, 109, 111–112, 115, 323–325
PAD 21 & SAC 1	37-6-3560	14	13	120–123, 328–329	124–126, 326–327
PAD 22 & SAC 4	37-6-3562	3	—	—	1–2
PAD 23 & IF 8	37-6-3555	1	—	—	3–4
PAD 24 & SAC 6	37-6-3564	25	32	30, 32	29, 31, 330–336
PAD 25 & SAC 9	37-6-3566	+30	22	84–86, 315–322	314
PAD 26 & SAC 10	37-6-3567	2	16	82–83, 307–313	—
PAD 27 & SAC 11	37-6-3568	10	137	5–10, 287–306	—
PAD 28 & SAC 8	37-6-3565	+75	67	14–28	—
IF1	37-6-3553	1	—	—	—
IF2	37-6-3554	1	—	—	—

Site and PAD #	AHIMS #	Number of Surface Lithics	Number of Subsurface Lithics	TUs Excavated	TU Proposed but Not Excavated
IF9	37-6-3556	1	—	—	—
IF10	37-6-3557	1	—	—	—
SAC 2	37-6-3561	2	—	—	—
SAC 3	37-6-2777	1	N/A	N/A	N/A
Total		+272	523	318	98

3.12 Endnotes

1 DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (24 September 2010). Page 13.*

2 2010: Appendix A.

3 Wandsnider, L.A., and Camilli, E.L. 1992. The Character of Surface Archaeological Deposits and its Influence on Survey Accuracy. *Journal of Field Archaeological.* 19(2): 169–188.

4 Fanning, P., and Holdaway, S. 2001. Stone Artefact Scatters in Western NSW, Australia: Geomorphic Controls on Artefact Size and Distribution. *Geoarchaeology: An International Journal.* 16(6): 667–686.

5 GML. 2012. *East Leppington. Archaeological Technical Report*. Report prepared for Stockland.

6 GML. 2012. *Peppertree Quarry. Archaeological Excavation Report*. Report prepared for Boral.

7 Eg refer to Thomas, J. 2001. Archaeologies of Place and Landscape. In I. Hodder (Ed). Polity Press. *Archaeological Theory Today.* Cambridge. And Darvill, T. 1999. The historic environment, historic landscapes, and space-time-action models in landscape archaeology. In P.Ucko and R. Layton (Eds). *The Archaeology and Anthropology of Landscape.* Routledge. London.

8 Memmott, P. 2007. *Gunyah, Goondie + Wurley. The Aboriginal Architecture of Australia.* University of Queensland Press.

9 Memmott 2007: Figure 5.2

10 Department of Environment, Climate Change and Water, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, September 2010, pp 24–28.

11 Department of Environment, Climate Change and Water, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, September 2010, p 24.

12 Department of Environment, Climate Change and Water, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, September 2010, requirement 16a, pp 26–27.

13 Orton, C 2000, *Sampling in Archaeology,* Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge.

14 Orton, C 2000, *Sampling in Archaeology,* Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge, p 29.

15 Orton, C 2000, *Sampling in Archaeology,* Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge, p 29.

16 Holdaway, S and N Stern 2004, *A Record in Stone: The Study of Australia's Flaked Stone Artefacts,* Museum of Victoria and Aboriginal Studies Press, Melbourne.

17 Kovac & Lawrie 1991.

18 Bannerman, S.M., and Hazelton, P.A. 1990. *Soil Landscapes of the Penrith 1:100 000 Sheet.* Soil Conservation Service of NSW, Sydney.

19 Kovac & Lawrie 1991.

20 Barker 2015—Appendix I.

21 Barker 2015—Appendix I.

4.0 Scientific Values and Significance Assessment

4.1 Preamble

First Nations heritage sites, objects and places hold value for communities in many different ways. The nature of those heritage values is an important consideration when deciding how to manage a heritage site, object or place and balance competing land use options.

In line with Australian best practice, First Nations heritage assessment must consider both scientific and First Nations community perspectives when identifying key First Nations heritage values.

This ATR concerns itself with scientific values only. Aspects of social value, historical value and aesthetic value are assessed in the Aboriginal Cultural Heritage Assessment Report (ACHAR), to which this report is an appendix.[1]

The primary guide to management of heritage places is the Burra Charter. The Burra Charter defines cultural significance as:

> *Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.*
>
> *Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.*
>
> *Places may have a range of values for different individuals or groups.*

4.1.1 Assessment Criteria

This assessment has sought to identify First Nations heritage objects and sites within the study area and obtain sufficient information to allow the values of those objects and sites to be determined. Following Heritage NSW guidelines for assessing scientific value,[2] five key criteria have been considered during the examination of the scientific value/significance of the identified sites and places within the study area. These criteria are:

- Research potential—does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?
    - Integrity and condition—integrity refers to the level of modification a site has been subject to (the cultural and natural formation process) and whether the site could yield intact archaeological deposits that could be spatially meaningful. Condition considers the state of the material, which is especially relevant for organic materials.
    - Complexity—the demonstrated or potential ability of a site to yield a complex assemblage (stone, bone and/or shell) and/or features (hearths, fire pits, activity areas).
    - Archaeological potential—the potential to yield information (from subsurface materials which retain integrity, stratigraphical or not) that will contribute to an understanding of contemporary archaeological interest, or which could be saved for future research potential.
    - Connectedness—whether the site can be connected to other sites at the local or regional level through aspects such as type, chronology, content (ie materials present, manufacturing processes), spatial patterning or ethnohistorical information.

- Representativeness—how much variability (outside and/or inside the study area) exists, what is already conserved, and how much connectivity is there?
- Rarity—is the study area important in demonstrating a distinctive way of life, custom, process, land use, function or design no longer practised? Is it in danger of being lost or of exceptional interest?
- Education potential—does the study area contain teaching sites or sites that might have teaching potential?
- Archaeological landscapes—the study of First Nations cultural sites in the context of First Nations people's interactions with the wider social and natural environment. Landscapes can be large or small depending upon specific contexts (ie local or regional conditions); they may also be influenced by First Nations social and demographic factors (which may no longer be apparent).

A statement of First Nations scientific significance has been prepared that summarises the salient values as drawn from the above criteria.

4.2 Scientific Assessment

The study area has been assessed against each of the criteria defined above.

4.2.1 Research Potential

The study area contains sufficient archaeological materials, primarily in the form of stone objects, to have research potential to contribute to increased understanding of the Anambah study area within the wider context of the Hunter Valley. It contains a diverse combination of landforms and soil landscapes, all of which hold an archaeological signature. Contrast between archaeological deposits associated with hilltops and those on low flats overlooking watercourses, and the varied soil landscapes may provide a detailed picture of middle to late Holocene landscape use, which is not normally accessible through archaeological excavation and/or research. In addition, recovery of an analysable assemblage of stone may provide new information pertaining to stone material sources and trade networks.

The assemblage of stone artefacts recovered during test excavation demonstrates that further excavation in the northern portion of the study area would be warranted. The presence of alluvial deposits and terraces provides the opportunity to investigate chronological stratigraphic sequences that may provide new evidence of changes in stone material use over the mid to late Holocene. These investigations could assist in new regional understanding of stone movement, trade and use in this landscape.

Of research interest is the patterning of archaeological materials within the study area. The results of the field survey indicated that landforms associated with the drainage lines (low flats on hill slopes) did not generally contain a continuous density of materials. Instead, objects were clustered in discrete groups, separated from the adjacent artefact concentrations by a distance of between 60m to 150m. This apparent separation of materials was investigated further during test excavation. The separation could be associated with specific selection of landforms and/or locations, which may have been governed by tradition and law. Test excavation revealed similar artefacts across these locations and was not able to reveal why the clusters of artefacts were kept separated from each other. Further investigation, including open area excavation may be better suited to analysing the separate clusters of artefacts.

Integrity and Condition

Pedestrian survey and examination of historical aerials showed that portions of the study area had been modified through historical disturbance, land clearing and agricultural activities; other portions appeared relatively intact.

The southern two-thirds of the study area has been ploughed and cropped within the last 10 years, and thus have some reduced integrity, which was verified through test excavation soil profile recording. This portion of the study area has experienced little animal or water erosion by comparison to the northern third.

The northern third of the study area does not appear to have been ploughed or cropped but has been eroded by animals and water; visible erosion scars exist along the creeks, especially on the outer bends, which have eroded stone artefacts from their buried contexts.

In zones with significant evidence for water erosion, the condition and integrity of soils has been reduced, often removing the soils entirely. The condition of the soils across all the study area following vegetation stripping and cropping remains good. Test excavation confirmed the integrity in the northern third is high, whilst the central and lower third is low. The impacts of animal grazing have resulted in localised impacts, with moderate soil condition and low to moderate soil integrity. 4WD tracks, fence post installation and dam construction have resulted in poor soil condition and low integrity in the areas of impact.

Overall, the study area is significant as it yields intact archaeological deposits, particularly in the northern portion of the study area, which could be spatially interpretable if sufficient extents were open excavated.

Complexity

The majority of archaeological deposits identified within the study area were un-stratified stone objects (albeit, in some locations, with spatially intact deposits). Other cultural evidence (hearths etc) was not identified during test excavation. There is potential for complex archaeological deposits to be present in locations with alluvial terraces, especially those with high artefact concentrations which includes PAD 24, PAD 25 and PAD 28.

Archaeological Potential

Archaeological potential was assigned to landforms across the study area before test excavation was undertaken. Some areas with PAD contained no archaeological deposits (PADs 6 to 10).

The majority of archaeological deposits have a low to moderate potential to yield spatially intact, unmodified and dense archaeological assemblages. However, test excavation identified four areas with a high level of archaeological potential (PAD 21, PAD 24, PAD 27 and PAD 28), two areas with moderate to high potential (PAD 20 and PAD 26). The remaining sites and PADs identified during field survey and consequential test excavation were attributed moderate or low potential.

Following the results of the test excavation, the archaeological potential of the study area has been reassigned. Table 4.1 lists the revised archaeological potential for each PAD. The northern portion of the study area has high potential for complex archaeological deposits.

Table 4.1 Revised Archaeological Potential following Test Excavation.

PAD #	Revised Archaeological Potential	PAD #	Revised Archaeological Potential
1	Low Two unconnected TU had higher concentrations of Aboriginal objects, which is more likely synonymous of single knapping events, rather than repeat visitation.	15	Nil–Low
2	Nil–Low	16	Moderate Only in specific locations around TU with high densities
3	Nil–Low	17	Nil–Low
4	Nil–Low	18	Nil–Low
5	Nil–Low	19	Additional assessment is required
6	None	20	Moderate to high
7	None	21	High
8	None	22	Moderate
9	None	23	Moderate
10	None	24	High
11	Nil–Low	25	Moderate to High
12	Nil–Low	26	Moderate
13	Moderate Only in specific locations around TU with high densities.	27	High
14	Nil–Low	28	High

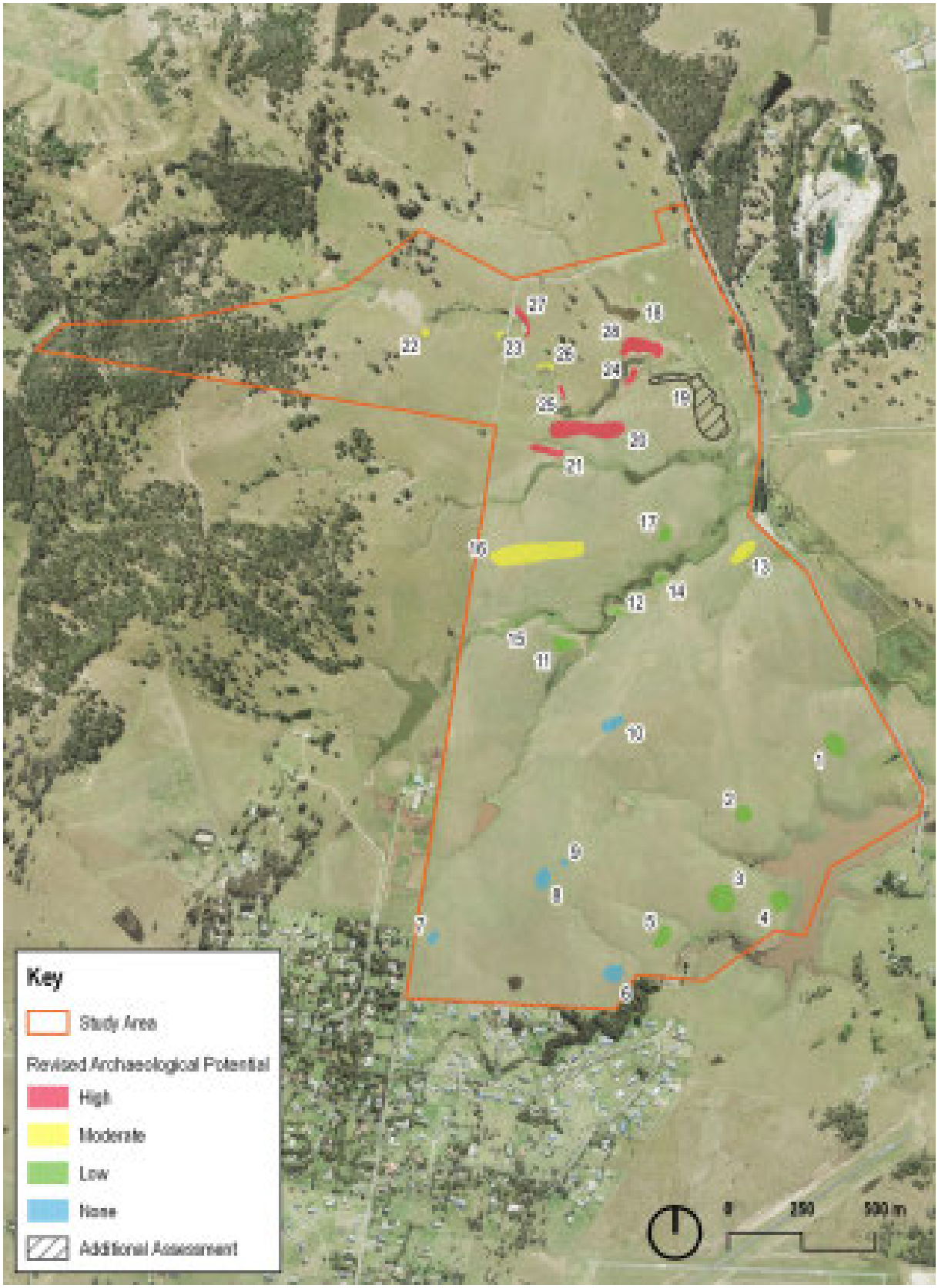


Figure 4.1 Revised First Nations archaeological potential associated with PADs and other artefact sites identified through this investigation. (Source: NSW LPI with GML additions, 2021)

Connectedness

The archaeological sites identified within the Anambah study area can be connected to those at the regional level (especially those derived from recent archaeological excavation). The sites are connected through landscape location, landform position and commonality in material content. Comparative analysis of these factors will further archaeological knowledge in this region of the Hunter Valley.

The study area meets this criterion at the moderate level. However, further research may be able to demonstrate higher levels of connectedness.

4.2.2 Representativeness

Archaeological deposits and the physical assemblage of stone within those deposits appear to be representative of wider deposits. In general, the materials themselves are representative. Deposits with a moderate or high archaeological potential have the ability to provide a suitable sample of materials for regional characterisation and comparison.

The study area meets this criterion at the moderate level.

4.2.3 Rarity

The study area appears to possess a number of unique heritage aspects that can be considered rare at the local level. The spatial nature of archaeological deposits, located at discrete distances along the creeks and lower slopes, coupled with the use of micro-landforms (low flats) on the slopes, has not been previously archaeologically identified in this region. Whilst such patterning may have been the norm for First Nations landscape use in this region, until further research and identification is undertaken, the spatially discrete archaeological deposits within Anambah should be considered rare in the immediate landscape of the study area. Any chrono-stratigraphic sequences within the alluvial terraces may also be rare at the regional level. Further research is required to provide additional evidence for this patterning, which should only be described as tentative at the current time.

The landforms across which the study area is positioned are regionally rare, providing outstanding views across the Hunter Valley to Mount Sugarloaf and adjacent mountains in the south.

The study area meets this criterion at the moderate level.

4.2.4 Education potential

The First Nations archaeological material recovered from the test excavation in the Anambah study area is significant for its ability to provide educational opportunities, both now and in the future. It has the potential to educate the general public and future residents of the Anambah development, as well as to contribute to cultural education and the reconnection of the local First Nations community with their heritage and ancestors.

The excavation of archaeological sites through stratigraphic excavation, combined with the potential to identify archaeological features other than stone objects, is of high educational value to the archaeological, First Nations, and wider communities.

4.2.5 Archaeological landscapes

Archaeological deposits associated with the drainage lines—in conjunction with oral histories associated with the surrounding hills—provide enough detail about the wider social and physical context to allow the Anambah study area to be described as an archaeological landscape. The archaeological

accumulation of materials resulting from occupation activities, with clear zones of archaeological evidence interspersed with zones with no archaeology, shows the importance of analysing the study area as a whole, rather than the sites in isolation.

The spatial patterning of archaeological deposits recovered from the study area indicates that the lower lying creek systems in its northern third were preferred locations for First Nations activities—as distinct from the higher hills in the centre and south.

The spatial differentiation between the hill tops and lower flats, habitation and use/activity zones within the landscape (with and without archaeological deposit) provide evidence of First Nations 'location/site' selection and consequential land use, possibly over a long period of time.

The landforms and soil landscapes within the study area are associated with a wide variety of ecological communities, which would have presented a varied and wide range of food sources and economic resources. The numerous ecotones are likely to have influenced First Nations people's traditional use of the place as a whole as well as of individual sites within it.

4.3 Statement of Scientific Heritage Significance

The alluvial deposit identified through survey and test excavation of the study area is of high scientific significance due to its high archaeological, research and education potential and its ability to possess intact chronological sequences. The Anambah study area is also scientifically significant as a component of a wider First Nations archaeological and cultural landscape. The opportunity for the continuous investigation of such a wide, relatively intact landscape across the Hunter Valley is rare.

Further archaeological investigation of the northern portion of the study area has good potential to further inform several aspects associated with middle to late Holocene First Nations occupation in the region around the study area.

4.4 Endnotes

1 This division is in line with OEH requirements for reporting and assessment, as defined under OEH. 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011). Section 2.4.2 and DECCW. 2010. *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010). Requirement 11.

2 OEH. 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011). Page 10.

5.0 Impact Assessment

This ATR has been prepared to support DAs and future AHIPs for the Anambah residential development. In line with Heritage NSW heritage impact assessment guidelines, the impacts arising from the potential residential development of the study area have been assessed for First Nations heritage sites, places and values.

5.1 Ecologically Sustainable Development

An objective of the NPW Act is the 'conservation of objects places and features … of cultural value within the landscape, including ... places, objects and features of significance to Aboriginal people…' (s.2A(1(b)(i)).

The publication *Operational Policy: Protecting Aboriginal Cultural Heritage*[1] provides guidance to proponents in term of Ecologically Sustainable Development (ESD). The following discussion provides an overview of ESD and its application to the current project.

> *Avoiding or Reducing Impact to Aboriginal Sites*
>
> *DECC* [Heritage NSW] *needs to balance the sometimes competing tensions between development activities and environment protection when we make decisions. Although the NPW Act gives a high level of protection to known Aboriginal objects* [and since the NPW Amendment Regulation 2010 all unknown Aboriginal sites]*, recent court decisions have reinforced that Part 6 gives the Director General (DG) express powers to consent to the damage, destruction or defacement of Aboriginal objects by development activities. The powers in Part 6 are not inconsistent with the objects of the Act or a requirement to give effect to ESD.*[2]

Heritage NSW has three policies that provide guidance with respect to avoiding or reducing impact to Aboriginal sites:

> *Policy 20*
>
> *Impacts to significant Aboriginal objects and places should always be avoided wherever possible. We* [Heritage NSW] *will promote the development (or amendment) of proposals to avoid impacts and therefore avoid the need for s.90 AHIPs.*
>
> *Policy 21*
>
> *Where impacts to Aboriginal objects and places cannot be avoided, we will require the proponent or AHIP applicant to develop (or amend) proposals so as to reduce the extent and severity of impacts to significant Aboriginal objects and places through the use of reasonable and feasible measures. Any measures proposed should be negotiated between the proponent or AHIP applicant and the Aboriginal community.*
>
> *Policy 22*
>
> *Once all avoidance, minimisation and mitigation options have been adequately explored, we may also consider the appropriateness of any proposed actions having potential Aboriginal cultural heritage benefit. Any actions proposed should be negotiated between the proponent or AHIP applicant and the Aboriginal community.*

5.1.1 Principles of Ecologically Sustainable Development

ESD has been defined in Section 6 of the *Protection of the Environment Administration Act 1991* (NSW). This requires the integration of economic and environmental considerations (including cultural heritage) in the decision-making process. In regard to First Nations cultural heritage, ESD can be achieved by applying the intergenerational equity and the precautionary principles.[3]

Intergenerational Equity

Intergenerational equity is the principle whereby the present generation should ensure the health, diversity and productivity of the environment for the benefit of future generations.

In terms of Aboriginal heritage, intergenerational equity can be considered in terms of the cumulative impacts to Aboriginal objects and places in a region. If few Aboriginal objects and places remain in a region (for example, because of impacts under previous AHIPs), fewer opportunities remain for future generations of Aboriginal people to enjoy the cultural benefits of those Aboriginal objects and places.

Information about the integrity, rarity or representativeness of the Aboriginal objects and places proposed to be impacted, and how they illustrate the occupation and use of land by Aboriginal people across the region, will be relevant to the consideration of intergenerational equity and the understanding of the cumulative impacts of a proposal.

Where there is uncertainty, the precautionary principle should also be followed.[4]

The Precautionary Principle

The precautionary principle states that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

In applying the precautionary principle, decisions should be guided by:

- *a careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and*
- *an assessment of the risk-weighted consequences of various options.*

The precautionary principle is relevant to DECC's consideration of potential impacts to Aboriginal cultural heritage where:

- *the proposal involves a risk of serious or irreversible damage to Aboriginal objects or places or to the value of those objects or places, and*
- *there is uncertainty about the Aboriginal cultural heritage values or scientific or archaeological values, including in relation to the integrity, rarity or representativeness of the Aboriginal objects or places proposed to be impacted.*

Where this is the case, a precautionary approach should be taken and all cost-effective measures implemented to prevent or reduce damage to the objects/place.[5]

With respect to the above OEH policies (Policy 20–22) and ESD, the following sections detail specifications for conservation, potential impact, and possible reductions to impact on the identified First Nations sites and values in the current study area.

5.2 Description of Proposed Development

The Anambah Urban Release Area (AURA) was rezoned in December 2020 to facilitate the creation of a new residential community, consisting of residential and associated urban zones, along with larger lots around the floodplain and on the western slopes through to vegetated conservation land and rural lands beyond.

Progressive development to the AURA will occur over a 15–20 year period, with potential for 3,500–4,000 dwellings over a range of lot sizes and densities, supported with a local centre, sports fields and public open spaces, new roads, riparian, drainage and stormwater, utilities and associated works including landscaping.

The DB20 study area forms part of the AURA, with potential for 2,500–2,800 dwellings across a range of lot sizes and dwelling types, containing a local centre and recreation hub, a school, and key parts of the social and community infrastructure. The western extent of the study area, that sits outside the AURA and owned by DB20, is zoned rural and is not subject to proposed works and activities for urban development.

A suite of external works (for utility infrastructure and roads) to support the AURA will be required, and these will be the subject of separate assessment and reporting.

DB20 Group have reviewed previous masterplans for the AURA prepared by others and the local Council and have finalised a whole of site masterplan (3 October 2023). This plan provides context for the preparation future development applications across the AURA and specifically the DB20 owned lands. DB20DB20

Future development applications will document specific detail such as subdivision lot patterns, the footprint of works and service alignments, to establish and progressively plan for the new community. The October 2023 masterplan, informed by the land use zoning, has been used to determine the potential impacts on First Nations heritage (Figure 5.1). The key land use identifications are environmental zones, public parks, and riparian corridors. The key aspects of the masterplan include:

The key aspects of the masterplan include:

- Retention of the existing large water pond in the south-east;
- Retention of four main drainage lines with specific riparian rehabilitation integrated with stormwater management and public recreation that provide the framework for a connected green grid;
- Active and passive recreation network including sports field, open spaces and activity hubs;
- Local centre, medium density and small lot housing precincts;
- Discrete residential subdivision precincts separated by the drainage features and connected through a road and pedestrian network; and
- Larger lots associated with the floodplain and environmental areas.

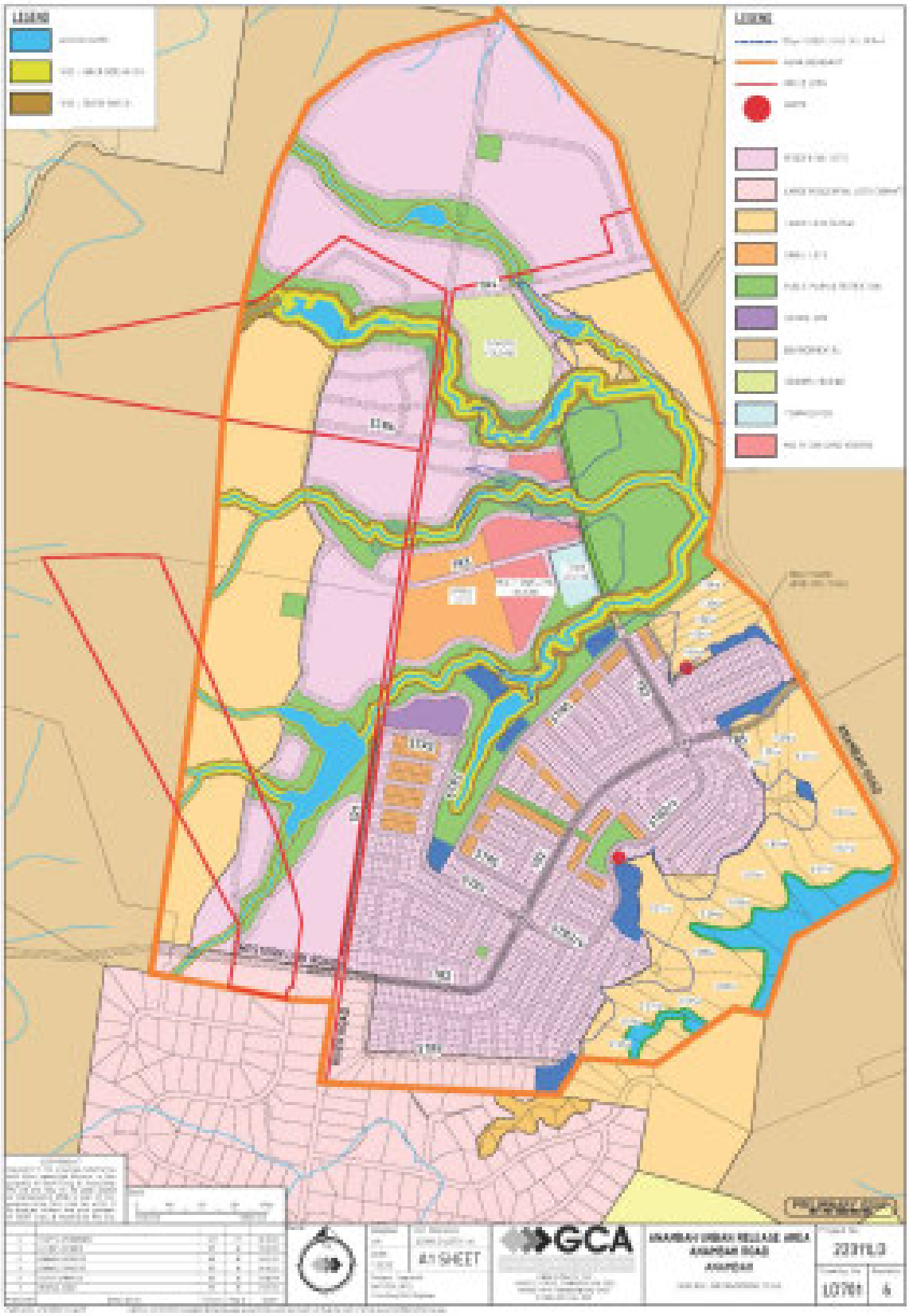


Figure 5.1 Final masterplan for the Anambah project. (Source: DB20, 2023)

Based on the draft masterplan, and as anticipated by the rezoning, a number of identified heritage sites will be impacted by the ultimate proposed development. DB20 Group, GML Heritage and RAPs have sought to consolidate investigations to date across the study area.

Whilst development will be proposed and delivered under multiple development applications (and stages within those), which will necessitate multiple applications for AHIPs, this impact assessment provides a holistic consideration to underpin future heritage management and mitigation requirements, as suggested in the subsequent section of this report.

DB20 intend to have an initial development application ready for lodgement by the end of 2022. The extent and boundaries of that application is still under consideration, but it likely to incorporate lands in the southern and central parts of the DB20 study area. Physical development for initial stages is programmed to occur after relevant approval phases by mid-2024.

5.3 Impact Assessment

The study area has potential for First Nations objects and archaeological remains. The nature and extent of these deposits has been investigated through archaeological field survey and consequent archaeological test excavation. The outcome is an understanding of the archaeological landscape associated with this place.

An assessment of the proposed development footprint against the identified First Nations archaeological sites and areas with potential is detailed below.

5.3.1 Identification of Impacts

The proposed residential development would result in impacts to all soil horizons across DB20's landholdings, from activities such as cut and fill, topsoil stripping and development for housing and its associated infrastructure.

Development activities would affect all parts of the 2012 study area, including the riparian corridors where ground disturbance activities may include removal of weeds, vegetation rehabilitation or machinery activities. DB20 are not planning any works in the portion of land included in the 2021 study area that was not in the 2012 study area. Therefore, this area, which includes the Restricted AHIMS site (#37-6-2777) will not be impacted by the development.

5.3.2 Potential Effects Arising From Proposed Impacts

The most direct, substantial impact to potential First Nations archaeological deposits will be through excavation of natural soil profiles across the study area to level it for development, and for ground levelling, service trenching and diversions across and around the public open spaces. These activities would likely destroy or remove any potential First Nations archaeological deposits, where present, within these impact areas.

While excavation in the recreational areas is not likely to be deep, this activity still has the potential to cause disturbance to subsurface First Nations archaeological objects and/or post-contact First Nations archaeology. Therefore these impacts must be considered to cause total harm to all potential First Nations archaeological deposits across the study area.

The activities of the proposed development, the degree of impacts and harm they may cause to First Nations sites are summarised in Table 5.1 below.

Table 5.1 Proposed Development Activity and Type, Degree and Consequence of Harm.

Activity	Type of Harm	Degree of Harm	Consequence of Harm
Filling of current topography.	Direct. Though this may cap a First Nations site, it would likely require removal of all organic material (ie stripping of the topsoil) and would result in soil compaction/soil disturbance activities caused by heavy machinery. This is considered harm by Heritage NSW.	Partial to total. Caps may preserve First Nations sites for posterity, but they can also harm the topsoil-bearing deposits of a site, making the lower sites in lower deposits inaccessible for many generations. Fill can crush more delicate archaeological features (although no such features have been identified).	Partial loss of value. Partial harm and loss of information, partial conservation, inaccessibility.
Modification to creek corridors and extant dams.	Direct. These works will require cut and fill to stabilise and change the banks of creeks and make safe dams.	Total.	Total loss of value. Loss of information, loss of heritage value.
Topsoil stripping for all residential development purposes.	Direct. Removal of soil horizons which may contain archaeological deposits.	Total.	Total loss of value. Loss of information, loss of heritage value.
Removal of trees and/or exotic species including grasses.	Direct. Removal of soil horizons which may contain archaeological deposits.	Partial to total.	Partial to total loss of value. Loss of information, loss of heritage value.
Sinking (via excavation) of foundations, footings, services, roadways, utilities, landscaping and other development related physical impacts (ie haulage routes, stockpiles, temporary site sheds and infrastructure).	Direct. Removal of soil horizons which may contain archaeological deposits.	Total.	Total loss of value. Loss of information, loss of heritage value.

5.3.3 Cumulative Impact

The gradual and continued loss of First Nations sites (a consequence of urban and infrastructure development) is resulting in a substantial overall cumulative impact to First Nations heritage information and values in the region.

Without appropriate management and mitigation, development across certain parts of the study area (with associated First Nations heritage) would result in the loss of information that can build further understanding of past First Nations people, their culture and subsistence in the Hunter Valley.

Appropriate future management includes conservation of site 37-6-2777, and appropriate archaeological salvage excavation of locations that will be impacted. Following archaeological excavation it is important to undertake sufficient scientific study into the recovered Aboriginal objects and associated sediments. Preparation of post excavation reporting, and then Aboriginal community and public interpretation of the outcomes should present new information on the use of this specific landscape. Provided the local

Aboriginal community is involved in this work, notably development of future interpretation, a last new body of intergenerational information will be generated.

5.4 Summary of Sites, Impacts and Effects

Impacts for all of known First Nations sites, places, landscape and values and areas of archaeological potential (as assessed in Section 4.0) are detailed in Table 5.2.[6] The correlation between Aboriginal heritage archaeological sites and intangible values against the Masterplan is shown in Figure 5.2.

Table 5.2 Impact to First Nations Heritage Sites Identified in this ATR.

Site and PAD #	AHIMS #	Type of Harm	Degree of Harm	Consequence of Harm
SAC 3	37-6-2777	None—outside area of works	None	None
PAD 1 & SAC 17	37-6-3574	Direct	Total	Total loss of value
PAD 2 & SAC 18	37-6-3575	Direct	Total	Total loss of value
PAD 3 & SAC 19	37-6-3578	Direct	Total	Total loss of value
PAD 4 & SAC 20	37-6-3579	Direct	Total	Total loss of value
PAD 5 & SAC 21	37-6-3580	Direct	Total	Total loss of value
PAD 6	None	Direct	Total	Total loss of value
PAD 7	None	Direct	Total	Total loss of value
PAD 8	None	Direct	Total	Total loss of value
PAD 9	None	Direct	Total	Total loss of value
PAD 10	None	Direct	Total	Total loss of value
PAD 11	37-6-3581	Direct	Total	Total loss of value
PAD 12 & SAC 13	37-6-3570	Direct	Total	Total loss of value
PAD 13 & SAC 23	37-6-3582	Direct	Total	Total loss of value
PAD 14 & IF 11	37-6-3558	Direct	Total	Total loss of value
PAD 15 & SAC 14	37-6-3571	Direct	Total	Total loss of value
PAD 16 & SAC 15	37-6-3572	Direct	Total	Total loss of value
PAD 17 & IF 12	37-6-3559	Direct	Total	Total loss of value
PAD 18 & IF 7	37-6-3573	Direct	Total	Total loss of value
PAD 19 & SAC 7	37-6-3564	Direct	Total	Total loss of value
PAD 20 & SAC 5	37-6-3563	Direct	Total	Total loss of value
PAD 21 & SAC 1	37-6-3560	Direct	Total	Total loss of value
PAD 22 & SAC 4	37-6-3562	Direct	Total	Total loss of value
PAD 23 & IF 8	37-6-3555	Direct	Total	Total loss of value
PAD 24 & SAC 6	37-6-3564	Direct	Total	Total loss of value
PAD 25 & SAC 9	37-6-3566	Direct	Total	Total loss of value
PAD 26 & SAC 10	37-6-3567	Direct	Total	Total loss of value
PAD 27 & SAC 11	37-6-3568	Direct	Total	Total loss of value

Site and PAD #	AHIMS #	Type of Harm	Degree of Harm	Consequence of Harm
PAD 28 & SAC 8	37-6-3565	Direct	Total	Total loss of value
IF1	37-6-3553	Direct	Total	Total loss of value
IF2	37-6-3554	Direct	Total	Total loss of value
IF9	37-6-3556	Direct	Total	Total loss of value
IF10	37-6-3557	Direct	Total	Total loss of value
SAC 2	37-6-3561	Direct	Total	Total loss of value
View 1	—	Direct	Partial	Partial loss of value
View 2	—	Direct	Partial	Partial loss of value
View 3	—	Direct	Partial	Partial loss of value
View 4	—	Direct	Partial	Partial loss of value
All First Nations objects inside the study area in a subsurface context (except if part of 37-6-2777).		Direct	Total	Total loss of value

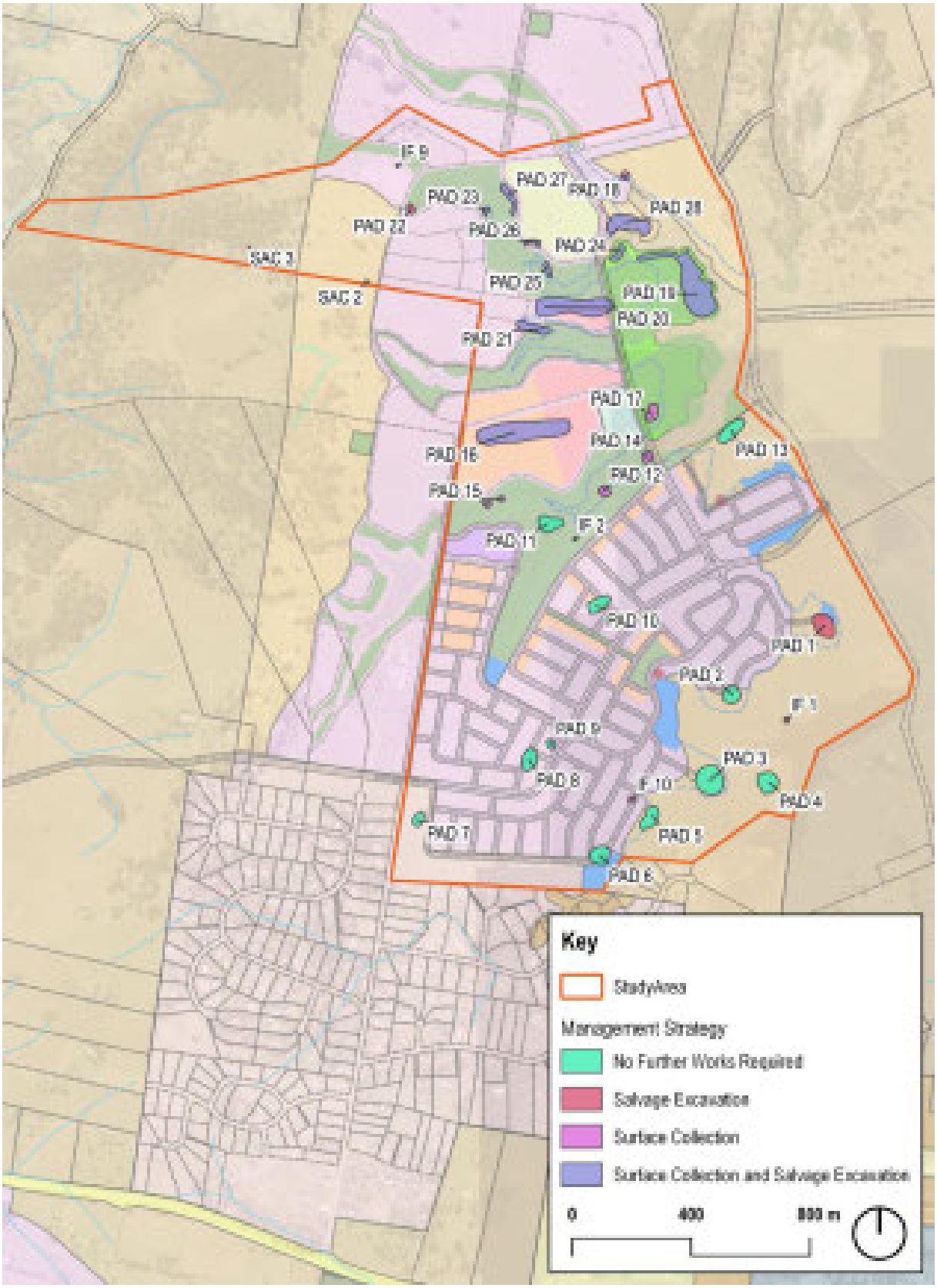


Figure 5.2 Showing the locations of Aboriginal heritage items, against the AURA Masterplan. (Source: DB20 October 2023, with GML additions)

5.5 Endnotes

1 Department of Environment and Climate Change NSW, *Operational Policy: Protecting Aboriginal Cultural Heritage*, Sydney, 2009 <http://www.environment.nsw.gov.au/resources/cultureheritage/09122ACHOpPolicy.pdf>.

2 Department of Environment and Climate Change NSW, Guide to Determining and Issuing Aboriginal Heritage Impact Permits, 2009 <http://www.environment.nsw.gov.au/resources/cultureheritage/09121AHIPGuide.pdf>, Section 3.8.

3 Department of Environment and Climate Change NSW, Guide to Determining and Issuing Aboriginal Heritage Impact Permits, 2009 <http://www.environment.nsw.gov.au/resources/cultureheritage/09121AHIPGuide.pdf>, p 26.

4 Department of Environment and Climate Change NSW, Guide to Determining and Issuing Aboriginal Heritage Impact Permits, 2009 <http://www.environment.nsw.gov.au/resources/cultureheritage/09121AHIPGuide.pdf>, p 26.

5 Department of Environment and Climate Change NSW, Guide to Determining and Issuing Aboriginal Heritage Impact Permits, 2009 <http://www.environment.nsw.gov.au/resources/cultureheritage/09121AHIPGuide.pdf>, p 26.

6 After Department of Environment and Climate Change NSW, 2010, *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales*, Requirement 11.

6.0 Management, Mitigation and Recommendations

The following management and mitigation statements are made in light of the findings of the study area inspection, background research, predictive modelling, test excavation, heritage significance assessment, relevant NSW legislation protecting First Nations heritage, the Heritage NSW Aboriginal Cultural Heritage Assessment Guidelines and consultation with local First Nations stakeholders.

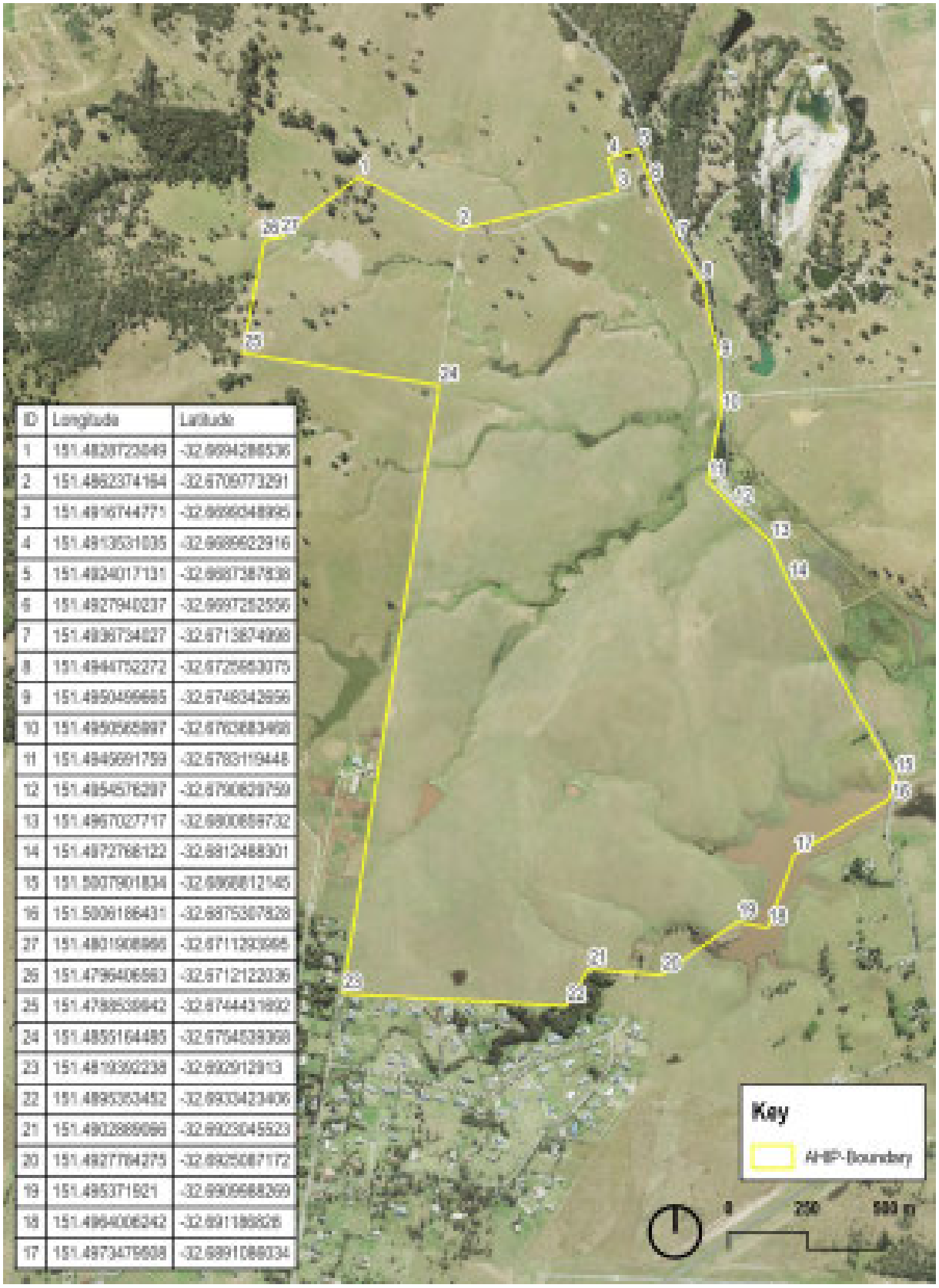
They are based on consideration of:

- legal requirements under the terms of the NPW Act, as amended—which states that it is illegal to harm or desecrate an Aboriginal object without first obtaining an AHIP from the Director-General, Heritage NSW;
- abiding by the Heritage NSW Code of Practice, which was adopted by the NPW Regulation 2019 (NPW Regulation) made under the NPW Act;
- the assessment of the First Nations cultural heritage values in the study area;
- the interests of the local First Nations community members who participated in this project; and
- the size of the study area, the size of the remaining areas with archaeological sensitivity and likely impacts posed by the project proposal.

Section 90 of the NPW Act requires DB20 to apply for an Aboriginal Heritage Impact Permit (AHIP) for the proposed development to proceed. Ideally a single AHIP would be issued by Heritage NSW for the whole of DB20's portion of the AURA; the extent of this AHIP is shown in Figure 6.1. Issue of a single AHIP provides all parties with certainty on the required management for ACH, negates the need for RAPs and Heritage to keep re-reviewing documentation, and would allow DB20 to implement a single phase of archaeological salvage across the whole development area.

GML recommends DB20 apply for AHIPs that are valid for a period of 15 years.

The following First Nations heritage management strategies should be implemented under any Section 90 AHIP issued. These mitigation strategies have been developed in consultation with the First Nations community and as a result of discussions with Heritage NSW.



ID	Longitude	Latitude
1	151.4828723049	-32.6694286536
2	151.4862374164	-32.6709773291
3	151.4916744771	-32.6699348995
4	151.4913531035	-32.6689622916
5	151.4924017131	-32.6687387838
6	151.4927940237	-32.6697252556
7	151.4936734027	-32.6713874998
8	151.4944752272	-32.6725653075
9	151.4950499665	-32.6748342656
10	151.4950565997	-32.6763683468
11	151.4949691759	-32.6783119448
12	151.4954576297	-32.6790829759
13	151.4967027717	-32.6800859732
14	151.4972768122	-32.6812488301
15	151.5007901834	-32.6868812145
16	151.5006186431	-32.6875307828
27	151.4801908966	-32.6711293995
26	151.4796406563	-32.6712122036
25	151.4788539642	-32.6744431692
24	151.4855164485	-32.6754539368
23	151.4819392238	-32.692912913
22	151.4895353452	-32.6933423406
21	151.4902889066	-32.6923045523
20	151.4927784275	-32.6925087172
19	151.495371921	-32.6909688269
18	151.4964006242	-32.691186826
17	151.4973479508	-32.6891086334

Figure 6.1 Proposed outer AHIP boundary—noting that smaller area for AHIPs, inside this larger outer boundary may be sought by the proponent. (Source: NSW LPI with GML additions, 2021)

6.1 Potential Management and Mitigation Strategies

6.1.1 Strategy—Avoidance

Avoidance of heritage sites represents the best heritage outcome as it means no impact to the identified heritage features. An avoidance strategy can be employed for the northwestern portion of the study area (including AHIMS site #37-6-2777) by excluding it from the future AHIP (Figure 6.2). In this conservation area:

- no ground works are to be undertaken;
- temporary fencing and signage should be erected during development to ensure workers and machinery avoid this area; and
- passive revegetation strategies should be used for vegetation management.

The boundary of this area is currently shown on the Anambah Urban Release Area boundary. If future avoidance is not possible, then a site specific assessment and approach will need to be developed for the restricted site.

Figure 6.2 The avoidance management strategy for the western portion of the study area, outside of the proposed AHIP. AHIMS site #37-6-2777 is within the avoidance area. (Source: NSW LPI with GML additions, 2021)

6.1.2 Strategy—Salvage Excavation

Approved Section 90 AHIPs will need to define the First Nation sites that require salvage excavation and those sites that can be managed by other strategies, such as monitoring of topsoil stripping and/or community collection of objects and public interpretation.

The assessment of the archaeological context and land impact assessment for the study area resulted in the identification of 28 test excavation areas (PADS 1–28) (refer to ATR Section 3.0 and Section 4.0). Test excavation of these locations has identified 12 areas which will require further archaeological investigation through salvage excavation, ten of which require a combined community collection and salvage excavation program (subject to the proposed works and development stages). For all future archaeological excavation undertaken under an AHIP, the extent of excavation, triggering features that necessitate further excavation and a point at which excavation should cease are defined in the ATR (Appendix D).

The extent of salvage must be tied to the objectives for the salvage. The location, reasons and nature of salvage excavation required within the study area under the AHIP are presented in this section.

Salvage Excavation Locations

To mitigate the impacts of the proposed development, salvage excavation and/or community collection should be undertaken at the sites and PADs listed in Table 6.1. Should future proposals for land use be able to conserve these locations, then archaeological work would not be required. Archaeological salvage excavation should be undertaken, within the defined areas, prior to the commencement of any earthworks in those specific locations (Figure 6.1).

Table 6.1 Identified First Nations Sites and the Extent of Required Archaeological Mitigation.

Site and PAD #	AHIMS #	Extent of Future Work Required	Indicative Extent of Archaeological Excavation	Figure #
PAD 1 & SAC 17	37-6-3574	Salvage Excavation	Initial expansion (1m^2) around TU 224. Initial expansion (9m^2) around TUs 221 and 227. Possible further expansion on the basis of the results.	Figure 6.5
PAD 2 & SAC 18	37-6-3575	None	None	Figure 6.5
PAD 3 & SAC 19	37-6-3578	None	None	Figure 6.5
PAD 4 & SAC 20	37-6-3579	None	None	Figure 6.5
PAD 5 & SAC 21	37-6-3580	None	None	Figure 6.5
PAD 6	None	None	None	Figure 6.4
PAD 7	None	None	None	Figure 6.4
PAD 8	None	None	None	Figure 6.4
PAD 9	None	None	None	Figure 6.4
PAD 10	None	None	None	Figure 6.5
PAD 11	37-6-3581	None	None	Figure 6.3
PAD 12 & SAC 13	37-6-3570	Surface collection	None	Figure 6.3
PAD 13 & SAC 23	37-6-3582	None	None	Figure 6.3
PAD 14 & IF 11	37-6-3558	Surface collection	None	Figure 6.3
PAD 15 & SAC 14	37-6-3571	Surface collection	None	Figure 6.3

Site and PAD #	AHIMS #	Extent of Future Work Required	Indicative Extent of Archaeological Excavation	Figure #
PAD 16 & SAC 15	37-6-3572	Surface collection and salvage excavation	Initial expansion (9m^2) around TUs 189 and 191 with a high density. Possible further expansion on the basis of the results.	Figure 6.3
PAD 17 & IF 12	37-6-3559	Surface collection	None	Figure 6.3
PAD 18 & SAC 16	37-6-3573	Surface collection	None	Figure 6.2
PAD 19 & SAC 7	37-6-3564	Surface collection and salvage excavation	Salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions. Up to 100m^2 to 150m^2 further salvage may be required.	Figure 6.2
PAD 20 & SAC 5	37-6-3563	Surface collection and salvage excavation	Salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions. Up to 100m^2 to 150m^2 further salvage may be required.	Figure 6.2
PAD 21 & SAC 1	37-6-3560	Surface collection and salvage excavation	Salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 6.2
PAD 22 & SAC 4	37-6-3562	Salvage excavation	Salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 6.2

Site and PAD #	AHIMS #	Extent of Future Work Required	Indicative Extent of Archaeological Excavation	Figure #
PAD 23 & IF 8	37-6-3555	Surface collection and salvage excavation	Salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 6.2
PAD 24 & SAC 6	37-6-3564	Surface collection and salvage excavation	Initial expansion (9m^2) around TU 32 with a high density. Salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 6.2
PAD 25 & SAC 9	37-6-3566	Surface collection and salvage excavation	Initial expansion (9m^2) around TU 320 with a high density.	Figure 6.2
PAD 26 & SAC 10	37-6-3567	Surface collection and salvage excavation	Initial expansion (9m^2) around TU 83 with a high density.	Figure 6.2
PAD 27 & SAC 11	37-6-3568	Surface collection and salvage excavation	Initial expansion (1m^2) around TUs 6, 7 and 304. Initial expansion (9m^2) around TUs 290, 295, 297 and 306 with a high density. Possible further expansion on the basis of the results.	Figure 6.2
PAD 28 & SAC 8	37-6-3565	Surface collection and salvage excavation	Initial expansion (1m^2) around TU 19. Initial expansion (a single 60m * 2m trench) connecting TUs 14,15,16 and 17. Possible further expansion on the basis of the results. Up to 120m^2 further salvage may be required.	Figure 6.2
IF1	37-6-3553	Surface collection	None	Figure 6.5
IF2	37-6-3554	Surface collection	None	Figure 6.3
IF9	37-6-3556	Surface collection	None	Figure 6.2
IF10	37-6-3557	Surface collection	None	Figure 6.5
SAC 2	37-6-3561	Surface collection	None	Figure 6.2
SAC 3	37-6-2777	This site will be conserved with zero impact	NA	Figure 6.2

Earthworks associated with the urban development outside of the archaeological mitigation areas could occur upon the acquisition of a Section 90 AHIP for those areas, once all relevant management strategies outlined in Table 6.2 are complete (where relevant to the actual location and stages of management and development over time). Should earthworks commence adjacent to an area which has not been archaeological salvaged (in line with requirements in Table 6.1), temporary fencing must be erected, with a suitable buffer, beyond the area with archaeological potential. The buffer must allow for both potential expansion of the archaeological excavation area, and provide a safe working environment for archaeologists and RAPs. Considerations for a safe work environment must consider traffic, noise, dust and adequate space for work.

The area should be clearly designated as a no-go zone. No (non-archaeological) vehicles or machinery should enter the no go zones until the archaeological works are complete.

Should any earthworks be proposed adjacent to an area requiring further archaeological works, the areas with archaeological potential (plus the suitable buffer) must be fenced (with temporary non-intrusive fencing), and clearly designated as a no-go zone. No (non-archaeological) vehicles or machinery should enter the no go zones until the archaeological works are complete.

The ARD for salvage excavation (under an AHIP) has been developed using the results from the test excavation undertaken as part of this ATR, and the original ARD which it followed, as the basis for future archaeological research. It will build upon the questions arising from the test excavation. The ARD for salvage excavation is presented in full as Appendix K to this report and is summarised below.

The extent of open excavation at each salvage site (Table 6.1) should be defined by a number of parameters. These include:

- Obtaining a statistically viable assemblage of objects. In order to undertake statistical analysis of the assemblage, a minimum of 2000 objects is required so that descriptions of raw material, artefact types, artefact size, specific tool types, etc, can be described. Excavation should commence with the expansion of TUs within the study area that demonstrated the highest densities of artefacts (>10/m^2) until densities decrease to that of a background scatter.

- Recovering a whole assemblage (or what remains across the raised alluvial flat of PAD 16) so that the activities undertaken can be properly characterised. As artefact densities vary in relation to the kind of activity undertaken, systematic core reduction and backed artefact production may result in high densities while non-specific reduction to produce unshaped tools may result in a moderate or low density. Thus, excavation areas should not be restricted to high density locations, unless a range of activities are indicated within high density areas.

- Identification of a range of activities across the target salvage excavation area. As different artefacts were used for different activities (and are made of different raw materials), a wide range of areas should be sampled in order to obtain the complete spectrum of activities. This could include focusing excavation around TUs that demonstrated modified artefact types and/or knapping floors through test excavation.

- Identification of non-artefactual evidence, such as ovens and campfires. These types of evidence are considered rare and should be excavated in full as they may lead to information about the spatial layout of a domiciliary area. Carbon may be obtained from such features, which could be dated and contrasted against artefact types, leading to dates for the use of this landscape.

- Undertaking further scientific methods of investigation, where relevant, which could include geomorphology, dating via OSL, floatation of soil samples for phytolithic analysis, archaeobotany of suitable samples from wetlands, XRF and XRD of microlithology connected to stratified sequences, XRD of stone objects, use wear analysis of stone objects, pollen analysis, magnetometer survey of the salvage area, etc.

The extent of recommended salvage excavation has been determined by the requirement to obtain an adequate assemblage of stone objects for statistical analysis and the potential opportunity to recover other features such as hearths or ovens. Extent of salvage excavation in each area has been determined by dividing the 2000 artefacts aimed to be recovered by the mean cultural lithic density recovered from test excavation. Mathematically, this would be the amount of excavation required within each area to recover a statistically viable lithic sample for analysis. However, the amount of excavation within the study area may vary depending on:

- the nature of the lithic densities (ie higher densities through salvage excavation than indicated through test excavation);
- the nature of the lithic assemblage (ie a high number of modified artefacts are recovered to allow analysis or all artefacts from a feature, such as a knapping floor, are recovered); and
- the overall depth of archaeological deposits.

Therefore, a range for the extent of the excavation area, including an upper limit of excavation size, is provided. Excavation of non-artefactual deposits, such as ovens, hearths or other features, requires a slower and more delicate approach to excavation. Therefore, excavation of these features within the identified First Nations sites should not be connected to a volume of excavation. Rather, excavation should aim to extract as much archaeological data through precise stratigraphical excavation techniques and consequential recording.

The archaeological salvage excavation of the study area should focus on the recovery of a larger lithic assemblage in order to understand the nature of occupation and use of the area, as well as the identification of features appropriate for dating (carbon—C14, or sands—OSL), and an investigation into the potential for vertical stratification of both artefacts and soils. The application of geophysical techniques, such as magnetrometry, to attempt to locate cultural burning features, such as hearths, or to demonstrate the ability of this method to do so, could also be included in this salvage excavation. Depending on the nature of the lithic assemblage and presence of any other archaeological features, it is proposed that salvage excavation of each site in the study area would be approximately 20–50m^2.

The proposed ARD for salvage excavation is presented in full as Appendix K of this ATR.

Excavation at the PADs that require further archaeological investigation (Table 6.1) will be undertaken at the same time as the salvage excavation. Works in these PADs will first excavate the remining TUs from the test excavation, and, if required, will immediately be salvaged following the salvage ARD summarised above and detailed in Appendix K.

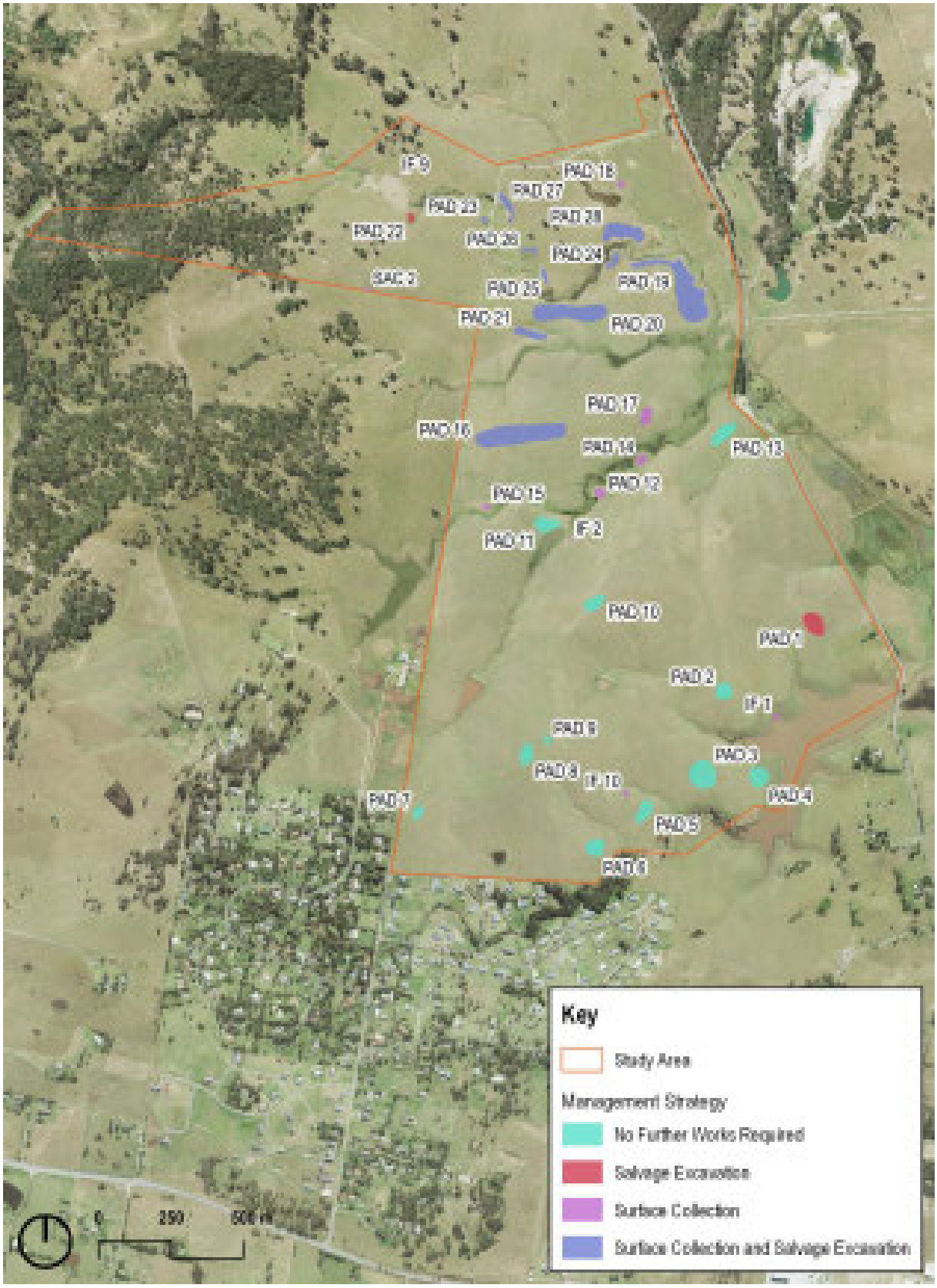


Figure 6.3 Archaeological management strategies for the study area. (Source: NSW LPI with GML additions, 2021)

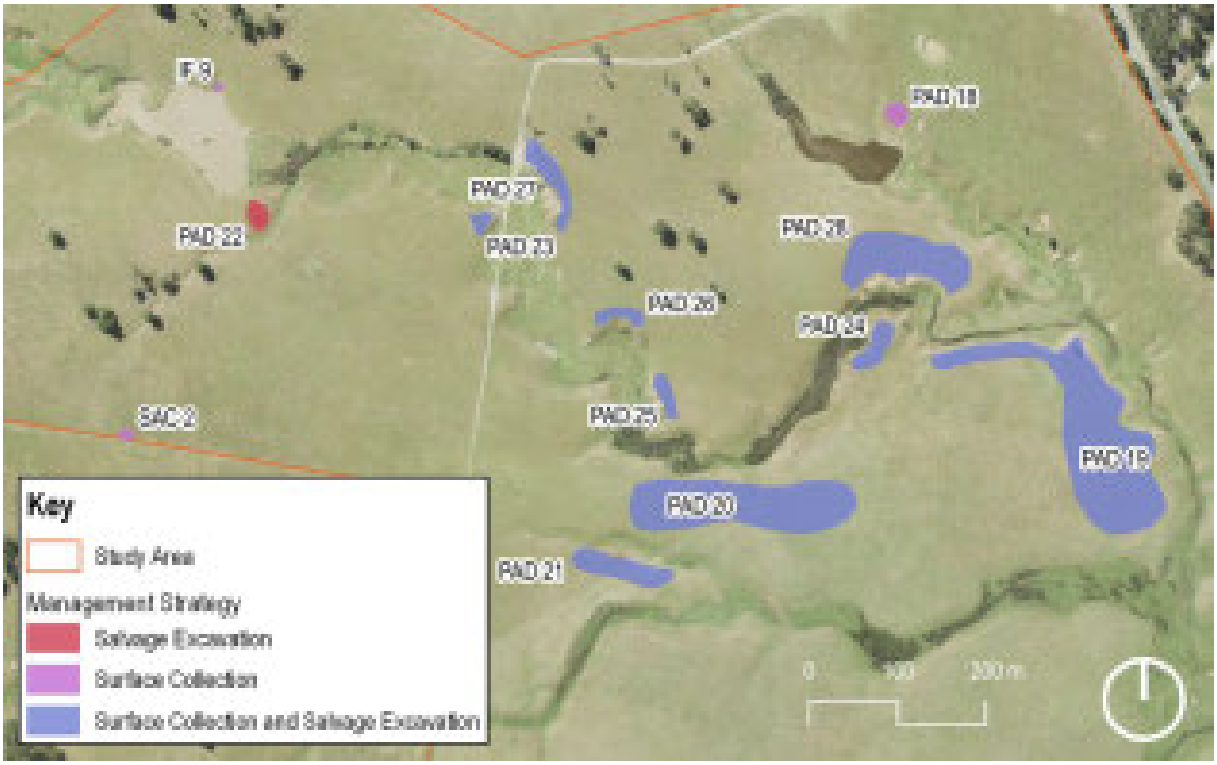


Figure 6.4 Archaeological management strategies for the northern portion of the study area. (Source: NSW LPI with GML additions, 2021)

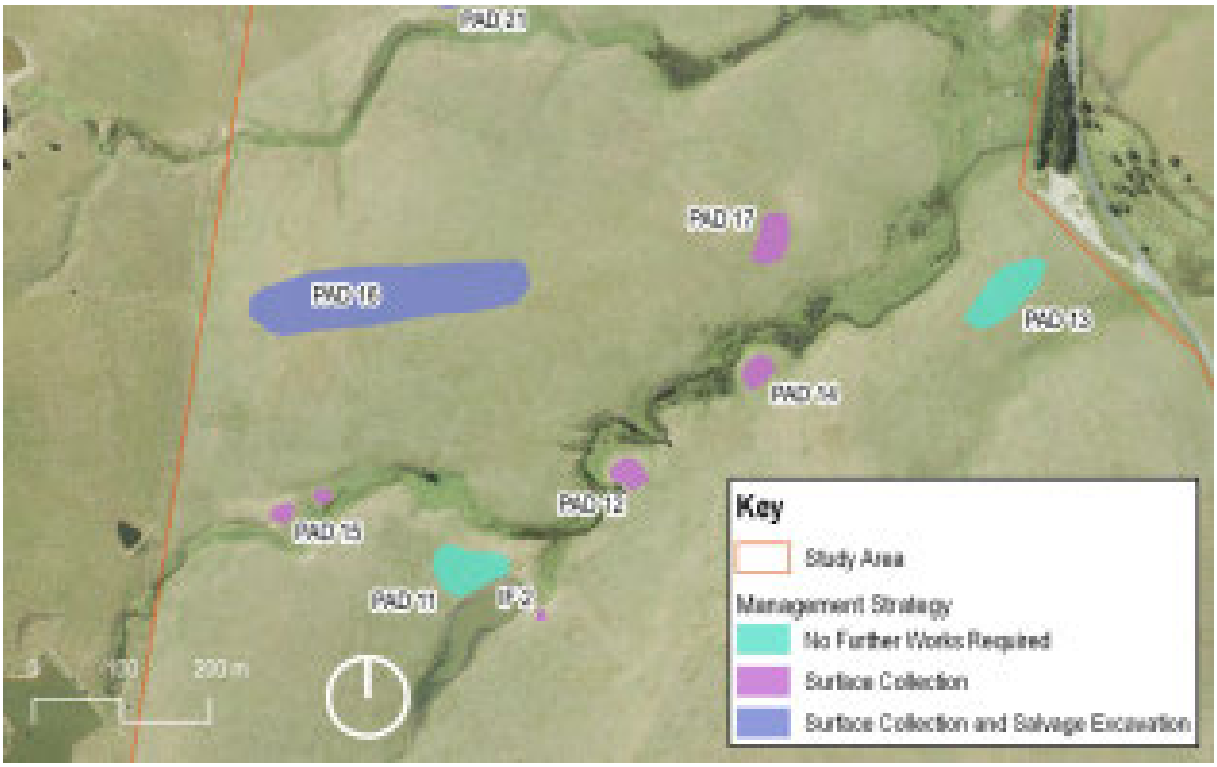


Figure 6.5 Archaeological management strategies for the middle portion of the study area. (Source: NSW LPI with GML additions, 2021)

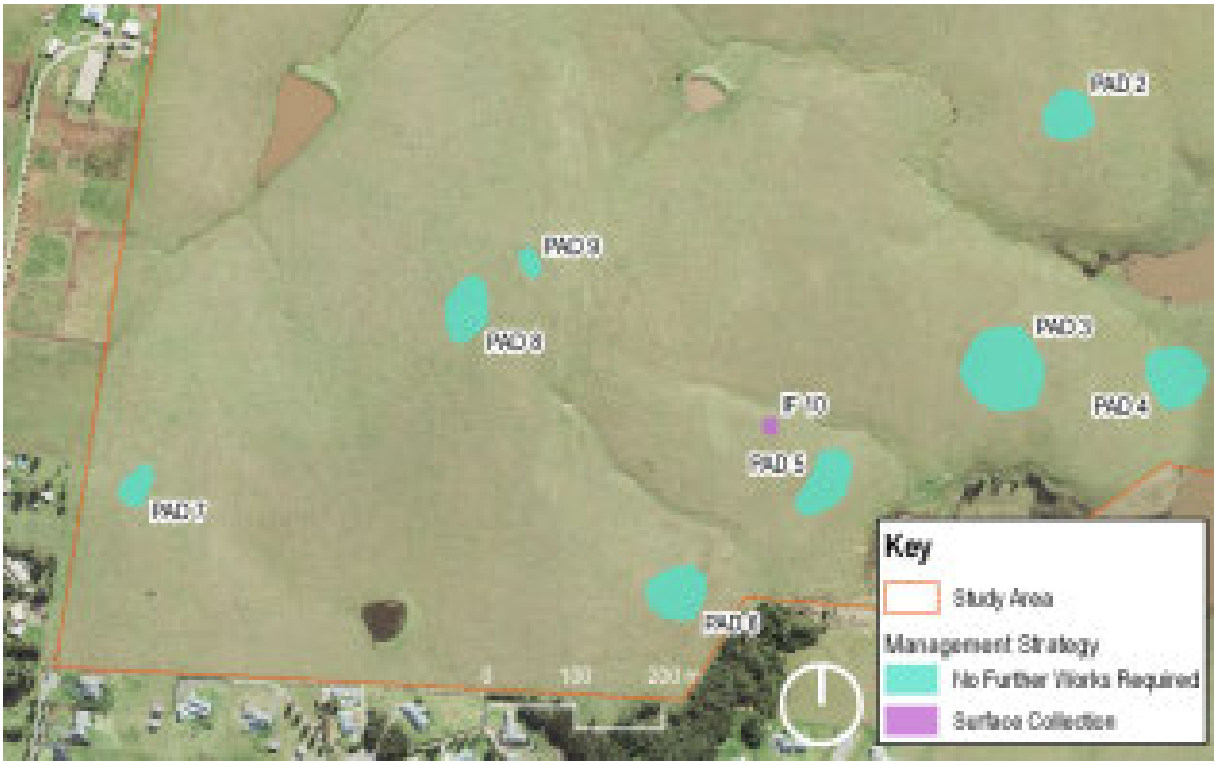


Figure 6.6 Archaeological management strategies for the southwestern portion of the study area. (Source: NSW LPI with GML additions, 2021)

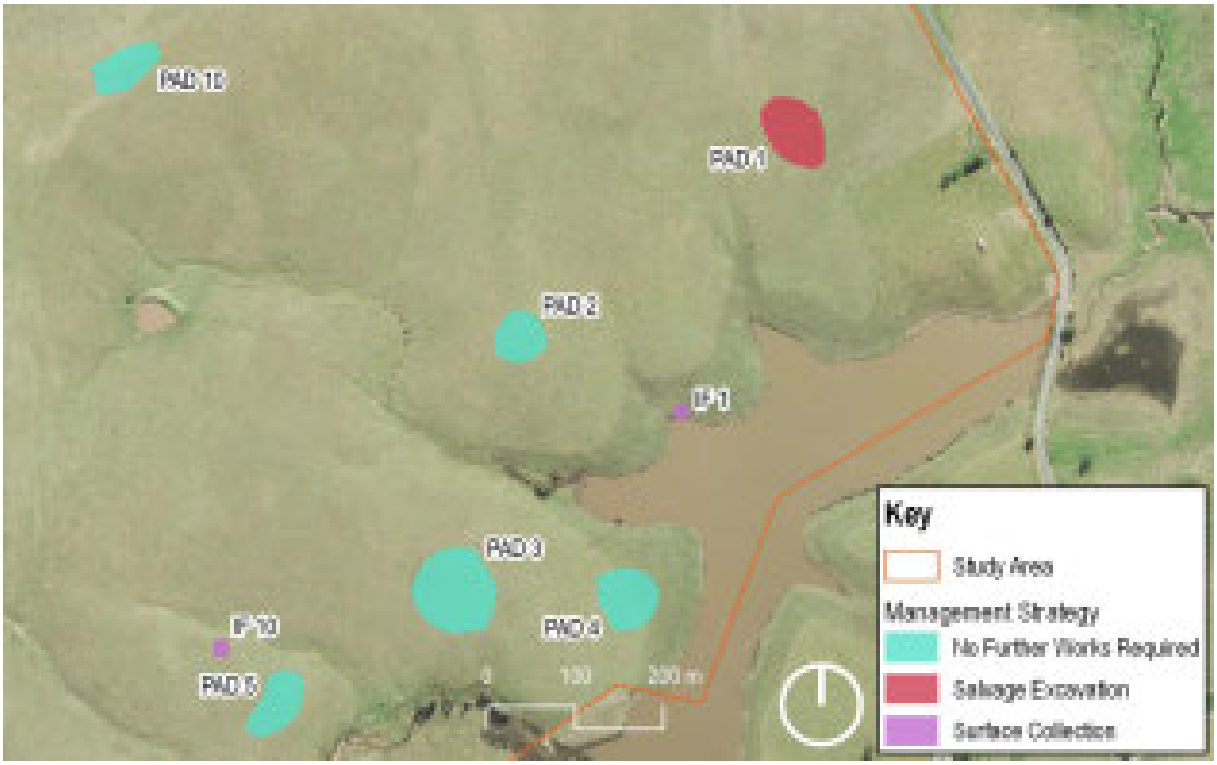


Figure 6.7 Archaeological management strategies for the southeastern study area. (Source: NSW LPI with GML additions, 2021)

6.1.3 Strategy—Community Collection

For First Nation objects that will not be conserved in situ and which do not require further archaeological excavation through the current assessment, collection is recommended. Community Collection of Isolated Finds (IF) and Stone Artefact Clusters (SAC) that are not part of archaeological sites (Table 6.2) will ensure that Aboriginal community values are respected and acknowledged.

Ten sites have been identified as requiring community collection, and a further twelve require a combined program of community collection and/or salvage excavations. Although the areas to be subject to surface artefact collection are not expected to be of high scientific research value, intangible First Nations cultural values could be damaged during topsoil stripping.

The strategy of collection will mitigate the physical harm to significant First Nations stone objects that will be required to occur during the development process. The process of collection should involve an initial walk over prior to any earthwork occurring. Stone artefacts would be collected and stored on a site wide basis (eg all artefacts from a site ie PAD 12 & SAC 13, would be collected, recorded and stored together). Following initial collection, a grader should be used to remove the grass and topsoil from the wider site area—NB not cut to basal clay. This machine action should be undertaken through single pass transects (the machine does not drive back and forward across the stripped area). Once stripped of topsoil, a second collection should occur. Depending on the depth of soils, and whether a relatively larger number of artefacts is recovered, a second machine grading may be necessary. This can only be determined through discussed between the RAPs and archaeologists in the field.

All objects collected through the topsoil stripping and surface artefact collection should be stored with those from the salvage excavation works and subject to analysis on a site wide basis.

6.1.4 Strategy—Public Interpretation

Options for public interpretation of First Nations heritage as part of DB20s residential development should be explored. In consideration of a wider First Nations landscape, it is appropriate that public interpretation for Anambah be undertaken holistically where possible. All interpretation should be guided by an interpretation strategy, prepared in consultation with RAPs, for the study area. This should include recognition and interpretation of key heritage sites, values and connections. Future public access associated with one or more of the key viewing locations would be ideal locations for future heritage interpretation (refer to the ACHAR: Section 6.3.6).

Possible interpretation mediums could include interpretation signage installed at appropriate places within the landscape and/or the creation of park/picnic areas that recognise First Nations cultural heritage and history of the land.

Interpretation would be an effective way to mitigate against the impact to cultural values resultant of the development of parts of the wider First Nations landscape of Anambah.

6.1.5 Strategy—Management of Aboriginal Stone Objects

Determining the best approach to managing any First Nations stone objects that are recovered is the right and responsibility of the local First Nations community (ie the project RAPs) in consultation with the DB20 and Heritage NSW.

Some options for the management of the First Nations stone objects recovered from the study area (through test excavation, salvage excavation and community collection) could include:

- reburial within the study area and registration with AHIMS;
- negotiation with the local First Nations community for the management and care of the assemblage that would allow the assemblage to be accessed in the future by the First Nations community and/or future archaeologists for teaching and research purposes; and
- a combination of these options, ie reburial within the study area, while reserving a teaching assemblage in a keeping place for future generations.

These options have been discussed with the RAPs during the review period for the ACHAR. The outcomes of the discussion identified the following:

- Option 1—TBD
- Option 2—TBD
- Option 3—TBD

6.2 Recommendations

Table 6.2 provides a summary of management recommendation for all known First Nations sites, places, landscapes, values and areas of archaeological potential (as assessed in Section 4.0).

Table 6.2 Summary of Recommendations for Aboriginal Heritage.

Site and PAD #	AHIMS #	Is the Site Harmed?	Is a S90 Permit Required?	Recommended Mitigation Strategy
PAD 1 & SAC 17	37-6-3574	Yes	Yes	Salvage Excavation
PAD 2 & SAC 18	37-6-3575	Yes	Yes	None
PAD 3 & SAC 19	37-6-3578	Yes	Yes	None
PAD 4 & SAC 20	37-6-3579	Yes	Yes	None
PAD 5 & SAC 21	37-6-3580	Yes	Yes	None
PAD 6	None	Yes	Yes	None
PAD 7	None	Yes	Yes	None
PAD 8	None	Yes	Yes	None
PAD 9	None	Yes	Yes	None
PAD 10	None	Yes	Yes	None
PAD 11	37-6-3581	Yes	Yes	None
PAD 12 & SAC 13	37-6-3570	Yes	Yes	Surface collection
PAD 13 & SAC 23	37-6-3582	Yes	Yes	None
PAD 14 & IF 11	37-6-3558	Yes	Yes	Surface collection
PAD 15 & SAC 14	37-6-3571	Yes	Yes	Surface collection
PAD 16 & SAC 15	37-6-3572	Yes	Yes	Surface collection and salvage excavation
PAD 17 & IF 12	37-6-3559	Yes	Yes	Surface collection
PAD 18 & SAC 16	37-6-3573	Yes	Yes	Surface collection
PAD 19 & SAC 7	37-6-3564	Yes	Yes	Surface collection and salvage excavation

Site and PAD #	AHIMS #	Is the Site Harmed?	Is a S90 Permit Required?	Recommended Mitigation Strategy
PAD 20 & SAC 5	37-6-3563	Yes	Yes	Surface collection and salvage excavation
PAD 21 & SAC 1	37-6-3560	Yes	Yes	Surface collection and salvage excavation
PAD 22 & SAC 4	37-6-3562	Yes	Yes	Salvage excavation
PAD 23 & IF 8	37-6-3555	Yes	Yes	Surface collection and salvage excavation
PAD 24 & SAC 6	37-6-3564	Yes	Yes	Surface collection and salvage excavation
PAD 25 & SAC 9	37-6-3566	Yes	Yes	Surface collection and salvage excavation
PAD 26 & SAC 10	37-6-3567	Yes	Yes	Surface collection and salvage excavation
PAD 27 & SAC 11	37-6-3568	Yes	Yes	Surface collection and salvage excavation
PAD 28 & SAC 8	37-6-3565	Yes	Yes	Surface collection and salvage excavation
IF1	37-6-3553	Yes	Yes	Surface collection
IF2	37-6-3554	Yes	Yes	Surface collection
IF9	37-6-3556	Yes	Yes	Surface collection
IF10	37-6-3557	Yes	Yes	Surface collection
SAC 2	37-6-3561	Yes	Yes	Surface collection
SAC 3	37-6-2777	No	No	Avoidance
All Aboriginal objects inside the study area in a subsurface context (except as part of 37-6-2777).		Yes	Yes	S90 Permit to harm

AHIMS site #37-6-2777 should be conserved without impact. No ground works should take place in this area, temporary non-intrusive fencing and signage should erected during development to ensure workers and machinery avoid this area; and passive revegetation strategies should be used for vegetation management.

Should any previously unrecorded Aboriginal heritage sites or objects be uncovered during the course of development that are not covered by an existing AHIP, then work in the vicinity of the item should cease and the site should be reported to Heritage NSW in order to determine the appropriate course of action.

It is required that copies of this report be provided to members of First Nations community who registered an interest in this project for their comment and review. All comments received from the community have been attached to this report as part of the consultation records.

This report will be forwarded to Heritage NSW for its records and to support the forthcoming AHIP application. GML has updated AHIMS to reflect the results of the 2012 test excavation.

7.0 Appendices

Appendix A

Legislation

Appendix B

AHIMS Search Results

Appendix C

Stone Source Review

Appendix D

Test Excavation Roster

Appendix E

Context Register

Appendix F

Context Sheets

Appendix G

Photo Register

Appendix H

Site Photos Thumbnails

Appendix I

Artefact Analysis

Appendix J

AHIMS Site Cards

Appendix K

Salvage ARD

Appendix A

Legislation

Appendix A—New South Wales Legislation

National Parks and Wildlife Act 1974

Section 90 of the NPW Act provides statutory protection for all Aboriginal 'objects' consisting of any material evidence of the Indigenous occupation of New South Wales. It also enables under Section 84 the declaration of 'Aboriginal places' which are areas of cultural significance to the Aboriginal community.

Aboriginal objects and places are given automatic statutory protection in New South Wales and it is an offence to harm an Aboriginal object or declared Aboriginal Place without the Ministers consent.

The NPW Act defines an Aboriginal object as:

> *any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.*

Protection of Aboriginal objects and places applies irrespective of the level of their significance or issues of land tenure. Sites of traditional significance that do not necessarily contain material remains may be gazetted as 'Aboriginal Places' and thereby be protected under the NPW Act. Areas are only gazetted if the Minister is satisfied that enough evidence exists to demonstrate that the location was and/or is of special significance to Aboriginal culture.

A strict liability offence applies for harm to an Aboriginal object or declared Aboriginal Places. This means that even if an Aboriginal object is unwittingly harmed, a crime has been committed and prosecution can still occur. The definition of 'harm' under the NPW Act includes destroying, defacing, damaging or moving an Aboriginal object or declared Aboriginal Place. The strict liability offence of harming Aboriginal objects has a number of defences. The two defences relevant to the proposed development are the statutory defence of due diligence through complying with an adopted industry code, or compliance with the conditions of an Aboriginal Heritage Impact Permit (AHIP).

Environmental Planning and Assessment Act 1979

The EP&A Act provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items through inclusion in schedules to planning instruments such as Local Environmental Plans (LEPs) or Regional Environmental Plans (REPs). Heritage items in planning instruments can include Aboriginal objects and places, historic sites, landscapes and parks. The EP&A Act requires that appropriate measures be taken for the management of the potential archaeological resource consistent with the requirements of the NPW Act.

The study area is located within the Maitland Local Government Area (LGA), and is subject to the Maitland Local Environmental Plan (LEP) 2011. The heritage conservation objectives of the Maitland LEP 2011 are:

a) to conserve the environmental heritage of Maitland,

b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,

c) to conserve archaeological sites,

d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

Appendix B

AHIMS Search Results

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : 12-0226

Client Service ID : 69695

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0069	Martins Creek;	AGD	56	369540	6398390	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	**Recorders**	ASRSYS					**Permits**		
38-4-0294	Patison Rd.;	AGD	56	368990	6395990	Open site	Valid	Shell : -, Artefact : -	Midden	1333
	Contact	**Recorders**	Warren Bluff					**Permits**		
38-4-0214	Martins Creek 2	AGD	56	370600	6397300	Open site	Valid	Artefact : -	Isolated Find	1872
	Contact	**Recorders**	Gary Dunnett					**Permits**		
38-4-0215	Martins Creek 3	AGD	56	370400	6397300	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1872
	Contact	**Recorders**	Gary Dunnett					**Permits**		
38-4-0216	Martins Creek 4	AGD	56	366900	6397650	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1872
	Contact	**Recorders**	Gary Dunnett					**Permits**		
38-4-0217	Martins Creek 5	AGD	56	369880	6397490	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1872
	Contact	**Recorders**	Gary Dunnett					**Permits**		
38-4-0218	Martins Creek 6	AGD	56	369840	6397590	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1872
	Contact	**Recorders**	Gary Dunnett					**Permits**		
45-3-1954	Calga;Gunderman;	AGD	56	363750	6412900	Open site	Valid	Burial : -	Burial/s	1333
	Contact	**Recorders**	Warren Bluff					**Permits**		
45-3-1955	Calga;Gunderman;	AGD	56	364040	6413540	Open site	Valid	Grinding Groove : -, Art (Pigment or Engraved) : -	Axe Grinding Groove,Rock Engraving	1333
	Contact	**Recorders**	Warren Bluff					**Permits**		
38-1-0005	Allynbrook;Allyn River;	AGD	56	362000	6416000	Open site	Valid	Modified Tree (Carved or Scarred) : -, Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial,Carved Tree	
	Contact	**Recorders**	David Bell					**Permits**		
37-3-0140	Myall Creek/hv61;	AGD	56	355100	6414900	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Archaeological Consulting Services					**Permits**		

Report generated by AHIMS Web Service on 10/05/2012 for Josh Madden for the following area at Lat, Long From : 151.37189, -32.5809 - Lat, Long To : -32.37558, 151.63323 with a Buffer of 0 meters.Additional Info : Aboriginal Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 58

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref Number : 12-0226
Client Service ID : 69695

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0103	Vacy No.2 Martins Creek	AGD	56	369750	6399020	Open site	Valid	Artefact : -	Open Camp Site	
Contact		Recorders	Allan Lance					Permits		
38-4-0105	Vacy;Site 1;Martins Creek;	AGD	56	369200	6398510	Open site	Valid	Artefact : -	Open Camp Site	
Contact		Recorders	Allan Lance					Permits		
37-6-1084	GG B44	AGD	56	352341	6400092	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1085	GG B45	AGD	56	352330	6400192	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1086	GG B 46	AGD	56	358239	6400014	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1087	GG B 49	AGD	56	350675	6400275	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1088	GG B 55	AGD	56	352528	6400086	Open site	Valid	Artefact : -		
Contact		Recorders	Mr.Giles Hamm					Permits		
37-6-1089	GG B 55A	AGD	56	352529	6400086	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1076	GG B22	AGD	56	351417	6400959	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1077	GG B28	AGD	56	352176	6401058	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1078	GG B29	AGD	56	352133	6401010	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1079	GG B27	AGD	56	352121	6401058	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1080	GG B30	AGD	56	352111	6400980	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1081	GG B35	AGD	56	352288	6400259	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1082	GG B36	AGD	56	352265	6400221	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1083	GG B43	AGD	56	352298	6400172	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		

Report generated by AHIMS Web Service on 10/05/2012 for Josh Madden for the following area at Lat, Long From : 151.37189, -32.5809 - Lat, Long To : -32.37558, 151.63323 with a Buffer of 0 meters.Additional Info : Aboriginal Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 58

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref Number : 12-0226
Client Service ID : 69695

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
37-6-1055	GG A2	AGD	56	349620	6399822	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1056	GGA6	AGD	56	349733	6399375	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1057	GGA8	AGD	56	349851	6399185	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1058	GGA10	AGD	56	349740	6399083	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1059	GGA13	AGD	56	349910	6399481	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1060	GGA16	AGD	56	350923	6398637	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1061	GCA18	AGD	56	351071	6398939	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1062	GG B64	AGD	56	350152	6399558	Open site	Valid	Artefact : 0		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1063	GG B61	AGD	56	351520	6399522	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1064	GG B62	AGD	56	351531	6399558	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1065	GG A27	AGD	56	351619	6399943	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1066	GGB2	AGD	56	350740	6400870	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1067	GB B1	AGD	56	350240	6400716	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1068	GG B10	AGD	56	351725	6401157	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1069	GB B13	AGD	56	355223	6400289	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1070	GB B14	AGD	56	355223	6400289	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		

Report generated by AHIMS Web Service on 10/05/2012 for Josh Madden for the following area at Lat, Long From : 151.37189, -32.5809 - Lat, Long To : -32.37558, 151.63323 with a Buffer of 0 meters.Additional Info : Aboriginal Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 58

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : 12-0226

Client Service ID : 69695

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
37-6-1071	GB B17	AGD	56	352103	6400914	Open site	Valid	Artefact : -		
Contact	Recorders	Archaeological Risk Assessment Services (ARAS)						Permits		
37-6-1072	GB B18	AGD	56	352059	6400990	Open site	Valid	Artefact : -		
Contact	Recorders	Archaeological Risk Assessment Services (ARAS)						Permits		
37-6-1073	GB B19	AGD	56	352081	6401033	Open site	Valid	Artefact : -		
Contact	Recorders	Archaeological Risk Assessment Services (ARAS)						Permits		
37-6-1074	GG B20	AGD	56	352046	6401098	Open site	Valid	Artefact : -		
Contact	Recorders	Archaeological Risk Assessment Services (ARAS)						Permits		
37-6-1075	GG B21	AGD	56	352025	6401154	Open site	Valid	Artefact : -		
Contact	Recorders	Archaeological Risk Assessment Services (ARAS)						Permits		
37-6-1223	Lambs Valley 5	AGD	56	355505	6397105	Open site	Valid	Artefact : -		
Contact	Recorders	Mrs.Angela Besant						Permits	1964	
38-4-0841	Martins Creek PAD 1	AGD	56	369800	6396910	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
Contact S Scanlon	Recorders	Austral Archaeology Pty Ltd						Permits	2263	
37-6-1506	Lot 12 Site 15 Stanhope	AGD	56	348971	6393886	Open site	Valid	Artefact : 49		
Contact T Russell	Recorders	Mr.Giles Hamm						Permits		
38-4-0983	Grace Avenue, Martins Creek 1	AGD	56	369987	6396819	Open site	Valid	Artefact : 6		101133
Contact Searle	Recorders	Austral Archaeology Pty Ltd						Permits	2633,2729,2855	
38-4-0213	Martins Creek 1	AGD	56	370400	6397300	Open site	Valid	Artefact : -	Isolated Find	1872
Contact	Recorders	Gary Dunnett						Permits		
38-4-0104	Vacy;No.3;Martins Creek;	AGD	56	369840	6399100	Open site	Valid	Artefact : -	Open Camp Site	
Contact	Recorders	Allan Lance						Permits		
38-4-1182	Vacy-Cornish	AGD	56	365404	6399931	Open site	Destroyed	Artefact : -		
Contact	Recorders	RPS Australia East Pty Ltd -Hamilton,Mr.Lennard Roberts,Ms.Ali Byrne						Permits	3310	
38-4-1183	Vacy-Cornish_	GDA	56	365317	6400112	Open site	Valid	Artefact : 1		
Contact	Recorders	Mr.Lennard Roberts						Permits		
38-4-1304	RPS STANFORD METHYR AS2	GDA	56	359770	6399774	Open site	Valid	Artefact : -		
Contact	Recorders	RPS Australia East Pty Ltd -Hamilton,Ms.Laraine Nelson						Permits		
38-4-1383	Gostwyck Bridge PAD 1	GDA	56	369057	6396095	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
Contact	Recorders	Ms.Mary-Jean Sutton,Virtus Heritage - Tighes Hill						Permits		

Report generated by AHIMS Web Service on 10/05/2012 for Josh Madden for the following area at Lat, Long From : 151.37189, -32.5809 - Lat, Long To : -32.37558, 151.63323 with a Buffer of 0 meters.Additional Info : Aboriginal Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 58

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 21-0037

Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0002	Rosebrook;	AGD	56	361810	6385071	Open site	Valid	Artefact : -	Open Camp Site	102158,102229
	Contact	**Recorders**	ASRSYS					**Permits**		
38-4-0003	Rosebrook.	AGD	56	362724	6385088	Open site	Valid	Stone Quarry : -, Artefact : -	Quarry	102158,102218,102229
	Contact	**Recorders**	Moore					**Permits**		
38-4-0611	ABER 2	AGD	56	361210	6381350	Open site	Valid	Artefact : -		98364,102158,102229
	Contact	**Recorders**	Mrs.Angela Besant					**Permits**	1595	
38-4-0613	ABER 1	AGD	56	361250	6381500	Open site	Valid	Artefact : -		102158,102229
	Contact	**Recorders**	Mrs.Angela Besant					**Permits**		
37-6-1607	Lochinvar 1	AGD	56	355515	6380960	Open site	Valid	Artefact : 2		99841
	Contact Searle	**Recorders**	Ms.Penny Mccardle					**Permits**	2456,3963	
38-4-0689	AD1	AGD	56	362500	6380800	Open site	Valid	Artefact : 2		101043,102158,102229
	Contact	**Recorders**	Wildthing Environmental Consultants					**Permits**	1741	
37-6-1054	R-1	AGD	56	357900	6381200	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
37-6-1122	ISF 1 Rutherford	AGD	56	357650	6381250	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
37-6-1123	ISF 2 Rutherford	AGD	56	357200	6381200	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
37-6-1124	PAD 1 Rutherford	AGD	56	358280	6384800	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102158,102229
	Contact	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
37-6-1125	ISF 3 Rutherford	AGD	56	357750	6381240	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
38-4-0865	AB PAD 1, same as 38-4-1062	AGD	56	363400	6381800	Open site	Valid	Artefact : 1		100253,100668,100770,100784,102158,102229
	Contact T Russell	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**	2598,2806,2809,2851	
38-4-0866	AB PAD2, same as 38-4-1063	AGD	56	363450	6381000	Open site	Valid	Artefact : 124		100253,100668,100770,100784,101515,102158,102229,102388

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.

Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : 21-0037
Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact T Russell	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**	2598,2809,2851	
38-4-0867	AB PAD 3	AGD	56	363100	6382400	Open site	Valid	Artefact : 1		100253,100770,102158,102229
	Contact T Russell	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**	2806	
38-4-0863	AB Site 1	AGD	56	363044	6382272	Open site	Valid	Artefact : 4		100253,100770,102158,102229
	Contact Searle	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
38-4-0864	AB Site 2	AGD	56	362855	6382216	Open site	Valid	Artefact : 6		100253,100770,102158,102229
	Contact Searle	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
38-4-1062	ABPAD1, same as 38-4-0865	AGD	56	363400	6381800	Open site	Valid	Artefact : -		102158,102229
	Contact	**Recorders**	Ms.Mary Dallas					**Permits**		
38-4-1063	ABPAD2, same as 38-4-0866	AGD	56	363450	6381000	Open site	Valid	Artefact : -		102158,102229
	Contact	**Recorders**	Ms.Mary Dallas					**Permits**		
38-4-1057	Site 1 Open Camp Site	GDA	56	362825	6381909	Open site	Valid	Artefact : 3		102158,102229
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**	2961,3534	
38-4-1058	Site 2 Isolated Find	GDA	56	362865	6381829	Open site	Valid	Artefact : 1		102158,102229
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**	2961,3534	
38-4-1163	Anambah-ISF2	GDA	56	359783	6381328	Open site	Valid	Artefact : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1164	Anambah PAD 1	GDA	56	359900	6381300	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1165	Anambah PAD 2	GDA	56	360600	6381550	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1166	Anambah PAD 3	GDA	56	360000	6381700	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.
Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 21-0037

Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-1167	Anambah PAD 4	GDA	56	360330	6381350	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1168	Anambah PAD 5	GDA	56	360530	6381420	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1169	Anambah PAD 6	GDA	56	360440	6381870	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1170	Anambah PAD 7	GDA	56	360410	6381950	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1171	Anambah PAD 8	GDA	56	359850	6381370	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1162	Anambah-AS2	GDA	56	360643	6381665	Open site	Valid	Artefact : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
37-6-1907	R1 (Greta)	GDA	56	357900	6381200	Open site	Valid	Artefact : 4		4119
	Contact	**Recorders**	Ms.Mary Dallas					**Permits**		
37-6-2188	Lochinvar Rail 2	GDA	56	355591	6387760	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	South East Archaeology					**Permits**		
37-6-2219	PAD 2 Lochinvar URA	AGD	56	354720	6381415	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	**Recorders**	Mr.Paul Irish,Ms.Mary Dallas					**Permits**		
37-6-2228	LCC1 and PAD	GDA	56	355673	6381234	Open site	Partially Destroyed	Artefact : 15, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Mrs.Angela Besant,Umwelt (Australia) Pty Limited - Individual users,Mr.Kirwan Wi					**Permits**	3936,3963,4694,4697	
37-6-2774	DA2	AGD	56	358270	6387470	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	**Recorders**	Ms.Mary Dallas					**Permits**		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.

Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : 21-0037
Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-1512	MCKEACHIES AS 1	GDA	56	362866	6381792	Open site	Valid	Artefact : 1		103462
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1513	MCKEACHIES AS 2	GDA	56	363031	6381816	Open site	Valid	Artefact : 1		
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1514	MCKEACHIES AS 3	GDA	56	363040	6381566	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1515	MCKEACHIES AS 4	GDA	56	362934	6381456	Open site	Valid	Artefact : 1		103462
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1516	MCKEACHIES AS 5	GDA	56	362825	6381558	Open site	Valid	Artefact : 1		103462
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1517	MCKEACHIES AS 6	GDA	56	362759	6381768	Open site	Valid	Artefact : 1		103462
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1518	MCKEACHIES AS 7	GDA	56	362667	6381839	Open site	Valid	Artefact : 1		
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1528	McKeachies AS 7a	GDA	56	362667	6381839	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		103462
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits		
38-4-1525	MCKEACHIES AS 3A	GDA	56	363040	6381566	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits		
37-6-2777	Anambah SAC 3	GDA	56	357212	6383869	Open site	Valid	Aboriginal Ceremony and Dreaming : 1, Artefact : 1		
Contact	Recorders	Doctor.Tim Owen						Permits		
37-6-2963	26 Windemere Rd Site 1 (PAD 1)	GDA	56	354426	6380945	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -		
Contact Mindaribba Local Aboriginal L	Recorders	Archaeological Risk Assessment Services (ARAS),Ms.Penny Mccardle						Permits		
37-6-2964	26 Windemere Rd Site 2 (PAD 2)	GDA	56	354305	6381044	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -		
Contact Mindaribba Local Aboriginal L	Recorders	Archaeological Risk Assessment Services (ARAS),Ms.Penny Mccardle						Permits		
37-6-3553	Anambah IF 1	GDA	56	359024	6382274	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.
Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : 21-0037
Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
37-6-3554	Anambah IF 2	GDA	56	358313	6382885	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3555	Anambah IF 8 & PAD 23	GDA	56	358025	6383995	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3556	Anambah IF 9	GDA	56	357717	6384140	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3557	Anambah IF 10	AGD	56	358397	6381819	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3558	Anambah IF 11	GDA	56	358558	6383163	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3559	Anambah IF 12	GDA	56	358575	6383304	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3560	Anambah SAC 1 and PAD 21	GDA	56	358183	6383600	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3561	Anambah SAC 2	GDA	56	357612	6383746	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3562	Anambah SAC 4 and PAD 22	GDA	56	357770	6383996	Open site	Valid	Potential Archaeological Deposit (PAD) : -, Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3563	Anambah SAC 5 and PAD 20	GDA	56	358246	6383842	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3564	Anambah SAC 6&7 + PAD 24&19	GDA	56	358536	6383837	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -, Stone Quarry : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3567	Anambah SAC 10 and PAD 26	GDA	56	358188	6383868	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Miss.Diana Cowie						Permits		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.
Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
37-6-3568	Anambah SAC 11 and PAD 27	GDA	56	358102	6383978	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3565	Anambah SAC 8 and PAD 28	GDA	56	358491	6383928	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3566	Anambah SAC 9 and PAD 25	GDA	56	358210	6383796	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3569	Anambah SAC 12	GDA	56	357645	6381559	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3570	Anambah SAC 13 and PAD 12	GDA	56	358404	6383034	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3571	Anambah SAC 14 and PAD 15	GDA	56	358068	6383015	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3572	Anambah SAC 15 and PAD 16	GDA	56	358028	6383247	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3573	Anambah SAC 16	GDA	56	358025	6383995	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3574	Anambah SAC 17 and PAD 1	GDA	56	359151	6382591	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3575	Anambah SAC 18	GDA	56	358837	6382360	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3578	Anambah SAC 19	GDA	56	358764	6382070	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3579	Anambah SAC 20	GDA	56	358965	6382068	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.
Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : 21-0037
Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Miss.Diana Cowie					Permits		
37-6-3580	Anambah SAC 21	GDA	56	358568	6381937	Open site	Valid	Artefact : -		
	Contact	Recorders	Miss.Diana Cowie					Permits		
37-6-3581	Anambah SAC 22 and PAD 11	GDA	56	358220	6382935	Open site	Valid	Artefact : -		
	Contact	Recorders	Miss.Diana Cowie					Permits		
37-6-3582	Anambah SAC 23 and PAD 13	GDA	56	358834	6383251	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Miss.Diana Cowie					Permits		
37-6-3654	Cantwell Rd 1	GDA	56	355173	6381028	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Umwelt (Australia) Pty Limited -					Permits		
38-4-2043	Lot 1 AS 2	GDA	56	360716	6381487	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS),Mr.Giles (dup ID#12832) Hamm					Permits		
38-4-2044	Lot 1 AS 3	GDA	56	360602	6381498	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS),Mr.Giles (dup ID#12832) Hamm					Permits		
38-4-2045	Lot 1 AS 4	GDA	56	360646	6381665	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS),Mr.Giles (dup ID#12832) Hamm					Permits		
38-4-2046	Lot 1 AS 5	GDA	56	360458	6381733	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS),Mr.Giles (dup ID#12832) Hamm					Permits		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.
Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Appendix C

Stone Source Review

1.0 Potential Lithic Sources in the Maitland Area

Beth White, September 2012

1.1 Introduction

This is a preliminary study to identify stone resources of potential use to Aboriginal people in the Maitland area, considering both locally available resources and non-local resources which could have been obtained through exchange or trade with neighbouring clan groups. The study is based on desk-top research with a brief field visit to the Maitland area. The study is intended to help inform two subject areas – at Anambah and McKeachie's Run (Figure 1).

Stone artefacts in the Maitland area are predominantly of silcrete, augmented by silicified tuff, with smaller numbers of diverse other rock types including silicified wood, quartz, quartzite and igneous stone (Baker 1997; GML 2012:30-31; Kuskie 2008a:48; MDCA 2008; Reeves and Coulter 2006:14,17). Lithic raw material sources could potentially have occurred variously:

- in the local area as bed rock;
- in distant outcrops but transported into the local area by streams. The Hunter River gravels include rocks from diverse geological formations to the north, west and south-west. Wallis Creek could potentially include rocks from diverse geological formations to the south;
- in distant outcrops but carried by people during visits or as a result of trade/exchange.

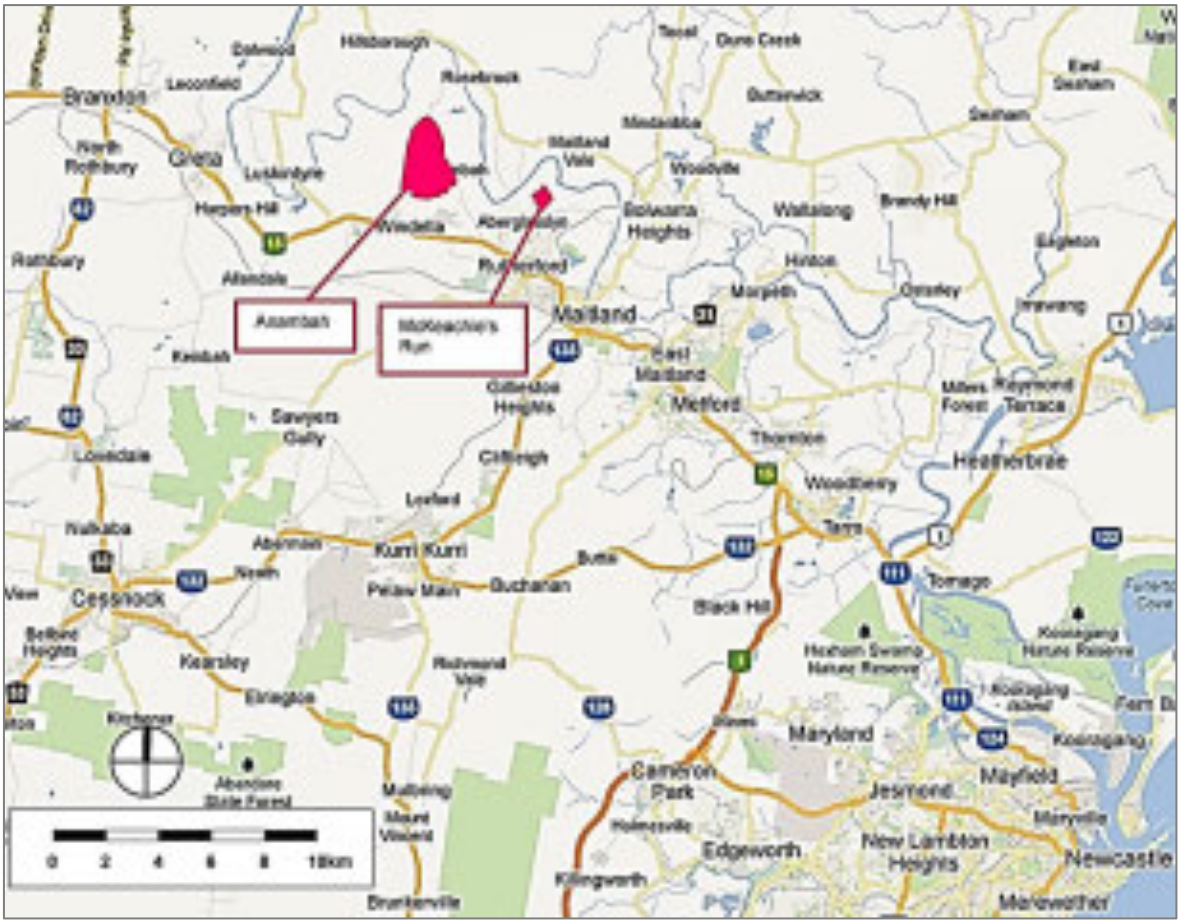


Figure 1 Locality map

This report could have taken different approaches. It could have described the local and regional geology and sought to identify potential lithic sources within it, and/or it could have focussed on lithic raw materials known to have been used for artefact production, and sought information on the likely sources of these. Apart from an examination of the local geology, I have chosen the latter path. The local geology is described in section 1.3. The main raw material types used for artefact production are described and their potential sources are discussed in sections 1.4, 1.4.9 8 and 1.6. A summary of results is given in section 1.7. An outline of study methods is given in section 1.2. A glossary of terms is included as section 1.9.

The issue of lithic raw material movement via trade or exchange would also involve an examination of social structure and of the mechanisms surrounding the movement and transport of physical goods across the physical and social landscapes. These issues were beyond the scope of the current study.

1.2 Study methods

1.2.1 General

The study brief for this work was to identify potential sources of stone in the Maitland area which Aboriginal people could have used for stone artefact production. The aim of the study was to assist in the identification of the processes of stone procurement and local/regional trade/exchange.

The work carried out for this study involved:

- Checking previous archaeological reports to identify the raw material types from which Aboriginal objects in this region were made, and whether sources of stone raw materials had previously been identified. Kuskie and Kamminga (2000:180-190) provide an extensive discussion of the nature of lithic materials used for flaking and their potential sources in the Lower Hunter. Their observations were followed up, and more recent reports were checked to obtain more up-to-date information;
- Inspection of geological maps at various scales to ascertain locally and regionally available rock types. Geological maps held by the author, and those available for download from http://www.resources.nsw.gov.au/geological/geological-maps were examined;
- Checking on-line geological reports and publications which may have been relevant to the identification, or elimination, of potential stone sources;
- Field visit on 4th July to familiarise myself with the local landscape and to identify any potential sources. This is described in section 1.2.2 below;
- Preparation of this draft report.

A limited amount of time was allocated to the study, so it was not possible to visit public libraries or to conduct a comprehensive reading of archaeological reports held in the Aboriginal Heritage Information Management System (AHIMS located in Hurstville). Research was restricted to the author's existing holdings, to internet searches, to reports held by AHIMS which were identified by Kuskie and Kamminga (2000), and a preliminary field visit. More exhaustive research, and interviews with experts with local knowledge (especially geologists) would undoubtedly uncover new information.

1.2.2 Field visit

A field visit to the Maitland area was made on Wednesday 4th July 2012. A vehicle was driven along several public roads by Ms Jenni Lennox of GML, and I scanned the road side and surrounding terrain for exposed rock which could then be inspected on foot (Figure 2). The following particular situations were sought:

- exposed ground containing pebbles and cobbles,
- road cuttings revealing geological strata, and
- stream banks or beds containing pebbles and cobbles.

A targeted visit was made to Riverbend Quarry, at Anambah, to inspect gravels occurring in the Greta Coal Measures. Ms Annette Ditton in the quarry office arranged for Jenni Lennox and me to visit the quarry, where a brief discussion was held with Mr Terry Ditton and Mr Chris Ditton. A foot inspection of exposed gravels near the top of the quarry was then made by Jenni Lennox and me. No indurated/silicified tuff or silcrete was seen.

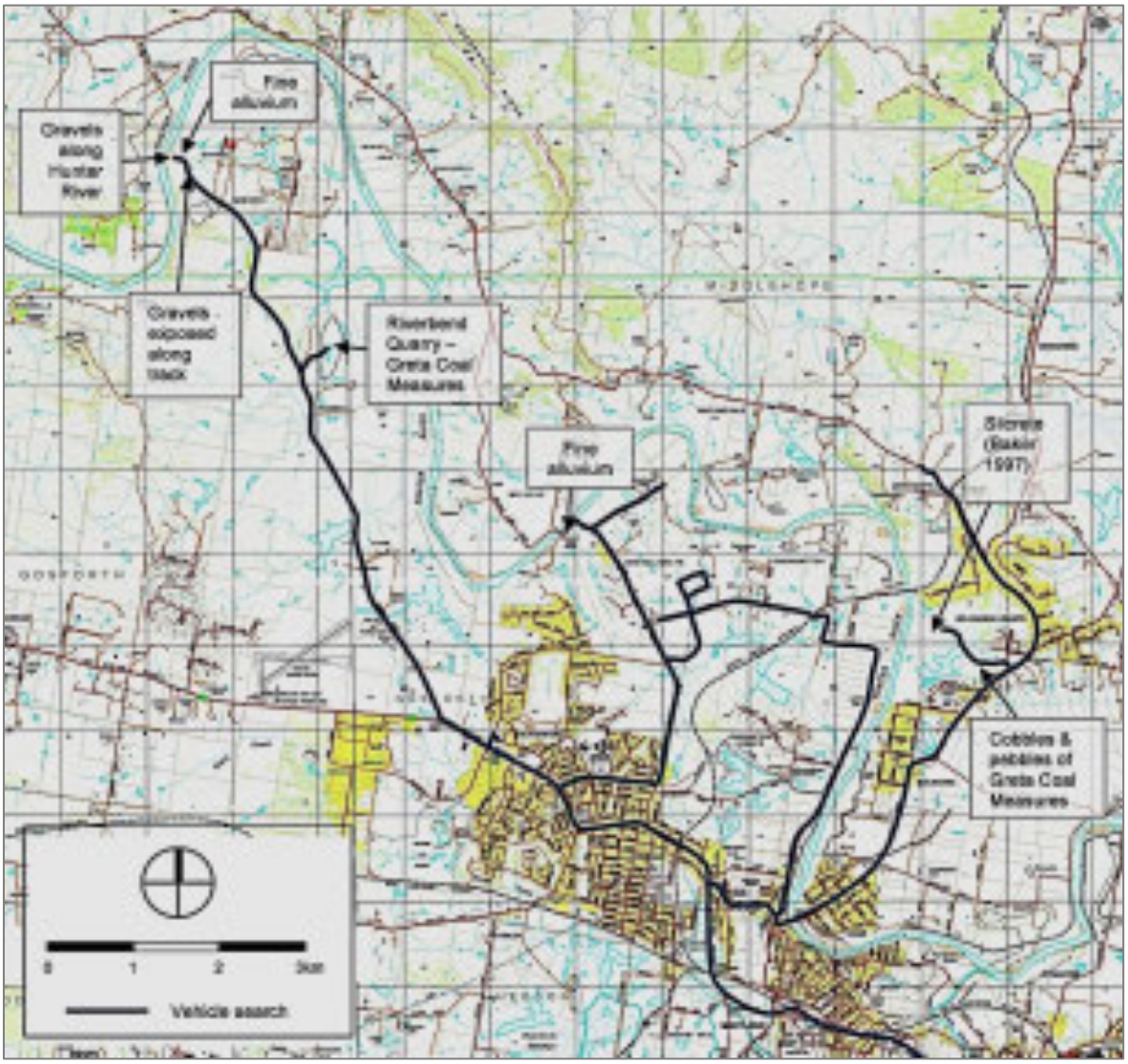


Figure 2 Field visit, vehicle search and points of interest.

Whilst in the office of Riverbend Quarry Ms Megan Smith (a local history teacher, on holiday), kindly offered to show JL and myself a location where she knew gravels and cobbles were exposed within the bedload of the Hunter River. She took us to the Hunter River west of Gosforth, along the Gosforth to Hillsborough Road; the bridge over the River having been destroyed by floods. Inspection of the gravels revealed numerous pebbles and small cobbles of indurated/silicified tuff, quartz, various igneous and other rock types. No silcrete was observed.

An area of pebbles and small cobbles was seen along the Gosforth to Hillsborough Road, about 350m south-east of the Hunter River. On inspection the pebbles appeared similar to those at Riverbend Quarry, and the location may have been an unmapped area of the Greta Coal Measures. No indurated/silicified tuff or silcrete cobbles or pebbles were seen.

The vehicle search for exposures of pebbles and cobbles was then continued in the Aberglasslyn and Oakhampton areas, thence to Lorn, Bolwarra and Bolwarra Heights, on the eastern side of the Hunter River.

The vehicle search for pebbles and cobbles was generally unsuccessful. Very few road cuttings were encountered, and the ground and creek banks were covered with thick grass. The area of silcrete at Bolwarra Heights was not inspected, as we did not have permission to enter the land.

1.3 Local Bedrock

Local geology has been mapped at the 1:100,000 scale on the Newcastle Coalfield Regional Geology 1995 map (Figure 3). I have been unable to locate mapping at 1:25,000 scale.

Anambah bedrock

The Anambah subject area is located on ‘Pdl’, being basalt, siltstone and sandstone of the Permian Lochinvar Formation. Siltstone and sandstone are not suitable for the production of flaked artefacts, although sandstone could be used for grinding seeds, and hatchet sharpening with water. Basalt is often thought to be suitable for artefact production (e.g. a category listed on the AHIMS form), but this rock type is predominantly feldspar (plagioclase) and contains relatively little silica, making it unsuitable for flaked artefact production. In the Sydney region, igneous rocks were rarely used for hatchet production, metamorphic rocks being preferred (Corkill 2005). In the New England region, hatchets were of greywacke, siltstone (sedimentary rocks), hornfels, phyllite, schist and quartzite, other metamorphic rocks, altered basalts (“greenstone” and others) and altered plutonic igneous rocks. Only small numbers of New England hatchets were of basalt (Binns and McBryde 1972:8-60, their Group 7). It is likely that basalt was rarely used for stone artefacts in the Hunter Valley.

McKeachie’s Run bedrock

The McKeachie’s Run subject area is located on several sedimentary formations. ‘Pmb’ (Permian Branxton Formation) occurs in the south, with ‘Pdf’ (Permian Farley Formation of siltstone) in the north, with a narrow band of ‘Pdfs’ (Permian Farley Formation of sandstone) through the centre of the northern section. ‘Pms’ (Permian Muree Sandstone) occurs in the south-west corner and ‘Pg’ (Permian Greta Coal Measures) occurs in the eastern corner (Newcastle Coalfield 100k geological map sheet). The siltstone and sandstones of these formations are not suitable for flaked artefacts.

Nearby bedrock containing conglomerate

An outcrop of the Greta Coal Measures is located immediately north-east of the Anambah subject area; this is shown as ‘Pg’ on the 1:100k, and consists of sandstone, conglomerate, siltstone and

coal. The conglomerates were of potential interest, as they could have potentially included pebbles of diverse lithologies. The outcrop of Greta Coal Measures was visited (Plate 1 and Plate 2), but pebbles were generally unsuitable for the production of flaked artefacts.

'Cz' occurs west of the study area. This formation consists of Carboniferous undifferentiated tuff and ignimbrite interbedded with conglomerate, sandstone and shale. These rock types were not inspected during the field visit but are unlikely to have been suitable for flaked artefact production.

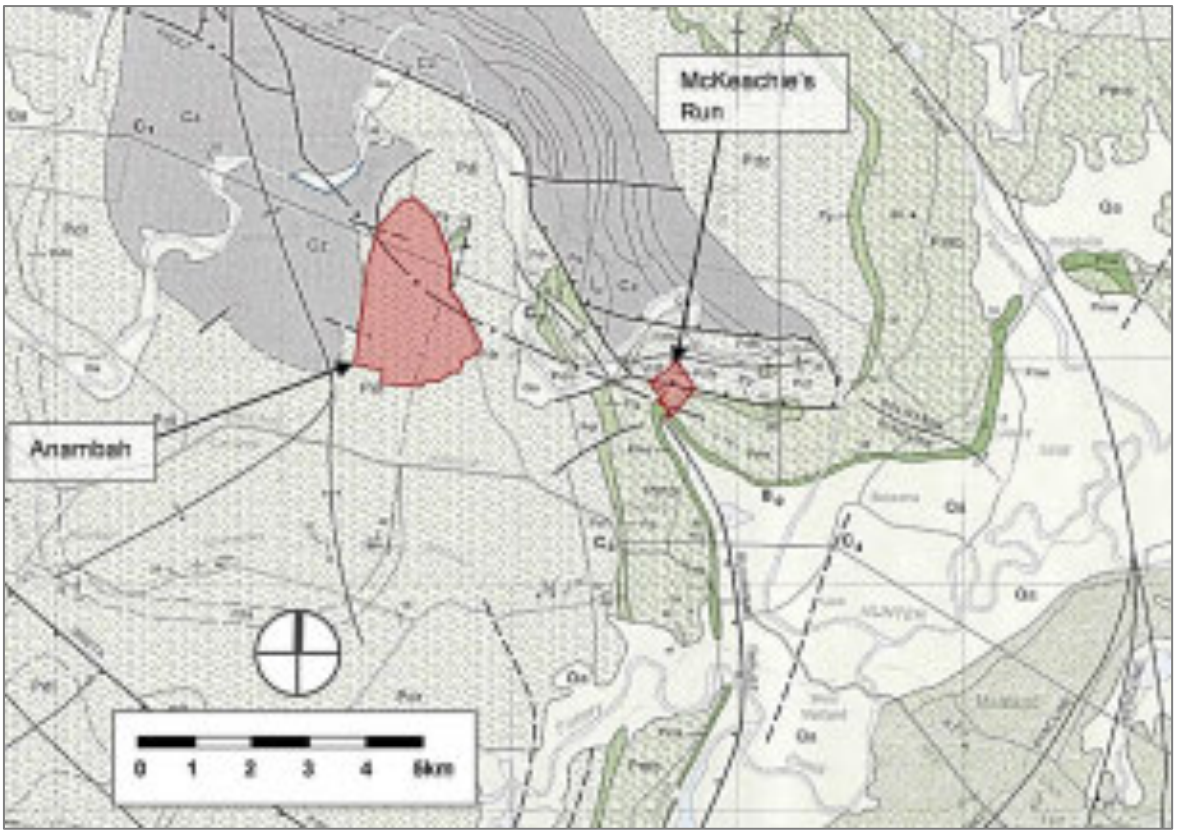


Figure 3 Extract from *Newcastle Coalfield Regional Geology* 1:100k (Department of Mineral Resources 1995)

Plate 1 Greta Coal Measures at Riverbend Quarry, Anambah.

Camera facing north-east.

Plate 2 Detail of pebbles at Riverbend Quarry, Anambah.

Scale 8.5cm long.

1.4 Indurated/silicified tuff

1.4.1 General

Kuskie and Kamminga (2000:180-182) note that 'indurated rhyolitic tuff' (sometimes referred to as 'indurated mudstone' and 'silicified tuff') formed when volcanic ash settled onto the ground or into water bodies. After burial the tuff beds became indurated and the stone recrystallised. Volcanic tuffs occur in numerous geological formations throughout the Hunter Valley, although only a few were suitable for flaking.

Inspection of the 1:100k *Newcastle Coalfield Regional Geology* map sheet shows that tuff occurs in many formations in the Newcastle Coal Measures and less commonly in some formations of the Tomago Coal Measures (Table 1, Figure 4). Diessal (1983) notes that the Newcastle Coal Measures contain hundreds of individual tuff layers. Together with their associated and derived claystones they comprise 20% of the rock sequence, varying from 1mm to 25m thick. The layers occur as thick tuffs (usually several metres) between coal seams, and thin ash layers millimetre to decimetre thick) within coal seams. The thick inter-seam tuffs retained their pyroclastic character, apart from some devitrification and other effects of weathering, while the thin ash layers within or under coal seams have generally been altered to claystones (Diessal 1983:197, 207). The intra-seam claystones and tonsteins consist of single layers, which can cover large areas, e.g. a claystone band in the Dudley Seam is 10cm thick but covers more than 700km^2 (Diessal 1983: 207).

Quartz, biotite, plagioclase, orthoclase, volcanic rock fragments and unwelded glass shards occur in varying proportions in the tuff layers, which often grade from coarse crystal tuff at the bottom through vitric tuff to fine ash-stone within a thickness of only a few centimetres. Some tuff beds consist of only one layer and others display multiple and/or reverse grading. The composition of the tuffs suggests a rhyolitic to rhyodactic source for most tuffs of the Newcastle Coal Measures, but post depositional alterations have often obliterated their genetic association. The fine-grained tuffs are generally more altered than the coarse ones (Diessal 1983:197-199). Some tuffs display a

microcrystalline intergrowth of authigenic chalcedony and analcime. As rainwater filtered through the tuff layer after it settled on the ground it leached alkalis, silica and iron from the volcanic glass, increasing the pH of the descending fluids. Analcime and silica (opal and chalcedony) formed near the bottom of the pyroclastic pile. Montmorillonite (clay) also formed, especially in the thin intra-seam tuffs. Most claystones have remnants of fine glass shards now transformed into montmorillonite or kaolinite, with biotite common in some cases (Diessal 1983:199, 207). The inter-seam tuffs commonly consist of stacks of strata which differ from each other in grain size, colour (white, pink, green, cream), fabric (massive, cross-bedded), different grades of secondary silicification and other forms of authigenesis resulting in contrasting weathering patterns (Diessal 1983:199).

Two implications arise for archaeologists: (1) some of the tuffs have been silicified, giving them good flaking properties, and (2) many of the tuffs have been transformed into clay, making them generally unsuitable for flaked artefact production.

Kuskie and Kamminga (2000) observed rhyolitic tuff occurring naturally in the terrain at Black Hill and Woods Gully (F3 Freeway), exposed in a creek near Stockrington and in a cutting along Seahampton Road (Kuskie and Kamminga 2000:357, Plates 15 and 16). They cited Murray Little (geologist) when reporting several potential tuff sources at Black Hill Quarry (10m to 20m thick), spurs around Long Gully, spurs near George Booth Drive, a quarry near Buttai, localities along Minmi Creek, and localities near West Wallsend (Kuskie and Kamminga 2000:180-182). More information on the nature of tuff in the Tomago Coal Measures is given in Section 1.4.2 .

Barry (2010:13-14) reported sources of 'IMTC' (Indurated mudstone/tuff/chert) at Nobbys Headland (see section 1.4.3), Mereweather Beach, Glenrock Lagoon, Jewells Swamp at Dudley (quarry site #38-4-0039), Richardson Road at Tomago, Grahamstown Storage Reservoir and Tomago (Shortland Tuff). Barry's references for these locations were Shane Frost (Awabakal Descendent Traditional Owner Aboriginal Corporation) personal communication in 2009, MDCA (2004:90,94) and Dyall (1972). The 'Shortland Tuff' is actually silcrete and is discussed below in section 1.4.9).

Dyall (1972:171) reported 'chert' among boulders at the foot of the sea cliff at Dudley. He stated

> *… the stone was obtained from the seashore. The most likely sources of chert and tuff are Little Redhead and Murdering Gully, where large aboriginal (sic) stone workshops exist. The only closer source I can find is at the foot of the cliff at Dudley, where chert makes up a small proportion of the boulders. (Dyall 1972: 171)*

Steele (2005:16) noted that Indurated mudstone/rhyolitic tuff occurred extensively in the Permian Singleton Coal Measures in the Central Hunter Lowlands, and could be obtained from river cobbles or occasionally from outcrops. However, tuff from the Singleton Coal Measures which I have observed (courtesy Geologist Roz Kerr, 1991) was coarser than that used for flaked artefacts in the Singleton–Jerrys Plains area. The Singleton Coal Measures were probably not a source for silicified tuff used widely for artefact production in the Central Hunter Lowlands.

There is a widely-held belief that silicified tuff occurs in the bed load of the Hunter River, and the current field visit confirmed the presence of silicified tuff in the Hunter River gravels, near the former river crossing west of Gosforth (Plate 3, Plate 4, at grid reference 357250 6386670). Silicified tuff cobbles from the Hunter River are generally tabular in shape, whereas as some cobbles of Nobbys Tuff are ovoid to lenticular in shape (e.g. AHMS 2011 front cover).

		Coal seams & formations	**Comments on Tuff**
Newcastle	Moon Island	Vales Point	Includes tuff (Hawley and Brunton 1995:45)

		Coal seams & formations	Comments on Tuff
Coal Measures	Beach Subgroup	Karignan conglomerate	
		Cowper Tuff	Mechanically weak, weathers to form clay (Laing 2012:15,24).
		Wallarah coal	Plastic clays (Hamilton 1971:107)
		Catherine Hill Bay / Mannering Park Tuff	
		Toukley Coal	
		Bluff Point Coal	
		Teralba Conglomerate	
		Booragul Tuff	Mostly claystone (Hayes 2001); 'Pipeclay" (Laing 2012:27).
		Great Northern Coal	Plastic clays (Hamilton 1971:107)
	Awaba Tuff	**Eleebana / Awaba Tuff**	Mostly claystone (Seedsman 1988)
	Boolaroo Subgroup	Chain Valley Coal	
		Bolton Point Conglomerate	
		Fassifern Coal	
		Croudace Bay / Belmont Conglomerate	Includes **tuff** – the **chert** Belmont insect bed (Hawley and Brunton 1995:39; Beattie 2007)
		Upper Pilot Coal	Includes **tuff bands** (Hawley and Brunton 1995:39)
		Reids Mistake / Seahampton Sandstone	Includes **tuff** (Hawley and Brunton 1995:41)
		Lower Pilot Coal	Includes **tuff** (Hawley and Brunton 1995:39)
	Warners Bay	**Tuff**	
	Adamstown Subgroup	Hartley Hill Coal	Includes **tuff bands** (Hawley and Brunton 1995:39)
		Mount Hutton	
		Australasian Coal	Includes **numerous tuff bands** (Hawley and Brunton 1995:38), but as plastic clays (Hamilton 1971:107)
		Tickhole/Charlestown Conglomerate	
		Stockrington Tuff	
		Montrose Coal	
		Kahibah / Whitebridge Conglomerate	
		Hillsborough Tuff	
		Wave Hill Coal	
		Glebe / Tingira Conglomerate	
		Edgeworth Tuff	
		Redhead Conglomerate	
		Fern Valley Coal	Includes **tuff** (Hawley and Brunton 1995:37)
		Kotara/Merewether Conglomerate	Includes **tuff** (Hawley and Brunton 1995:35)
		Victoria Tunnel Coal	
	Nobbys Tuff	**Shepherds Hill / Nobbys Tuff**	Used for artefacts (AHIMS 2011)
	Lampton Subgroup	Nobbys Coal	
		Bar Beach / Signal Hill Conglomerate	Includes **tuff** (Hawley and Brunton 1995:34)
		Dudley Coal	10cm claystone band (Diessal 1983:207)
		Young Wallsend Coal	
		Bogey Hole / Cockle Creek Conglomerate	Includes **tuff** (Hawley and Brunton 1995:34)
		Yard Coal	
		Tighes Hill / Ferndale Conglomerate	Includes **tuff** Hawley and Brunton 1995:31
		Borehole Coal	
		West Borehole Coal	
	Waratah	Waratah Sandstone	

		Coal seams & formations	Comments on Tuff
	Sandstone		
Tomago Coal Measures	Dempsey Formation	Shale, mudstone, sandstone, thick coal seams, clay	**Tuffaceous clays** (Engels 1966:23), most unsuitable for knapping, some pieces OK (Kuskie & Kamminga 200:358)
	Four Mile Creek Formation	Sandstone, shale, mudstone, coal seams, **tuff**	
	Wallis Creek Formation	Sandstone, shale, mudstone, thin coal seams	

Table 1 Tuff in Permian geological formations in the Newcastle region. (Compiled largely from Hawley and Brunton 1995:12, 16, 83; Engel 1966:Table 1, with additional references)

Plate 3 Gravel bar along Hunter River, Gosforth.

Camera facing south-west

Plate 4 Detail of gravels in Hunter River, Gosforth.

Yellow pebble above scale is silicified tuff. Scale in cm.

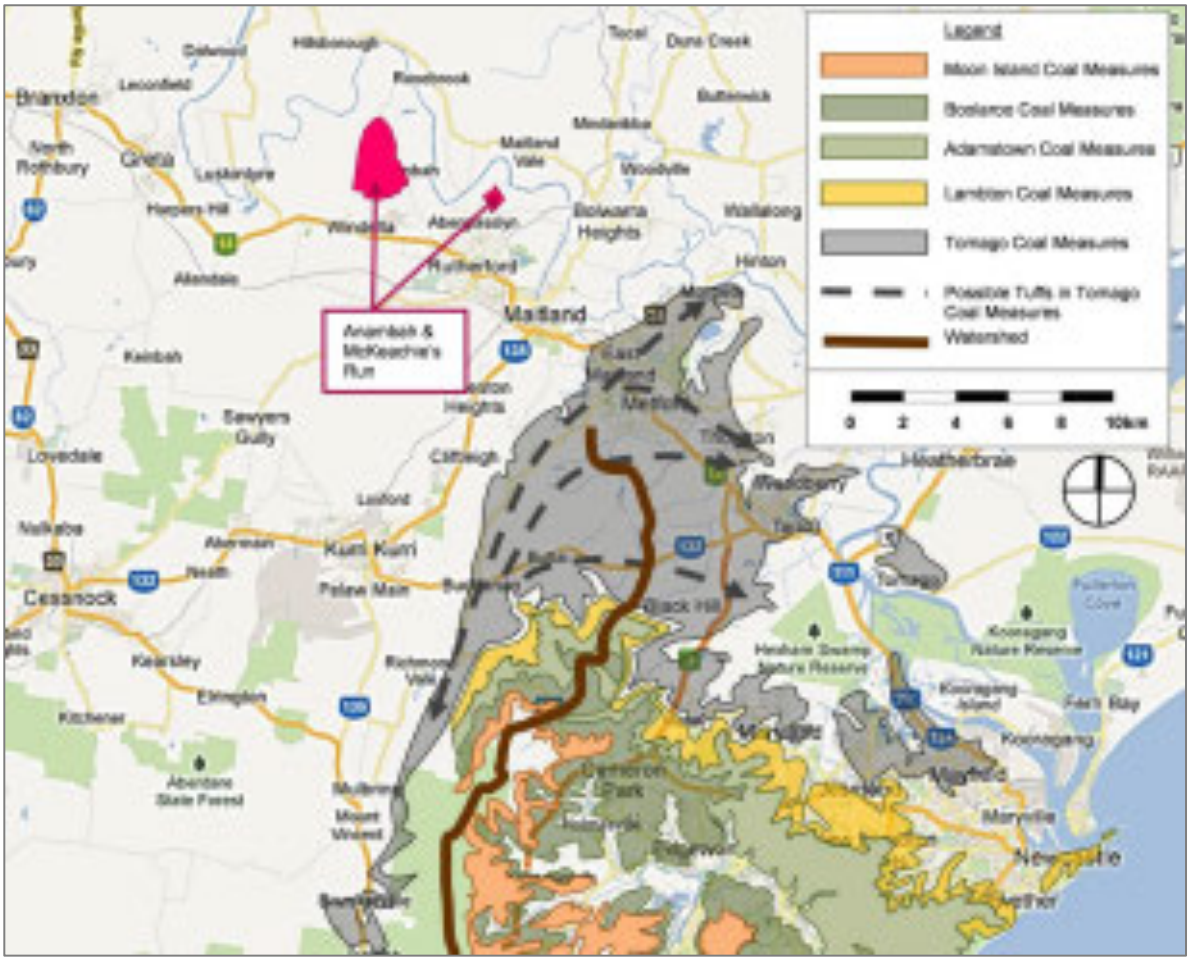


Figure 4 Primary geological formations in the Newcastle Coalfield which contain tuff (from Hawley and Brunton 1995:50).

1.4.2 Tuffs in the Tomago Coal Measures

The Tomago Coal Measures include a number of tuff horizons (Engel 1966:21), but by volume, they make up only a small proportion of the total sequence. Tuffs occur in the Four Mile Creek and Dempsey Formations. The Four Mile Creek formation outcrops from about 1.5km south of Buchanan, north-east to about 1.5km south-east of Maitland, then south-east around the flank of the south dipping Four Mile Creek Anticline, then north-east to about 1km south of Thornton (Engles 1966:22-23). The Dempsey Formation includes “tuffaceous clays”, between the Upper and Lower Sandgate Seam. It outcrops in the Buttai area and extends easterly towards Newcastle, passing under alluvium in the Hexham area (Engels 1966:23). Approximations of the surface outcrop of tuff formations are shown on Figure 4 with dashed lines.

Kuskie and Kamminga (2000:357) reported detritus from thin tuff layers occurring naturally at Woods Gully and Black Hill around their archaeological excavations. This area was located on the Dempsey Formation of the Tomago Coal Measures (Kuskie and Kamminga 2000:29). They describe the tuff as follows:

> *Within the survey area, thick tabular pieces of tuff up to 15cm in size were scattered on the reservoir embankment and along the margins of the gully between scrapes C3/1 and F4/a. A few detrital pieces of tabular tuff, the largest 80mm long, 16mm thick and weighing 106 grams, were also recovered from the F5/A*

> *broad area excavation. These pieces of tuff were orange, yellow or white in surface colouration, with orange to red interior matrix. While some displayed small conchoidal flake scars along their sides, they predominantly had fractured along bedding planes weakened by penetration of secondary minerals. Because many pieces were heavily weathered, only some were suitable for knapping. Possibly these fragments derive from bedrock layers no more than a centimetre thick, or from the parallel splitting along bedding planes within a layer at least a few centimetres thick. Such layers have not been completely removed by erosion in the area and presumably these fragments represent their typical remnants. Similar detrital pieces of tuff were used as microblade cores on site and may have been collected from the immediate area to be used for knapping (Kuskie and Kamminga 2000:358).*

This statement indicates that occasional pieces of tuff may have been found which were suitable for production of flaked artefacts — but most pieces were not.

1.4.3 Nobbys Tuff

Nobbys Tuff was a preferred lithic resource for production of flaked artefacts (e.g. AHIMS 2011; Baker 1994; Dean-Jones 1990).

Nobbys Tuff formed at the top of the Lambton Subgroup. It is generally 1.5m to 2m thick over much of the eastern portion of the Newcastle Coalfield with irregular thickening to the north and east (Diessal 1983:199). At Nobbys Head, Nobbys Tuff is 25m thick, extending upwards from sea level. South of Nobbys, the tuff occurs high up in cliffs at Shepherds Hill and Merewether, then further south at Glenrock it outcrops again just above sea level. From Glenrock the tuff continues to dip southwards, disappearing below sea level. It forms a broad arch-like fold, called the Shepherds Hill Anticline. Inland, Nobbys Tuff outcrops from Newcastle to Stockrington. South of the outcrops it occurs beneath the land surface. Thin sections of Nobbys Tuff examined under the microscope show crystals of quartz, feldspar, and biotite, shards of volcanic glass and clay minerals. Much of the original glass was altered to clay soon after deposition (Kerr 2000, 2008).

The Lambton Subgroup is shown in yellow on Figure 4, and mostly east of the Sugarloaf Range watershed. It is likely that most Nobbys Tuff would have originated from bedrock outcrops in this region and from streams flowing into Hexham Swamp and the lower Hunter. The Lambton Subgroup also outcrops west of Sugarloaf Range, though much less extensively. It is possible that Nobbys Tuff could occur as bedrock outcrops or cobbles in the catchments of Buttai, Surveyors and Wallis Creeks. I would expect, however, that finds of Nobbys Tuff west of Sugarloaf Range may be uncommon. Archaeological survey on the Lambton Subgroup in the Surveyors Creek catchment did not identify any lithic materials suitable for artefact production (HBHC 2001:14, Figure 1).

1.4.4 Adamstown Subgroup

The Adamstown Subgroup includes several tuff formations, with the Warners Bay tuff at the top of the sequence, and Stockrington, Hillsborough and Edgeworth Tuff as named formations. Tuff also occurs in the Australasian, Fern Valley and Kotara Coal Seams (Table 1); although that in the Australasian coal Seam was unsuitable for artefact production (Hamilton 1971). The Adamstown Subgroup is quite extensive (Figure 4). It occurs in the Dudley area, and the ‘chert’ among boulders at the foot of the sea cliff at Dudley, reported by Dyall (1972:171) may have originated from the Adamstown Formation.

The Adamstown Subgroup also outcrops west of Sugarloaf Range, though much less extensively. Like Nobbys Tuff, it is possible that tuff from the Adamstown subgroup could occur as bedrock or cobbles in the catchments of Buttai, Surveyors and Wallis Creeks – but uncommonly.

1.4.5 Reids Mistake Formation

The Reids Mistake Formation is a pyroclastic sequence 7m thick (Diessal 1983:201). It is exposed at Swansea Head and includes chert nodules and claystone (Loughnan and Ray 1978; Brownlow 1979). Some of this formation may have been suitable for artefact production.

1.4.6 Belmont 'Chert'

A thin 'chert' seam has been referred to as the Belmont Insect Bed. It is located within the Belmont Conglomerate Member within the upper part of the Croudace Bay Formation within the Boolaroo Subgroup. The Belmont Insect Bed is generally only 20cm to 32cm thick, but it has been reported to be up to 8m thick. It outcrops at Belmont North, Snake Gully and Mt Hutton (Beattie 2007:41, 45). The description of the Belmont Insect Bed as 'chert' suggests that it may have included stone suitable for flaked artefact production, although the fossil insects would probably have formed flaws in the stone, hindering knapping.

1.4.7 Tuffs unsuitable for artefact manufacture

Several tuff formations would have been unsuitable for the production of flaked artefacts. The Awaba Tuff is a poor quality rock with strength and deformation properties lower than that of its associated coal seams, and causes roof and floor instability in underground mines (Seedsman 1988).

Booragul Tuff is referred to locally as 'claystone'. It is part of the Moon Island Beach sub-group. The thickness of the Booragul Tuff varies from absent to several metres thick over a fairly short distance. Claystones vary from soft to harder. The claystone is firmer at Chain Valley mine and weakest at Moonee mine. Claystone tends to be weakest near the interface with coal and tends to become stronger higher in the strata (Hayes 2001:73-83).

Tuffs in the Wallarah and Australasian Seams were composed largely of plastic clays, being montmorillonite and/or beidellite, as are similar deposits associated with the Scotch Derry and Great Northern Seams (Hamilton 1971:107-108).

1.4.8 Tuffs in stream bedloads

The Newcastle Coal Measures generally outcrop east of Sugarloaf Range. Cobbles and pebbles from these formations could become incorporated into the bedloads of streams draining north towards the Lower Hunter. The Tomago Coal Measures are the most westerly of the formations, occurring west and south of Mt Vincent, within the catchments of Surveyors and Buttai Creeks, and extending north to Metford and Morpeth. Surveyors and Buttai Creeks are tributaries of Wallis Creek, so tuff cobbles or pebbles could potentially occur in the bedload of Wallis Creek, which drains northwards to divide East Maitland from Maitland. Small areas of the Lambton and Adamstown subgroups of the Newcastle Coal Measures also occur within the upper catchment of Surveyors Creek, so tuff (including Nobbys Tuff) from those formations might also occur within the bedload of Wallis Creek. Tuff from the Boolaroo and Moon Island subgroups (including Warners Bay and Awaba Tuff) are not expected to occur within the bedload of Wallis Creek.

Indurated/silicified tuff occurs as tabular cobbles and pebbles within the bedload of the Hunter River in the Singleton area, and upstream to the west. Cobbles also occur along the Goulburn River, which is a major western tributary of the Hunter River, but are very rare (absent?) along the Hunter River upstream of the Goulburn River confluence (Fahey 1994:28). The rock may have originated

from Permian deposits in the Western Coalfields. Cobbles have also been found in relict terraces above the Hunter River at Lemington west of Singleton (Dean-Jones 1992:5).

Kuskie and Kamminga (2000:185) note that identifying particular gravel source locations along active streams is problematic. Substantial changes have occurred to the Hunter River since European occupation, due to ongoing changes in water flow, sediment erosion and deposition. Gravel bars which may have contained useable lithic materials may have been washed away by floods or buried under finer sediments. The course of the Hunter River across its flood plain has also been known to change in some places (Reeves and Coulter 2006:8-9). Similar processes may also have affected Wallis Creek and its floodplain.

1.4.9 Potential to source tuffs in artefact assemblages

Kuskie and Kamminga (2000:360) conducted x-ray diffraction (XRD) of tuff samples from their sites and from other localities in the lower and upper Hunter Valley. The analysis confirmed that both central and coastal Hunter Valley tuffs were essentially the same in mineral composition. The tuff samples were composed of quartz, potassium feldspar (orthoclase and/or sanidine) and occasionally layer silicate. They concluded that the then current methods of analysis did not provide a basis for attributing individual artefacts or assemblages to a particular source.

However, other geo-chemical analysis of various tuffs in the Sydney Basin has been carried out, indicating that some tuffs are distinctive. Kramer *et al*. (2001) found that the Awaba and Nobbys tuffs could be distinguished by chemical composition. Analysis of tonsteins in the tuffs also distinguished between the Warners Bay tuff, but not Mt Hutton tuff. When compared to tuffs in the Wollombi Coal Measures it was found that the Awaba Tuff was equivalent to the Nalleen Tuff of the Wollombi Coal Measures, but other tuffs in the Wollombi Coal Measures showed only moderate to poor correlation with their supposed stratigraphic equivalents in the Newcastle Coal Measures (Kramer *et al*. 2001). Geochemical analysis found that the Burragorang Claystone showed a strong correlation with the Awaba Tuff, and the Farmborough Claystone Member correlated with the Warners Bay Tuff. The Huntley Claystone Member was difficult to correlate with Nobbys Tuff (Grevenitz *et al*. 2003; but see Retallack *et al*. 2011:235). The results of the geo-chemical analyses indicate that Nobbys Tuff is distinctive from other tuffs that were tested. However, it is possible that it was distinguished from other tuffs which had weathered to form claystone, e.g. Awaba Tuff and Burragorang Claystone.

Kuskie and Kamminga (2000:183) raise the issue of colour as a potential aid to identifying different sources of tuff. Colour could be influenced by mineral composition, but colour could also change due to heat (e.g. yellow changing to red, Corkill 1997) or weathering (yellow artefacts when freshly broken during excavation often show grey less weathered stone internally).

The available information suggests a need for further geological investigation into the origin and nature of tuff from various sources in the region. If it was possible to distinguish between tuffs from various geological formations it may be possible to determine the original sources of indurated/silicified tuff used for artefact production. In turn, this might help inform social relationships across the lower and middle Hunter regions.

1.5 Silcrete

Kuskie and Kamminga (2000:183) describe silcrete as a brittle, intensely indurated rock composed mainly of quartz clasts cemented by a matrix which may be well-crystallised quartz, cryptocrystalline

quartz or amorphous (opaline) silica. The texture of silcrete reflects the host rock, and clasts may range from very fine grains to boulders.

In the lower Hunter, Kuskie (1994:4.29) reported the presence of silcrete gravel at Thornton, just west of Woodberry Swamp. Gravels were found at Thornton site 7, site 9 and elsewhere on the surface (Kuskie 1994:14,24,29) in the north-east part of his study area, suggesting a localised distribution. The sites were located between c.8m and 15m AHD. Surface geology was mapped as Permian Mulbring Sandstone (*Newcastle Coalfield Regional Geology* 100k). Kuskie (1994) stated:

> *Silcrete is by far the most common raw material within each site and the study area as a whole. The only notable internal variation is that Sites 8 and 9 are comprised almost entirely of silcrete. This is indicative of the different activities (procurement and reduction) which have occurred in this location. … The occurrence of silcrete in the Hunter Valley is widespread in alluvial gravels. It is ultimately derived from silicified Tertiary fluvial sands and gravels, several sources of which are located in the Upper Hunter (Hughes 1984:78).*
>
> *Site 9 could be described as a lithic quarry, following Hiscock and Mitchell's (1993) definition of a lithic quarry as the location of an exploited stone source* (Kuskie 1994:32)

Barry (2010:13-14) reported the presence of silcrete at Beresfield Golf Course and Fennell Bay, citing Shane Frost (Awabakal Descendent Traditional Owner Aboriginal Corporation) personal communication in 2009 for the Beresfield source, and MDCA (2004:90,94) for Fennell Bay. The precise location of silcrete within Beresfield Golf Course was not reported, but the golf course is located c.3km south of the Thornton source of silcrete and below 10m AHD. The surface geology is mapped as Tomago Coal Measures and Quaternary alluvium (*Newcastle Coalfield Regional Geology* 100k map).

Steele (2005:12) noted that various gravels, including silcrete, were present within Hexham Swamp; he cited Engel (1966) as the source for this information.

Silcrete 'gravels' occur at Bolwarra Heights, and Baker (1997) confirmed that they had been utilised as a raw material source, with on-site flaking of the stone. Baker stated:

> *The crest shows primary evidence of reduction of stone for artefact manufacture (mostly silcrete …). Aboriginal people dug in this area for large fragments of gravel for manufacture into artefacts. Artefacts of other raw materials occurred in very low numbers (1 to 5 artefacts): petrified wood, quartz, quartzite, tuff and other volcanic stone.*
>
> *Whilst most of the gravel originates from weathered Permian conglomerates, the origin of the silcrete is problematic. Silcrete is generally held to be of Tertiary age (P.Mitchell pers.comm. Dec 1996) whereas the conglomerates are of an older age. Inspection of conglomerate seams in the sandstone/conglomerate outcrops at river level fail to reveal silcrete pebbles or cobbles within the conglomeritic seams.*
>
> *The bulk of the gravel had long ago weathered from the conglomerates and formed a concentrated band in the soil at 10-20cm. A gravel layer at 10-20cm below ground surface was common across the elevated parts of the study area. On the crest the gravel fragments were larger than elsewhere and more suitable for Aboriginal flaking.* (Baker 1997:29)

The crest landform on which the silcrete occurred was located above 36m AHD, and about 300m from the Hunter River (Baker 1997). The surface geology was mapped as the Permian Branxton Formation (Newcastle Coalfield 100k Geological Map). It can be noted that the 1:25k topographic map sheet showed the Bolwarra Heights location as occurring between 20m and 30m; indicating an error in the mapping at the larger scale than given in the report.

Raggatt (1938) reported the presence of 'silicified Tertiary sands' or 'grey billy' (i.e. silcrete) at several locations in the Central Lowlands of the Hunter Valley between Muswellbrook and Singleton. He considered that the silcrete had formed when remnants of river sands and gravels were cemented following outpouring of Tertiary basalt which had since been removed by erosion (Raggatt 1938). That is, Raggatt proposed *in situ* formation of the silcrete. Mitchell (1997) inspected a formation at Bengalla, on the opposite side of the Hunter River to those at Roxburgh reported by Raggatt. The Bengalla formation included lithologies comparable to those in the bedload of the modern Hunter River, suggesting a similar original source. The Bengalla silcrete boulders showed arcuate and circular fractures, which were the eroded cones of percussion caused by boulder impacts during transportation in a high energy stream. He concluded that the silcrete was part of a fluvial gravel transported from an unknown source in the upper Hunter Valley (Mitchell 1997:3). Mitchell (1997:4) also noted that the terrace deposits were not dated, and could not be reliably ascribed a Tertiary age.

Silcrete has recently been identified within the Anambah study area at three locations. The outcrops include silcrete boulders and smaller debris (Tim Owen, personal communication 22nd and 28th August 2012). The outcrops are exposed between c.15m and 17m AHD, on the eroded edges of flat to very gently sloping landforms, into which several streams have been incised. They are located between 1.1km and 1.7km from the modern channel of the Hunter River. Similar formations could occur on wide flattish landforms between the outcrops and the Hunter River. It is possible that these landforms are ancient terraces, or lower slopes capped by ancient terrace deposits. If so, silcrete could occur on the adjacent flattish land surfaces away from the incised creeks.

In the Central Lowlands of the Hunter Valley (west of Maitland) silcrete has been reported at several locations (Table 2, Figure 5). Silcrete occurred within the bedload of the Hunter River (e.g. at the low level crossing at "Kilburnie", personal observation) but has been observed more often in relict terraces above the Hunter River (e.g. Brayshaw et al. 1996:5; Dean-Jones 1992; Koettig and Hughes 1985; Rich 1992, 1993). At Lemington, some of the boulders were very large and some probably weighed several tonnes. Rocks of other diverse lithologies were also present at Bengalla, Lemington, and nearby at Cheshunt (Brayshaw et al. 1996:5, Fig.2b; Dean-Jones 1992; Mitchell 1997). The elevations of silcrete locations are shown on Figure 6, together with the elevation of the modern Hunter River. The silcrete locations occur at higher elevations than the modern Hunter River, except for the low level crossing at "Kilburnie". The silcrete locations also show a general decline in elevation from Bengalla in the north-west towards the coast. However, the silcrete outcrops along Putty Road at Abbey Green and Doughboy Hollow, and that at Bolwarra Heights, are at higher elevations than the general trend, indicating that there may have been more than one phase of silcrete deposition.

Figure 5 Locations of reported silcrete (shown as red stars)

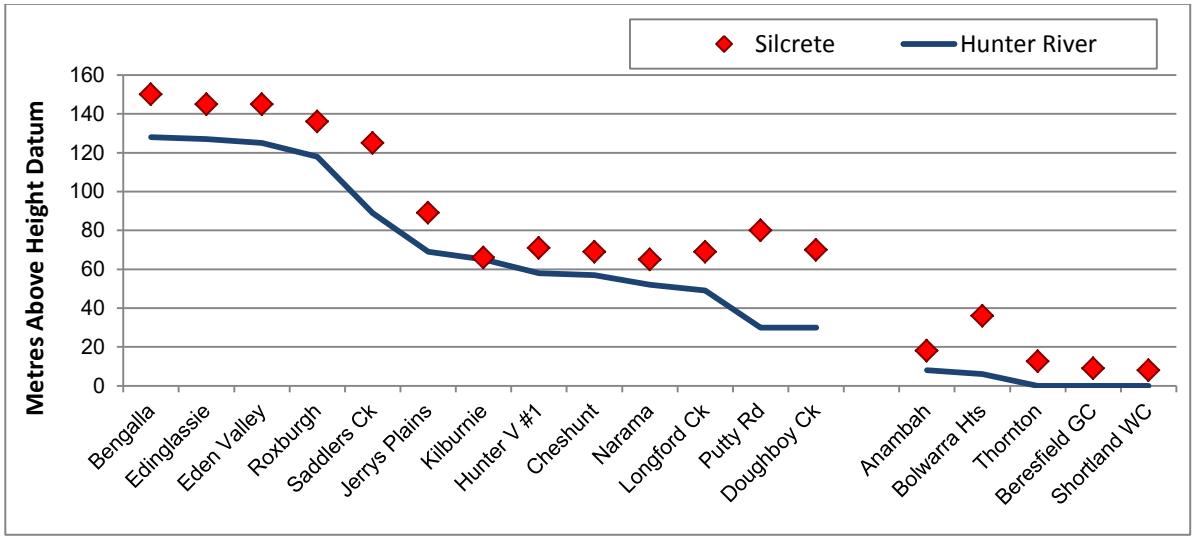


Figure 6 Elevation of reported silcrete locations

Location (from north-west to south-east)	Grid reference	AHD	Mapped Geology	Comments	Reference
Kayuga	n/a	n/a	n/a	Seen within road easement	Jill Ruig, *personal communication*.1994
Bengalla (AHIMS 37-2-	294620	150 –	Pswj	Confirmed Aboriginal	White 1998; Mitchell 1997:3-

Location (from north-west to south-east)	Grid reference	AHD	Mapped Geology	Comments	Reference
579)	6425575	160m		quarry. Fluvial deposit	4.
Edinglassie	296100 6424200	143 – 147m	Cza	Edge of a terrace; blocks remnant of uniform sheet, broken *in situ* (not transported boulders). Aboriginal site 37-2-125 spatially associated.	Muswellbrook 1:25k geological map sheet – mapped as Cza; Raggatt 1938:320; Dyall 1980:4.
Eden Valley	295100 6423000	140 – 151m	Cza		
Roxburgh	292000 6421600	130 – 142m	Cza		
Saddlers Creek	295615 6412030 295675 6411530	122m, 128m	Junction Qha & Pswj	Boulders present near Aboriginal sites MAS76 and MAS52.	Koettig and Hughes 1985:31,32.
Lower Saltwater Creek, uncertain location				Cobbles along Saltwater Creek, mostly as piles of cobbles where stacked by farmers when ploughing.	Koettig and Hughes 1985:25.
Jerrys Plains village	303070 6403200	89m	Cza	On edge of terrace 130' above the Hunter River. Terrace remnant	Raggatt 1938:320; Jerrys Plains 1:25k geological map sheet.
Kilburnie (low level crossing)	306260 6400480	65m	Qha	Cobbles amongst Hunter River gravels (current bedload).	Personal observation.
Hunter Valley No.1	311580 6401720	71m	Pswj	Silcrete cobbles present, large cores and flakes, split cobble.	Brayshaw 1985:1,12; Rich 1993b:64,67; Doyles Ck 1:25k geological map sheet.
Cheshunt (Lemington)	314000 6401200	69m	Cza	BBC4, LC2. Cobbles from Tertiary sediments readily available on the hillslide	Dean-Jones 1992:21,29; Singleton 1:25k geological map sheet
Narama site R5	314210 6405310	65m	Pswj near Qha	Cobbles present; no evidence of on-site reduction.	Rich 1992 Vol.2:142,152; Camberwell 1:25k geological map sheet
Lemington	315700 6395700	62m	Conglomerate lens in Pswj	Cobbles and boulders on ridge, much disturbed; artefacts associated with northern exposure.	Brayshaw *et al*. 1996:5, Fig.2b. Singleton 1:25k geological map sheet.
Putty Road, Abbey Green	326100 6390270	80m	Czas	Boulders on stranded terrace extended over 200 acres; disturbed.	Fahey 1992:4-5; Raggatt 1938:318; Singleton 1:25k geological map sheet.
Doughboy Hollow Ck, Abbey Green	327437 6391020	70m	Czas		Singleton 1:25k geological map sheet.
Anambah	c.358520 6383830, c.358670 6383620, c.359080 6382380	18m 15m 11m	Pdl	Boulders & pieces	Tim Owen, personal communication
Bolwarra Heights	366110 6381100	36m	Pmb	Silcrete gravel weathered from conglomerates	Baker 1997:29
Thornton	374075 6372935 373731 6373200	11m 14m	Pmm	Silcrete gravels at sites 7 and 9	Kuskie 1994:29,32; Newcastle Coalfield 1:100k geological map
Beresfield Golf Course	c.373000 6370000	9m	Pt & Qa	Silcrete gravels reported by Awabakal DTOAC	Barry 2010:13-14; Newcastle Coalfield 1:100k geological map
Shortland Wetlands Centre	c. 378000 6361800	c. 8m	Qa	Dean-Jones reported tuff, but Kuskie and Kamminga confirmed silcrete	Kuskie and Kamminga 2000:359, citing Dean-Jones.

Table 2 Reported silcrete locations in the Hunter Valley

1.6 Other raw material types

Kuskie and Kamminga (2000:185 onward) also briefly describe quartz, chalcedony, chert, petrified wood, quartzite, porcellanite, and dacite.. Quartz (silicon dioxide or SiO_2) can occur as veins, geodes and macrocrystals. Quartz and other raw material types often have flaws and tend to be of lesser flaking quality than indurated/silicified tuff or silcrete. Quartz, siliciified/petrified wood, other fine grained siliceous and porphyritic rock types have been observed within the bedload of the Hunter River (personal observation). Quartz also occurs within the Hawkesbury Sandstone, which outcrops in the Southern Mountains south of Singleton (*Newcastle Coalfield Regional Geology* 100k map sheet; Singleton 250k geological map sheet).

Barry (2010:13-14) reported that quartzite may occur at Nobbys Head and at other coastal locations. Dyall (1972:172) also noted that quartzite pebbles were present along the beach below Redhead Water Tower.

Porcellanite is a rare rock type used for flaked artefact production, with the largest numbers found in assemblages in the Central Hunter Lowlands around Mt Arthur (White 1999). This raw material type may have had a localised natural distribution.

Kuskie (2008b) suggested that the Munmorah Conglomerate could contain pebbles potentially suitable for production of flaked artefacts.

1.7 Summary of results

The main findings of this study are:

- Local bedrock at Anambah and McKeachies's Run is unsuitable for the production of flaked artefacts.
- Gravels occurring in nearby outcrops of the Greta Coal Measures are unsuitable for the production of flaked artefacts.
- A variety of lithic raw materials, but especially silicified tuff, quartz, other igneous and metamorphic rocks, are generally available in gravel bars along the Hunter River. The rocks would probably have been procured as cobbles or large pebbles (e.g. more than 5cm in size). The locations of rocks of suitable size could have changed over time, as floods variously removed gravel bars or buried them under finer sediment. The course of the Hunter River within its flood plain could also have changed over time. The potential for change over time in the availability of rocks of suitable sizes makes it difficult to predict the precise locations along the Hunter River from which people could have obtained lithic materials. However, the Hunter River gravels in general could be identified as a likely source for silicified tuff, quartz, quartzite, igneous and other metamorphic rocks.
- Silcrete may occasionally occur in the Hunter River gravels. However, the predominance of silcrete in local artefact assemblages suggests that Aboriginal people preferred terrace silcrete sources over the Hunter River gravels.

- Silcrete which had been used for artefact production, has been found at Anambah (Tim Owen, *personal communication*) and at Bolwarra Heights (Baker 1997), about 3.5km east-south-east of McKeachie's Run and between c.7.5km and 9km from Anambah. No other sources of silcrete are known to occur in the Maitland area, but it is likely that other sources are present. Silcrete sources are likely to occur as remnant terraces, at varying elevations above height datum (AHD) – between c.10m and 20m AHD at Anambah and at 36m AHD at Bolwarra Heights.
- Nobbys Tuff was a significant lithic resource in the Newcastle area, often used for stone artefact production (e.g. AHIMS 2011). It occurs within the Lambton Coal Measures. It outcrops near sea level at Nobbys Head (mouth of the Hunter River) and further south at Glenrock, high up in cliffs at Shepherds Hill, Merewether (Kerr 2000, 2008), Stockrington and several other locations (Kerr 2008; Kuskie and Kamminga 2000). The Lambton Coal Measures extend into the catchment of Wallis Creek, so cobbles suitable for artefact manufacture could potentially occur within the bed load of Wallis Creek; though so far as I can ascertain, no such sources have been identified within that catchment. Nobbys Tuff would not be present in the bedload of the Hunter River upstream from Maitland.
- Occasional pieces of tuff suitable for flaked artefact manufacture occur within the Dempsey Formation of the Tomago Coal Measures. Most tuff on the ground surface was not suitable, but occasional pieces were utilised in the Woods Gully—Black Hill area (Kuskie and Kamminga 2000:357). The Dempsey Formation extends into the catchment of Buttai Creek, thence Wallis Creek, so cobbles suitable for artefact manufacture could potentially occur within the bed load of the lower reaches of Wallis Creek.
- Silicified tuff suitable for artefact production may also occur within the Adamstown Subgroup in the Dudley area (Figure 4, Dyall 1972), in the Reids Mistake Formation at Swansea Head (Brownlow 1979; Loughnan and Ray 1978), and the Belmont Insect Bed of the Croudace Bay Formation at Belmont North, snake Gully and Mt Hutton (Beattie 2007).
- Numerous other tuff formations occur in the Newcastle Coal Measures but many of these have weathered to form claystones, unsuitable for artefact manufacture (Diessel 1983; Hamilton 1971; Hawley and Brunton 1995; Hayes 2001; Laing 2012; Seedsman 1988).
- Kuskie and Kamminga (2002:360) carried out X-ray Diffraction (XRD) analysis of tuff samples. They found that the technique did not distinguish between silicified tuffs from the central Hunter Valley and those from coastal sources. However, more recent studies of the chemical composition of major tuff formations has been carried out, and Nobbys Tuff has been distinguished from several other tuff formations (Grevenitz *et al*. 2003; Kramer *et al* 2001). This suggests that it may be possible to distinguish Nobbys Tuff from other tuff formations. If so, more detailed information on tuff procurement, and the possibility of trade or exchange, may be possible.
- The present study has been preliminary only, and considerably more research into the location and nature of lithic raw material sources could usefully be conducted in the Lower Hunter Region.

1.8 References

AHMS 2011 Section 87/90 Aboriginal Heritage Impact Permit #1098622 Excavation Report. Final report. Unpublished report by Archaeological and Heritage Management Solutions to SBA Architects Pty Ltd.

Baker, N. 1994 Moffats Swamp Dune: Final Report on Archaeological Site Salvage, Testing and Artefact Analysis. Unpublished report to RZM Pty Ltd.

Baker, N. 1997 Archaeological Test Excavations at Landcom Project 12163.001,Bolwarra Heights, Hunter Valley, NSW, Report by Australian Museum Business. Services to Atkinson and Tattersall Pty Ltd and Landcom, NSW, Sydney.

Barry, F. 2010 Stone artefact report, Appendix 7 in AHMS 2011 Section 87/90 Aboriginal Heritage Impact Permit #1098622 Excavation Report for SBA Architects Pty Ltd.

Beattie, R. 2007 The geological setting and palaeoenvironmental and palaeoecological reconstructions of the Upper Permian insect beds at Belmont, New South Wales, Australia. *African Invertebrates* 48(1):41-57.

Binns, R.A. and McBryde, I. 1972 *A petrological analysis of ground-edge artefacts from Northern New South Wales*. Canberra: Australian Institute of Aboriginal Studies.

Brayshaw, H. 1985 Archaeological survey of Authorisation 341 south of Hunter Valley No.1 Mine, NSW. Unpublished report to Coal & Allied Operations Pty Ltd.

Brayshaw, H., Haglund, L. and Rich (=White), E. 1996 Lemington mine Hunter valley Southern Extension EIS: archaeological survey for Aboriginal sites. Unpublished report to Lemington Mine through Sinclair Knight Merz.

Brownlow, J.W. 1979 Discussion: The Reids Mistake Formation at Swansea Heads, New South Wales. *Journal of the Geological Society of Australia* 26:319-322.

Corkill, T. 1997 Red, yellow and black: colour and heat in archaeological stone. *Australian Archaeology* 45:54-55.

Corkill,T. 2005 Sourcing stone from the Sydney region: a hatchet job. *Australian Archaeology* 60:41-50.

Dean-Jones, P. 1990 Newcastle Bight Aboriginal sites study. Unpublished report to NPWS.

Dean-Jones, P. 1992 Lemington Coal Mines Ltd. Archaeological investigations of Aboriginal sites, proposed north western open cut area. Unpublished report to Lemington Mine.

Department of Mineral Resources 1995 *Newcastle Coalfield Regional Geology* 1:100,000 scale geological map sheet.

Diessel, C.F.K. 1983 Tuffs and tonsteins in the coal measures of New South Wales, Australia, pp.197-208. *Dixième Congrès International de Stratigraphie et de Géologie du Carbonifère*. Madrid:XICC.

Dyall, L.K. 1972 Aboriginal Occupation of the Dudley-Jewells Swamp Area *Hunter Natural History,* pp.168-177.

Engel, B.A. 1966 1:250,000 *Geological series explanatory notes Newcastle Sheet S1 56-2 Australian National Grid* Sydney: Department of Mines.

Fahey, M. 1992 Geomorphological assessment of archaeological sites "H" and "L" and the Doctors Creek Valley on the Warkworth Mining Lease at Mt Thorley in the Hunter Valley, N.S.W. Unpublished report prepared by Warkworth Mining Pty Ltd to Haglund and Associates.

Fahey, M. 1994 Geomorphological assessment; archaeological sites "W6", "W7", "W8", "W9", "W10" and "C" and the Sandy Hollow and Dight's Creek catchments. Unpublished report prepared by Warkworth Mining Pty Ltd to Haglund and Associates.

GML 2012 McKeachie's Run top soil stripping. Archaeological technical report. Unpublished draft report to Stockland.

Grevenitz, P., Carr, P. and Hutton, A. 2003 Origin, alteration and geochemical correlation of Late Permian airfall tuffs in coal measures, Sydney Basin, Australia. *International Journal of Coal Geology* 55(1):27-46.

Hamilton, J.D. 1971 Beidellitic Montmorillonite from Swansea, New South Wales. *Clay Minerals* 9:107-123.

Hawley, S.P. and Brunton, J.S. 1995 *The Newcastle Coalfield: Notes to accompany te 1:100,000 Newcastle Coalfield regional geological map*. Coal and Petroleum Geology Branch Department of Mineral Resources. Geological Survey Report No. GS1995/256.

Hayes, P.J. 2001 Towards high productivity under a "claystone" roof: Great Northern Seam support management experiences at Chain Valley, Moonee and Wallarah Collieries, pp.71-84. In Aziz, N. (ed) *Coal 2001: Coal Operators' Geotechnology Colloquium*. University of Wollongong & the Australasian Institute of Mining and Metallurgy.

HBHC 2001 Proposed Highway Link F3 to Branxton update of archaeological assessment. Unpublished report by Helen Brayshaw Heritage Consultants to the NSW Roads and Traffic Authority through Connell Wagner Pty Ltd.

Hughes, P.J. 1984 NSW National Parks and Wildlife Service Hunter Valley region archaeological project stage 1: An overview of the archaeology of the Hunter Valley, its environmental setting and the impact of development. Unpublished report to the NSW National Parks and Wildlife Service.

Kerr, R. 2000 Nobbys Tuff – the rocks of Nobbys Head. Retrieved 16 July 2012 from http://www.newcastle.edu.au/Resources/Divisions/Academic/Library/Cultural%20Collections/pdf/kerr-nobbys.pdf.

Kerr, R. 2008 The Bathers Way: geology and landscape. Report to Newcastle Tourism & City Strategy, Newcastle City.

Koettig, M. and Hughes, P.J. 1985 Archaeological investigations at Plashett Dam, Mount Arthur North and Mount Arthur South in the Hunter valley, New South Wales. Vol.2: The archaeological survey. Unpublished report by ANUTECH Pty Ltd to the Electricity Commission of New South Wales and Mount Arthur South Coal Pty Ltd.

Kramer, W., Weatherall, G. and Offer, R. 2001 Origin and correlation of tuffs in the Permian Newcastle and Wollombi Coal Measures, NSW, Australia, using chemical fingerprinting. *International Journal of Coal Geology* 47(2):115-135.

Kuskie, P.J. 1994 Further archaeological investigations of Lot 1 DP 559519, Thornton, NSW. Unpublished report to Gutteridge, Haskins and Davey Pty Ltd.

Kuskie, P.J. and Kamminga, J. 2000 Salvage of Aboriginal archaeological sites in relation to the F3 Freeway near Lenaghans Drive, Black Hill, New South Wales. Report by South East Archaeology to the Roads and Traffic Authority of New South Wales.

Kuskie, P.J. 2008a Bloomfield Colliery, Hunter Valley, New South Wales: Completion of mining and rehabilitation project – Aboriginal heritage impact assessment. Unpublished report by South East Archaeology Pty Ltd to Bloomfield Collieries Pty Ltd.

Kuskie, P.J. 2008b Tasman Coal Mine (Panels 1 – 17) SMP application: Aboriginal heritage assessment. Unpublished report to Donaldson Coal Pty Ltd.

Laing, W.P. 2012 Cathering Hill Bay Development Control Plan and exclusion from General Housing Code, File: 11-21806 of 20 March 2012. Addendum 1 to Original Submission 19 April 2012. Retrieved 22 July 2012 from http://www.planning.nsw.gov.au/LinkClick.aspx?fileticket=_Gy4WMUOIGY%3D&tabid=205&mid=1081&language=en-AU

Loughnan, F.C. and Ray, A.S. 1978 The Reid's Mistake Formation at Swansea Head, New South Wales. *Journal of the Geological Society of Australia.* 25(8):473-481.

MDCA 2004 Aboriginal Archaeological Test Excavation Report: The Boardwalk site Honeysuckle Drive, Newcastle, NSW. Unpublished report to Stronach Pty Ltd.

MDCA 2008 Aboriginal Archaeological Excavation Report. Partial Salvage of AB Campsite 1 (AHIMS #38-8-0866) at Oakhampton Road, Aberglasslyn, NSW. Unpublished report to Pulver Cooper & Blackley Pty Ltd on behalf of Stockland Developments Pty Ltd.

Mitchell, P.B. 1997 Bengalla Mine Project. Aboriginal archaeological site B10. Appendix 4 in White, E. 1998 Archaeological salvage of sties B10 & B33, Bengalla Mine, Hunter Valley, NSW. Unpublished report to Bengalla Mining Company.

Raggatt, H.G. 1938 Note on some silicified terrace sands ("grey billy") in the Hunter Valley (N.S.W.). Journal of the Royal Society of New South Wales LXXII:318-324.

Reeves, J. and Coulter, N. 2006 Archaeological survey for Aboriginal heritage sites: proposed third Hunter River crossing, Maitland, New South Wales. Unpublished draft report to NSW Roads and Traffic Authority.

Retallack, G.J., Sheldon, N.D., Carr, P.F., Fanning, M., Thompson, C.A., Williams, M.L., Jones, B.G. and Hutton, A. 2011 Multiple Early Triassic greenhouse crises impeded recovery from Late Permian mass extinction. *Palaeogeography, Palaeoclimatology, Palaeoecology* 308:233-251.

Rich (= White), E. 1992 Narama salvage project, lower Bayswater Creek, Hunter Valley, NSW. Vol. 1. Unpublished report by Brayshaw McDonald Pty Ltd to Envirosciences Pty Ltd and Narama Joint Venture

Rich (=White), E. 1993a Proposed Bengalla coal mine, Muswellbrook, NSW: archaeological survey for Aboriginal sites. Unpublished report to Envirosciences Pty Ltd and Bengalla Joint Venture.

Rich (=White), E. 1993b Archaeological investigation of sites 37-5-63 and 37-5-126 Hunter Valley No.1 Mine. Unpublished report to Coal & Allied Operations Pty Ltd.

Seedsman, R.W. 1988 Mining in proximity to the Awaba Tuff. *Fifth Australia – New Zealand Conference on Geomechanics: prediction versus performance, preprints of papers*, pp.229-235. Barton, ACT, Australia: Institution of Engineers.

Steele, D. 2005 Preliminary Aboriginal archaeological survey and assessment proposed upgrade of State Highway SH23, Shortland to Sandgate New south Wales. Report to the NSW Roads and Traffic Authority.

White, E. 1998 Archaeological salvage of sites B10 and B33, Bengalla Mine, Hunter Valley, NSW. Unpublished report to Bengalla Mining Company.

White, E. 1999 From Artefacts to the Actions of People in Prehistory: A Behavioural Study of the W2 Stone Artefact Assemblage, Hunter Valley, NSW. Unpublished MPhil Thesis, Department of Archaeology, University of Sydney, Sydney.

1.9 Glossary of Technical Terms

Analcime. A white, grey, or colourless mineral, consisting of hydrated sodium aluminium silicate in cubic crystalline form. Structurally and chemically it is more similar to feldspars. Analcime occurs as a primary mineral in some basalt and other alkaline igneous rocks. It sometimes occurs as cavity and vesicle fillings in rocks.

Authigenic. A mineral or rock found where it formed during sedimentation by precipitation or recrystallization. Common sedimentary authigenic minerals include calcium carbonate[3], apatite[4], and clays [5]. For any mineral to be precipitated, the water must be oversaturated with respect to that mineral.

Beidellite. A clay mineral of the montmorillonite group in which Si^{4+} has been replaced by Al^{3+} and in which there is virtual absence of Mg or Fe replacing Al. http://www.answers.com/topic/beidellite-mineralogy#ixzz20kM29vSX.

Bentonite. An impure clay, with differing dominant elements, such as potassium, sodium, calcium and aluminium.

Biotite. A dark mica, consisting of iron, magnesium, aluminium, silicon, oxygen and hydrogen, which form sheets weakly bound together by potassium ions.

Boulder. A rock more than 25.6cm (10 inches) in size.

Cobble: A rock more than 6.4cm in size.

Cryptocrystalline. A rock texture made up of such minute crystals that its crystalline nature is only vaguely revealed even microscopically. Felsites and rhyolites are volcanic *Cryptocrystalline* rocks, and chert and flint are cryptocrystalline simentaedry rocks.

Devitrification. The formation of crystals in a previously non-crystalline substance, such as magma, volcanic glass or rhyolite.

Feldspar. A group of minerals containing aluminum and the silica and includes aluminum silicates of soda (sodium oxide), potassium (potassium oxide), or lime (calcium oxide). They are generally pale in colour. It forms in a variety of thermal environments, during the crystallization of liquid rock (magma), by metamorphism of rocks deep in the earth, and in sedimentary processes. Varieties include orthoclase, microcline and plagioclase feldspars. Feldspar is the single most abundant mineral group on Earth. They are easily weathered, and will eventually form clay

Felsic. A rock which contains more than 75% quartz, orthoclase and plagioclase. Felsic rocks are usually light in colour.

Kaolinite. A clay mineral, consisting of aluminium, silica, oxygen and hydroxide.

Montmorillonite. A very soft group of minerals that typically form in microscopic crystals, forming a clay. It is the main constituent of the volcanic ash weathering product bentonite

Orthoclase. A common feldspar.

Pebble: A rock less than 6.4cm in size.

Plagioclase. A common feldspar.

Porcellanite. A hard, dense rock somewhat similar in appearance to unglazed porcelain. It is often an impure variety of chert containing clay and calcareous matter.

Pyroclastic. Rocks composed solely or primarily of volcanic fragments or clasts.

Quartzite. Metamorphosed sandstone. Sandstone is converted into quartzite through heating and pressure usually related to tectonic compression within orogenic belts. Quartzite is usually white to gray, but pink and red can occur due to varying amounts of iron oxide.

Rhyolite. An igneous silica rock which crystallises at relatively low temperatures. Its composition is similar to granite. It may be suitable for flaked artefact production.

Sanidine. The high temperature form of potassium feldspar, typically occurring in obsidian, rhyolite and trachyte.

Silcrete. An indurated soil duricrust formed when silica dissolved and resolidified as a cement, forming a hard and resistant rock.

Silicified or indurated tuff. Tuff which has been cemented by silica after deposition.

Silicified or petrified wood. A fossil wood, in which the organic materials were replaced with minerals, especially silica, retaining the original structure of the stem tissue. The petrifaction process occurs underground, when wood becomes buried under sediment and is initially preserved due to a lack of oxygen which inhibits aerobic decomposition. Mineral-laden water flowing through the sediment deposits minerals in the plant's cells; as the plant's lignin and cellulose decay, a stone mould forms in its place.

Tonstein. Hard, compact mudrock that is composed mainly of the mineral kaolin and often some carbonaceous matter. Tonsteins occur as distinctive, thin, layers in coal seams throughout the

world. They formed as the result of the alteration of volcanic ash falls in a low salinity, acidic swamp environment.

Tuff. A type of rock consisting of consolidated volcanic ash ejected from vents during a volcanic eruption.

Vitric tuff. A tuff composed primarily of volcanic glass fragments.

Welded tuff. A pyroclastic rock, of any origin, that was sufficiently hot at the time of deposition to weld together.

X-Ray Diffraction (XRD). This is a versatile, non-destructive technique that reveals detailed information about the chemical composition and crystal structure of materials. An X-ray beam is projected onto a crystalline material at an angle, and diffraction occurs when the distance traveled by the rays reflected from successive planes differs by a complete number of wavelengths. Retrieved 2nd Sept 2012 from http://www.panalytical.com/index.cfm?pid=135

Appendix D

Test Excavation Roster

Season 1		Season 2	
Name	**Organisation**	**Name**	**Organisation**
Franz Reidel	GML Heritage	Franz Reidel	GML Heritage
Laressa Berehowyj	GML Heritage	Laressa Berehowyj	GML Heritage
Peter Woodley	GML Heritage	Peter Woodley	GML Heritage
Lyndon Patterson	GML Heritage	Lyndon Patterson	GML Heritage
Andrew French	Ngarramang CHG	Adam Sampson	Cacatua Culture Consultants
Ann Hickey	G.W.C.H.C	Ben Smith	Lower Hunter Wonnarua Council
Ashley Sampson	Cacatua Cultural Consultation	Carly Berry	Upper Hunter Wonnarua Council
Betty Bennett	Widescope	Cedric Wright	T&G Culture and Consultants
Bradley Leonard	Ngarramang CHG	Christine Deven	Lower Hunter Wonnarua Council
Cedric Wright	Myland	Clive Suey	Myland Culture and Heritage Group
Cedric Wright	T&G Culture and Consultants	Daniel Scott	WONH1
Clive Suey	Myland	Derrick Vale	DFTU Enterprises
Dean Miller	L.H.W.C.I	Dwayne Shaw	Wattaka WCCS
Dennis Tapaleao	DRM Cultural Management	Georgina Berry	Upper Hunter Wonnarua Council
Donna Swan	Culturally Aware	Greg Slater	Warragil CS
Dwayne Shaw	Wattaka WCCS	Hellen Faulkner	DRM Cultural Heritage Management
James Ballangarry	D.F.T.V Enterprises	Jake Dacey	Gidawaa
Jeffrey Swan	Wonnarua Nation	Jenny Chambers	Cacatua Culture Consultants
Joshua Griffiths	W.C.H	Justin Wilson	Cacatua Culture Consultants
Joshua Swan	Culturally Aware	Katina Vale	DFTV Enterprises
Justin Wilson	Cacatua Cultural Consultation	Kayla Whitter	Gomeroi Namoi
Katina Vale	D.F.T.V Enterprises	Kerrie Slater	Kawul CS
Linda Whitten	H.N.C.S	Lacey Gananburgh	Widescope
Luke Hickey	H.V.C.S	Lateeka Eggins	Yinarr CS
Maree Waugh	Wonnarua Nation	Linda Whitten	LNTO
Norm Porter	Warragil	Lionel McGrady	Lower Hunter Wonnarua Council
Peter Whitten	G.W.C.H.C	Luke Hickey	Hunter Valley Cultural Surveying
Rick Slater	Kuwal	Maree Waugh	Wallangan Cultural Services
Ricki-Jo Griffiths	Mindaribba ALC	Norm Archibald	Yinarr CS
Rod Hickey	H.V.C.S	Peter O'Brien	Mindaribba LALC
Steven Campbell	Yinarr	Rebecca Lester	Wonnarua National Aboriginal Corporation
Steven Hickey	Widescope	Rod Hickey	Kawul CS
Tod Maley	L.H.W.C.I	Sandra Jones	Wonnarua National Aboriginal Corporation
Troy Wilson	Myland	Shannon Griffiths	Wonnarua Culture Heritage
		Steven Hickey	WIG
		Timothy Smith	DRM Cultural Heritage Management
		Tony Waugh	Wallangan Cultural Services
		Trevor Archibald	Widescope
		William Smith	Culturally Aware

Appendix E

Context Register

Management Area	TU	Depth (mm)						Total Depth (mm)	Artefact Numbers						Total	Landform	Aspect	Soil profile	Date	Soil Description	Evidence of burning/heating	Munsell Colour Top	Munsell Colour Bottom	Features	Artefacts of Note
	5	100	100					200	2	0	0				2	Lower Slope	SW	Branxton	15.3.13	A1 - light brown loam topoil, moderately soft; A2 - brown clayey loam + ironstone gravel; B - mottled orange/cream clay, moderately clear differntiation between A2 and B (increasing clay and moisture content with depth)		7.5YR 3/2	SAME		Debitage
	6	100	100	70				270	3	3	3				9	Lower Slope	All	Branxton	15.3.13	A1 - light brown loam topoil, moderately soft; A2 - brown clayey loam + ironstone gravel; B - mottled orange/cream clay, moderately clear differntiation between A2 and B (increasing clay and moisture content with depth, particle size fine to moderate)	Charcoal flecks in A2 and top of B	7.5YR 3/2	SAME		Flakes + debitage, core
	8	100	100	70				270	0	2	0				2	Raised Flat	S	Branxton	15.3.13	A1 - mod soft brown loam topsoil (mod rich in organics); A2 - brown clayey loam (charcoal flecs); B - mottled cream/orange clay (increasing clay and moisture content with depth)	Charcoal flecks in A2	7.5YR 3/1	SAME		Flakes
	9	100	100					200	1						1	Upper Slope - Raised Flat	W	Branxton	15.3.13	A1 - dark brown-black very fine sandy loam (111mm deep) (sand interface - clear); A2 - light grey brown fine sandy loam with <20% charcoal + gravel inclusions; B - brown clay - mottled light and brown		7.5YR 3/1	7.5YR 3/2		Flake
	13	100	100	100	190			490	0	0	0	0			0	Mid Slope	E	Branxton	13.3.13	A1 - dark brown-black loam with high clay content; A2 - same as A1; B - orangey brown (orange flecking) + degraded sandstone gravel at base)		7.5YR 2.5/1	7.5YR 4/3		
	14	100	100	110				310	7	0	0				7	Mid - Lower Slope	E	Branxton	13.3.13 -	A1 - brown moderately compact loam with charcoal flecks; A2 orangey brown moderately compact clayey loam with ironstone gravel; B - orangey brown clay (increasing clay content with depth)	Burnt clay in A1 and A2	7.5YR 3/3	SAME		cores, debitage (2 large pieces of silcrete)
	15	100	100	100				300	20	3	0				23	Mid Slope	E	Branxton	13.3.13	A1 - light brown moderately compact loam topsoil (artefacts clearly evident while digging); A2 brown compact silty loam with high clay content; B - brown moist sticky clay (transition from A1-A2 not particularly clear, charcoal flecs in A1 and A2)	Charcoal flecks in A1 and A2	7.5YR 3/3	SAME		flakes, cores and debitage
	16	140	160					300	5	12	2				19	Lower Slope	E	Branxton	13.3.13	A1 - light brown moderately compact silty loam (like 24), <10% charcoal flecks/fragments; A2 - brown compact loam with very high clay content (increasing with depth); B - brown clay with same description as A2 (clay more compact with depth)		7.5YR 4/2	SAME		cores, flake, debitage (flakes + microflakes), head treated core?
	17	130	170					300	7	5	0				12	Lower Slope	NE	Branxton	13.3.13	A1 - light brown modertaley compact silt with c.10% charcoal inclusions; A2 - brown compact silty loam with high clay content (increasing with depth); B - brown moderately compact clay (as per 23)		7.5YR 4/2	SAME		Cores and flaked debitage
	18	80	100	140				320	0	0	0				0	Lower Slope	NE	Branxton	13.3.13	A1 - light brown moderately compact silty loam; A2 - brown compact loam with high clay content; B - brown very loose clay, not particularly moist and crumblier than previous pits		7.5YR 3/2	SAME		
	19	100	100	100				300	0	9	0				9	Lower Slope	E?	Branxton	13.3.13	A1 - light brown moderately compact loam; A2 - dark brown moderately compact loam; B - dark orangey brown moderately compact clay		7.5YR 3/2	SAME		Debitage, flake
	20	130	170					300	3	0	0				3	Lower Slope	SE	Branxton	13.3.13-1	A1 - light brown fine grained sandy silt, moderately compact (interface to A2 not clear); A2 - brown compact clayey loam with some silt and high clay content increasing with depth; B - brown clay as per other Tus in mid-low area of AREA Q		7.5YR 3/2	SAME		Broken flake, debitage (microflake?)
	21	100	100	100				300	2	0	0				2	Lower Slope	E	Branxton	14.3.13	A1 - light brown compact silty loam topsoil; A2 - brown compact silty loam with high clay content increasing with depth, <20% ironstone gravel; B - brown compact clay		7.5YR 3/3	SAME		Flakes
	22	100	100					200	0		0				0	Lower Slope	E	Branxton	13.3.13	A1 - brown moderately compact loam (fine - medium particle size) with increasing moisture content with depth, good condition, moderate to low integrity (mixing of loam and clay evident); A2 - orangey brown moderately compact clayey loam (fine - medium particle size), condition good, moderate to low integrity (mixing of loam and clay evident; B - orangey brown compact clay (clay and moisture content increase with depth, charcoal flecks in A1 and A2)	Charcoal flecks in A1 and A2	7.5YR 3/2	SAME		flakes, debitage
	23	100	100					200	1	0	0				1	Mid - Lower Slope	NE	Branxton	13.3.13	A1 - light brown moderately compact silty loam topsoil + charcoal flecks; A2 - orangey brown moderately compact clayey loam; B - orangey brown moderately compact sticky clay (particle size ranging from medium to fine, integrity = moderate, clay and moisture increasing with depth)	Charcoal flecks in A1	7.5YR 4/3	SAME		Debitage/ flake?
	24	100	150	70				320	0	0	0				0	Lower Slope	SE	Branxton	13.3.13	A1 - light brown moderately compact silty loam topsoil with <10% charcoal flecks; A2 - brown compact loam with <10% charcoal flecks and ironstone gravel; B - brown compact sticky clay (loose at top but becoming increasdingly compact with depth)		7.5YR 3/4	SAME		
	25	100	100	100				300	3	0	0				3	Mid - Lower Slope	E	Branxton	13.3.13	A1 - brown moderately compact loam topsoil; A2 - dark brown moderately compact clayey loam with charcoal flecks; B - dark brown clayey loam (NE corner of pit had high number of artefacts)		7.5YR 3/2	SAME		Cores and flake
	26	100	50	150				300	0	0	0				0	Mid - Lower Slope	SE	Branxton	13.3.13	A1 - light brown moderately compact silty loam topoil (fine particle size and unclear transition to A2); A2 - orangey brown compact clayey loam; B - orangey brown clay		7.5YR 3/3	SAME		
	27	130						130	0						0	Mid Slope	S	Branxton	13.3.13	A1 - light brown moderately compact mixed topsoil (very shallow - 130mm); B - red sticky clay		5YR 3/3	SAME		
	28	120	0	0				120	0						0	Mid Slope	SE	Branxton	13.3.13	A1 - light brown moderately compact mixed topsoil (very shallow - 130mm); B - red sticky clay		5YR 3/4	SAME		
	68	100	100					200	0	0	0				0	Upper Slope/Raised Flat	E	Branxton	20.3.13	A1 dark grey brown loose silty sand (60mm deep), clear transition to A2; A2 - dark brown moderately compact fine grained sandy loam (60-200mm deep), clay mixed in from 130mm, orange and white gravels forming c.<30%; B - dark brown compact sticky clay		7.5YR 3/2	SAME		
	82	100	100	100				300	3	0	0				3	Creek Bank	S	Branxton	15.3.13	A1 - brown moderately compact loam topsoil (top 50mm) + river stone fragments; A2 - brown moderately compact clayey loam + riverstone pebbles/fragments; B - orangey brown clay + river stone pebbles/fragments (increasing clay and moisture content with depth - orange tint increasing with depth with clay content)		7.5YR 4/2	7.5YR 4/3		Flakes, broken core
	87	80						80	0						0	Upper Slope	N	Branxton	18.3.13	A1 - light brown compact sandy clay loam topsoil (fine grained) (20mm deep); A2 - non existent; B - brown compact sticky clay		7.5YR 4/2	SAME		

	89	80						80							0	Upper Slope	N	Branxton	18.3.13	A1- light greyish brown powdery (extremely fine) sandy loam topsoil; A2 - non existent; B - light brown compact/dry clay		7.5YR 3/3	SAME		
	91	120						120							0	Upper Slope	N	Branxton	18.3.13	A1 - light greyish brown compact/fine sandy loam; A2 - non existent (erosion); B - brown compact clay + some gravel		7.5YR 3/2	SAME		
	92	100	100	40				240	3	7	3				13	Raised Flat	N, SE	Branxton	18.3.13	A1 - light brownish grey moderately soft loam topsoil; A2 - brown moderately compact clayey loam + river pebbles/gravel + charcoal flecks; B - mottled orange/brown/cream moderately compact clay (inreasing clay and moisture content with depth + increasing river pebbles/gravel with depth)	Charcoal present in A2	7.5YR 3/2	SAME		Flakes, debitage
	94	100	60					160	0	0					0	Ridgeline Raised Flat	NE	Branxton	18.3.13	A1 - light greyish brown fine sandy loam topsoil; A2 - brown compact/fine sandy clay loam; B - brown compact sticky clay (clay and moisture content increasing with depth)		7.5YR 4/2	SAME		
	96	80						80	3						3	Raised Flat/ Ridgeline	N, E	Branxton	18.3.13	A1 - light brown moderately soft loam topsoil; A2 - non existent; B - orangey brown moderately compact clay (clay and moisture content increasing with depth + charcoal flecks throughout)	Charcoal present in A2	7.5YR 3/2	SAME		Flakes
	97	100	100					200	2	2					4	Raised Flat/ Ridgeline	N, E, W	Branxton	18.3.13	A1 - light greyish brown moderately soft loam topsoil; A2 - greyish brown moderately compact clayey loam + charcoal flecks and fragments + burnt clay; B - grey compact clay + charcoal flecks/fragments on western side of pit and burnt clay on eastern side of pit (A2 almost non existent @ NE corner - BECAUSE burnt clay comes to just below topsoil OR clay ontent in A2 looks like pure clay due to heat treatment - making A2 and B very difficult to differentiate)	Charcoal present in A2	7.5YR 3/2	7.5YR 7/6		Flakes
	100	100	100					200	3						3	Raised Flat/ Ridgeline	N, E, W	Branxton	19.3.13	A1 - brown moderately compact loam topsoil; A2 orangey brown moderately compact clayey loam; B - orangey brown moderately compact clay (clay and mosture content increasing with depth)		5YR 3/2	SAME		Micro flakes, scraper
	102	100	40					140	1	0					1	Lower Slopes/ Ridgeline	N, E, W	Branxton	19.3.13	A1 - light greyish brown moderately compact loam topsoil; A2 - orangey brown moderately compact clayey loam; B - mottled orange/cream compact clay (condition - fair, integrity = moderate (some mixing evident), clay content increasing with depth)		7.5YR 4/2	SAME		Debitage/ angular fragment
	104	100	100					200	0	0					0	Ridgeline	N, E, W	Branxton	19.3.13	A1 - brown moderately compact loam topsoil; A2 - brown moderately compact clayey loam; B - orangey brown compact clay (transition from A2 to B = fair, some mixing evident, clay and moisture content increasing with depth)		5YR 2.5/1	SAME		
	105	100						100	0						0	Lower Flat/ Ridgeline/ Raise	N, E, W	Branxton	19.3.13	A1 - light greyish brown moderately compact loam topsoil (very thin 20-30mm thick); A2 - orangey brown moderately compact clayey loam; B - orangey brown compact clay (clay content increasing with depth)		7.5YR 4/3	SAME		
	107	100						100	0						0	Lower Flat/ Ridgeline/ Raise	N, E, W	Branxton	19.3.13	A1 - light greyish brown moderately compact/fine loam topsoil (thin 30-50mm) + ironstone gravel; A2 - brown moderately compact clayey loam + ironstone gravel; B - mottled brown (with orange) moderately compact clay (transition between soil units = poor)		7.5YR 3/2	SAME		
	108	100	60					160							0	Raised Flat/ Ridgeline	N, E, W	Branxton	19.3.13	A1 - light greyish brown moderately compact loam topsoil; A2 - dark brown compact clayey loam; B - dark brown compact clay with orange mottling (<10%) (clay and moisture content increasing with depth, transition to clay from A2 unclear)		7.5YR 3/1	SAME		
	110	100						100							0	Ridgeline/ Raised Flat	N, E, W	Branxton	19.3.13	A1 - brown moderately compact loam topsoil; A2 - dark brown moderately compact clayey loam, rich in organics+ fragment of silcrete with quartz identified; B dark brown compact clay, rich in organics (clay and moisture content increasing with depth)		7.5YR 2.5/2	SAME		
	113	100						100	0						0	Raised Flat/ Ridgeline	N, E, W	Branxton	19.3.13	A1 - light greyish brown slightly moderately compact loam topsoil (A1 almost non existent <20mm thich - probably due to erosion); A2 - brown moderately compact clayey loam; B - orangey brown compact clay (particle size = fine-medium, transition from loam units to B = unclear)		7.5YR 4/2	SAME		
	114	100	50					150	0						0	Raised Flat/ Ridgeline	N, E, W	Branxton	19.3.13	A1 - light greyish brown moderately compact loam topsoil; brown moderately compact clayey loam; B - orangey brown compact clay + ironstone gravel <10% evident near interface between A2 and B (transition to clay not clear) (Pit placed with post at NE corner)		7.5YR 4/2	SAME		
	116	100	130					230	0	0					0	Ridgeline Raised Flat	S	Branxton	18.3.13	A1 - light greyish brown moderately compact sandy loam with charcoal flecks near interface to A2; A2 - mid brown compact/fine sandy loam with charcoal flecks and evidence of burnt clay; B - brown compact sticky clay	Charcoal flecks in A2	7.5YR 3/2	SAME		
	117	100	100					200	3	2					5	Lower Slope	N,E, S	Branxton	18.3.13	A1 - brown moderately dry/compact loam topsoil; A2 - brown (slight orange tint) moderately compact clayey loam; B - orangey brown moderately compact clay (clay and moisture content increasing with depth, transition from A2 to B moderately clear)		7.5YR 4/2	SAME		Flakes
	118	100	100	100				300	0	3	0				3	Raised Flat	N,E, S	Branxton	18.3.13	A1 - light brown moderately compact loam topsoil (50-100mm); A2 orangey brown moderately compact clayey loam + river pebbles, gravel, burnt clay and charcoal flecks; B - orangey brown compact clay + burnt clay and charcoal flecks (increasing clay and moisture content with depth + transition from A2 to B fairly unclear)	Charcoal flecks and burnt clay evident in A2 and top of B	7.5YR 3/2	SAME		Flakes
	119	100	170					270	0	0					0	Lower Slope	NE	Branxton	18.3.13	A1 - light greyish brown moderately compact loam topsoil + river pebbles and gravel (<10%); A2 - brown compact clayey loam + river pebbles and gravel + burnt clay; B - orangey brown compact clay (increasing clay and moisture with depth + increasing river pebbles and gravel (<5%-<10%)	Charcoal flecks and burnt clay evident in A2	7.5YR 3/2	SAME		
	120	100	100	100				300	0	3	1	0			4	Lower Slope	N,E,S	Branxton	18.3.13	A1 - Strata 1 - light greyish brown moderately soft loam topsoil; A2 - Strata 2 - orangey brown moderately soft clayey loam + small river pebbles and gravel, Strata 3 - light yellowish brown sandy clay + small river pebbles and gravel; B - Strata 4 - mottled orange/brown compact clay (clay and moisture content increasing with depth)		7.5YR 3/2	7.5YR 4/3		Flakes

	121	100	100	100				300	0	0	0				0	Creek Bank	E	Branxton	18.3.13	A1 - brown moderately compact loam topsoil (top 50-100mm); A2 brown moderately compact clayey loam + charcoal flecks near interface to B; B - brown with orange mottling compact clay (clay and moisture content increasing with depth, integrity poor = mixing of loam and clay evident)	Charcoal flecks in A2	7.5YR 4/3			
	122	100	100	70				270	0	2	4				0	Lower Slope	N,E,S	Branxton	18.3.13	A1 - light greyish brown moderately soft loam topsoil+ charcoal flecks; A2 greyish brown moderately compact clayey loam + river pebbles and charcoal flecks/fragments; B - orangey brown compact clay with evidence of charcoal flecks, river pebbles and gravel (increasing clay and moisture content with depth - transition from A2 to B fairly clear)	Charcoal flecks and fragments throughout	7.5YR 3/1			Core, flakes
	123	100	100					200	0	0					0	Creek Bank	SE	Branxton	18.3.13	A1 - light brown moderately soft loam topsoil; A2 - brown moderately compact silty loam (v dry); B - mottled orange/brown/cream compact clay (increasing clay and moisture content with depth, moderately sharp transition from A2 to B)	Charcoal flecks throughout	7.5YR 4/4			
	143	100						100	0						0	Mid Slope	N	Branxton	30-Nov	Beneath gras, soil is characterized by very dense, very compacted and sticky clay with no discernible silt. Clay forms in large homogenous pockets with channels of finer, crumble-like clay particles approx 3-4mm in size. Clay is relatively moist but dies out quickly after exposure. Rare, isolated inclusions of burnt clay are visible	Burnt clay	7.5YR 3/1	SAME		
	144	90	110	100	20			320	3	2	1	0			6	Creek Bank	E	Branxton	29-Nov	Spit 1 - A1 - soft silt with grass root to depth of 90mm; Spit 2 to 4 - A2 - Very compact silty loam + gravel and bleached clay, slightly deeper in W end; B - Very hard brown clay with orange clay inclusions and occaional gravels	Burnt clay and charcoal	7.5YR 4/2	SAME		
	145	100	100					200	3	0					3	Creek Bank	N, E	Branxton	30-Nov	Topsoil down to a depth of 50-60mm is characterised by dry fine and powdery dense clay with few particles of silt present (*moist and compact below). Burnt clay and charcoal are frequent and are visible + mottled clay with coloured streaks. Silcrete artefacts found at depth of 90mm in SW quadrant of spit; Spit 2 was dug to ensure that dry lense was not just an overlay. At depth of 200mm clay is still densely compacted, moist and difficult to penetrate with few fine clumps of crumbling clay. Clay more homogenous.	Burtn clay and charcoal	7.5YR 4/2	SAME		
	146	100	90	50				240	0	0	0				0	Creek Bank	E	Branxton	30-Nov	Surface find: Approx 6m west from 144 leading to 146 - mudstone flake @ 7m SE of 146 - very exposed mudstone pieces evident, photo taken; Spit 1 - light brown silt with loam and clay inclusions + grass roots. At 0-40mm A2: dark brown loam very compact with brown and orange clay with depth; Spit 2 - A2; Spit 3 - A2 + clay in bottom 20mm; B - dark brown compact clay		7.5YR 4/2	SAME		
	147	80						80	0						0	Raised Flat	N, S	Branxton	6-Dec	A1 to A2 - Characterised by predominantly clay with few inclusions of silt. Clay is extremely dense and especially compacted, almost impenetrable and with a pliable consistency until it dries - rock hard. Some pockets of less dense but equally moist and sticky clay were encountered. The clay is heavily cracked, where roots and more crumbly particles of clayey loam (?) can be seen. Evidently compacted over many years.		7.5YR 3/1	SAME		
	148	120						120	0						0	Ridgeline	N, E, S, W	Branxton	6-Dec	A1 to A2 - mixed 0-20mm holding grass roots and mixed silty loam of light grey/brown, very shallow, giving way to a compact dark brown clay. Clay is cracked due to both ploughing and the construction of the horizon due to the lack of moisture (evidence of ploughing)		7.5YR 3/1	SAME		
	149	100	50					150	2	0					2	Ridgeline	N, S	Branxton	6-Dec	A1 - Thin lense of predominantly silt, wich have relatively dry and crumbly particles. It is no more than 20-30mm deep; A2 - Soil is characterised by a mix of silty loam and larger pockets of clay, and the stratigraphic layer contains more silt than clay, up to a depth of 120mm; B - At 120mm and lower, dense, compact and sticky homogenous dakr drown clay is encountered, and few silty channels are visible.		7.5YR 3/1	SAME		
	150	110	50					160	0	1					1	Ridgeline	N, E, S, W	Branxton	6-Dec	Spit 1 - A1 to A2 - mixed in through the clay, clay coming through; B - very compact cracked clay with silt in the cracked clay. Did not proceed with digging further down due to the likeliehood of unitentionaly expanding beyond the the 50 x 50 limits		7.5YR 3/1	SAME		
	151	100	50					150	0	0					0	Ridgeline	N	Branxton	6-Dec	0-50mm - dark greyish brown silty clay topsoil. Loose. Few inclusions. 0% surface visibility; 50-120mm - dark brown clay. Compact. Clumpy. Few inclusions. Little flecking; 120-150mm dark brown clay. Compact, more consistent and less clumpy than stratum above. Few inclusions and little flecking ***NOTE - A1/A2 horizons probably trumcated and B clay horizon probably ploughed to about 120mm below the current surface level		7.5YR 2.5/1	SAME		
	152	150						150	0						0	Ridgeline	N, E	Branxton	6-Dec	0-40mm - dark greyish brown silty clay. Loose. Few inclusions. 0% surface visibility; 49-130mm - dark brown clay. Compact. Clumpy. Few inclusions. Little flecking; 130-150mm (end of excav) - dark brown clay. Compact. Few inclusions. Little flecking. More consistent texture and less clumpy compared to stratum above **NOTE A1/A2 horizons probably truncated and B horizon clay probably ploughed to a deth of about 130mm below the current surface		7.5YR 3/1	SAME		
	153	100	50					150	1	0					1	Ridgeline	E	Branxton	6-Dec	Heavy compact loamy clay with overlying dark brown clay - large cracks evident in the clay		7.5YR 2.5/1	SAME		1 scraper
	154	100	100					200	0	0					0	Ridgeline	N, E	Branxton	6-Dec	0-50mm - shallow, loose dark greyish brown topsoil. Few inclusions, 0% surface visibility; 50-120/180mm - very dark brown clay. Moderately compact to compact. Clumpy. Few inclusions and little flecking; 120/180-200mm (end of excav) - very dark brown clay. Compact. Few inclusions and little flecking. Texture is more consistent than stratum above **NOTE A1/A2 horiuzons appear to have been truncated and the underlying B horizon ploughed over to a depth of 120-180mm below the surface		7.5YR 3/1	SAME		

	155	100						100	1						1	Ridgeline	N	Branxton	6-Dec	A1 - thin lense of fine and crumbly silty loam topsoil, to a depth of no more than 20mm; A2 - mix of silty loam and larger clay pockets, and clay dominates the soil matrix. It is dense and compacted and sticky, and has evidently been disturbed thanks to the presence of root material and an ant nest; B - larger clay pockets that are homogenous are entountered at a depth of approx 80-100mm. Silt channls are less prevalent		7.5YR 3/1	SAME		
	156	110						110	0						0	Ridgeline	N, E, S, W	Branxton	6-Dec	Spit 1 - no A1 or A2 horizons due to ploughing; B - Clay excavated until depth where clay was consistently across the pit (natural)		7.5YR 3/1	SAME		
	157	100	80					180	0	0					0	Ridgeline	N, E	Branxton	6-Dec	0-40mm - shallow clayey topsoil. Very dark brown. Loose. Few inclusions. 0% surface visibility; 40-150mm - very dark brown clay. Moderately compact and clumpy. Few inclusions. Little orange and buff flecking; 150-180mm - very dark brown clay. Compact. Few inclusions and little flecking. More consistent texture compared to stratum above. **NOTE - A1/A2 horizons appear to have been truncated, having a disturbed B horizon, possibly due to ploughing, to a depth of 150mm		7.5YR 2.5/1	SAME		
	158	90						90	0						0	Ridgeline	E	Branxton	6-Dec	Heavy compact loamy clay with overlying dark brown clay - large cracks evident in the clay, very shallow soils, impacted by ploughing		7.5YR 3/1	SAME		
	159	80						80	0						0	Ridgeline	N	Branxton	6-Dec	Heavy compact loamy clay with overlying dark brown clay - large cracks evident in the clay, very shallow soils, impacted by ploughing		7.5YR 3/1	SAME		
	160	100	90					190	0	0					0	Ridgeline	N, E, S, W	Branxton	6-Dec	A1 to A2 - truncated and ploughed off the surface; Spit 1 to 2 - clay context increasing in density and consistency with depth - stopped at 190mm due to compactness of clay		7.5YR 2.5/1	SAME		
	161	100						100	0						0	Ridgeline	N, W	Branxton	6-Dec	A1 - thin lense (20-30mm) of loose, fine, and crumbly silt topsoil; A2/B - mixed layer of silt and clay, predominantly clay that is sticky, dense and compacted in large pockets. The silt runs in channels and cracks along clay pockets; A2/B - dense, homogenous clay dominates the spit, 90% clay at a depth of 90-100mm		7.5YR 3/1	SAME		
	162	100						100	0						0	Ridgeline	N, W	Branxton	6-Dec	A1 - thin lense, 20mm deep, of fine silt and crumbly silty loam. Relatively moist; A2 - mix of silty loam and large pockets of homogenous dense and compacted clay. Channels of loam that have formed cracks in the clay; B - at a depth of 80-100mm a dense homogenous clay is encountered		7.5YR 3/1	SAME		
	163	100	50					150	0	0					0	Ridgeline	N, E	Branxton	6-Dec	0-30mm - shallow, loose clay topsoil. Dark greyish brown. Few inclusions. 9% surface visibility; 30-130mm - dark brown clay (slight yellowish tint). Compact, few inclusions and little flecking. Clumpy; 130-150mm (end of excav) - similar to stratum above, but texture is more consistent **NOTE A1/A2 - horizons appear to have been truncated and the B horizon probably ploughed over to a depth of c.130mm below the surface		7.5YR 3/1	SAME		
	164	100	40					140	0	0					0	Ridgeline	N, E, S, W	Branxton	6-Dec	Spit 1 & 2 - loam with increasing clay content with depth; A1 & A2 - truncated and ploughed off until a clay consistency throughout with c5% grainy light brown silt in the clay cracking		7.5YR 3/1	SAME		
	168	100	80					180	0	0					0	Ridgeline	N, E, S, W	Branxton	6-Dec	Spit 1 - A1 (0-40mm) - brown slightly humic grainy silt. Has grass root inclusions and is mixed with A1 - dark brown loam with increasing clay content with depth, plough cracking evident; Spit 2 - A2 - clay evident at @ 160mm; B - dark brown compact clay with cracking due to moisture (lack of) retnetion		7.5YR 3/1	SAME		
	194	100	100	100	100	50		450		2	0	2	0		4	Creek Bank		Branxton	4-Dec	0-70mm - greyish brown silty clay topsoil, loose, c.10% surface visibility. Few inclusions; 70-350/380mm - dark brown clay. Moderately compact. High proportion of orange, black, and white flecking, especially the latter (deccomposed limestone); 350/380-400/450 (end of excav) - dark brown clay matrix. Compact, with a high prportion of decomposing stone (orange, white and some black), about 50% **NOTE due to compactness of soil, difficult to excavate beyond this depth. Not certain that the natural horizon has been reached. The raised mound on which the test unit is situated could be artificial		7.5YR 3/1	SAME		
	195	100						100	7						7	Hilltop	N	Branxton	4-Dec	Dark brown sand onto red bwon compact clay **Note - 2 silcrete flakes found in TU		7.5YR 4/3	SAME		
	196	100	100	80				280	3	0	0				3	Creek Bank	N	Branxton	29-Nov	0-50mm - greyish brown silty clay topsoil. Loose. Few inclusions, 0% visibility; 50-200mm brown to greyish brown clay. Very compact. Some orange, white and black flecking. Few inclusions; 200-280mm - transition to a softer moderately compact to moderately soft clay. Brown. A much higher proportion of inclusions (orange, black and white) including fine and coarse sub-angular inclusions (up to about 20%). The clay is much more moist, NB: possible heat affected mudstone recovered at the interface between the compact clay and the underlying moist clay with inclusions		5YR 4/2	SAME		
	197	100	100					200	1	0					1	Creek Bank	N	Branxton	29-Nov	0-40mm - greyish brown silty clay. Loose. 0% surface visibility. Few inclusions; 40-180mm - brown clay, moderately compact. Orange and black flecking. Few inclusions; 180-200mm (end of excav) - yellowish brown compact clay with orange buff and black flecking. few inclusions		5YR 4/2	SAME		
	198	100	100	60				260	0	0	0				0	Creek bank	W	Branxton	29-Nov	A1 to A2 - is characterised by a fine and crumbly silt with clay inclusions and frequent root material, some as thick as 8mm, but generally 1mm in thickness. Silty clay is moist and generally pliable up to a depth of 200-260mm; B - at 260mm a homogenous dense and sticky compacted clay is encountered across 90% of the spit. This clay is less pliable and has evidently been disturbed by ploughing and erosion		7.5YR 3/1	SAME		

	199	100	100	20				220	1	0	0				1	Creek Bank	S, W	Branxton	29-Nov	A1 to A2 - dense compacted layer of moist sticky and compacted clay with very little silt topsoil, probably due to erosion of the slope. Clay is largely homogenous in large pocklets with few pockets of loose, crumbly clay that holds its shape when pressed. At a depth of approx 220mm the spit is almost exlusively a uniform moist and densely compacted clay		7.5YR 4/3	SAME		
	200	100	80					180	0	1					1	Raised Flat	E	Branxton	29-Nov	0-50mm - greyish brown silty clay, moderately soft to moderately compact topsoil layer. Loose. Visibility 0%; 50-150mm - brown to greyish brown clay. Compact. High proportion of orange and black flecking but few inclusions. Carbonised wood fragments; 150-180mm - brpwn clay, moderately soft and moist (compared to layer above), with orange and black flecking. Few inclusions		7.5YR 4/2	SAME		
	201	100	100					200	0	4					4	Creek Bank	E	Branxton	29-Nov	0-30mm - light brown grassy topsoil; 30-170mm - light brown lamy clay, compacted, orange and grey flecking throughout; 170-200mm - light brown compacted clay		7.5YR 4/2	SAME		
	202	100	130					230	1	5					6	Creek Bank	S	Branxton	29-Nov	0-30 - light brown grassy topsoil; 30-200mm - compacted light brown loam with soft orange stone (do not know what sort) (degraded sandstone? LB) throughout, very dry and with evidence of cracking; 200-230mm - light orangey brown clay		7.5YR 4/2	SAME		
	203	100						100	0						0	Creek Bank	S, W	Branxton	29-Nov	A1 to A2 - dense compacted layer of predominantly clay which is moist and sticky. Large homogenous pockets of clay are contracted with loose, medium sized clumps (approx 3-4mm wide) of clay, that fall away from the larger clumps, creating channels and gullies. Small and larger inclusions of burnt orange-red, yet powdery (upon inspection) clay, as well as isolated particles of charcoal, are present within the soil horizon		7.5YR 3/2	SAME		
	204	100	80					180	0	1					1	Lower Slope	S, W	Branxton	29-Nov	A1 to A2 - Soil predominantly clay that is compacted and dense, that has obviously been suppressed and not recently ploughed . Soil is moist and typically consists of large pockets of clay with finer crumbling clay that clumps together and holds its shape when pressed together. An ants nest is obviously nearby, given the presence of ants in the SW corner of the pit, and roots 2mm are common - at depth of between 150 and 280mm below the surface the clay is more compacted and dense, forming larger homogenous pockets than before (eg as opposed to higher spits). Clay is dark and rich in colour		7.5YR 3/1	SAME		
	205	80						80	0						0	Upper Slope	S, W	Branxton	29-Nov	0-80mm - dark brown shallow clay topsoil coming down onto dakr brown clay, very compacted with some cracks		7.5YR 3/1	SAME		
	206	40						40	0						0	Upper Slope	S, W	Branxton	29-Nov	0-40mm - dark brown grassy topsoil coming down onto dark brown clay, large cracks evident in the clay - however, considering how shallow the topsoil is, and the fact that the surface has not been ploughed, it appears unlikely to have remnant original soil horizons		7.5YR 3/1	SAME		
	207	100	100					200	0	0					0	Upper Slope	W	Branxton	29-Nov	0-60/80mm - greyish brown silty clay topsoil. Dense root system. Moderately soft. Few inlcusions; 60/80-120/180mm - greyish brown silty clay. Moderately compact, with few inclusions. Orange and buff flecking; 120/180-200mm - dark brown clay. Compact. Few inclusions. Orange buff and black flecking		7.5YR 3/1	SAME		
	208	100	100	80				280	0	0	0				0	Raised Flat	S, W	Branxton	29-Nov	A1 - thin lense of silty, fine topsoil, extending to a depth of 90mm below the surface; A2 - an undisturbed limestone deposit is encountered at 90-100mm and continues for the next c.200mm. It is characterised by dry cumbly and powdery limestone particles and a larger rocky outcrop with root material at a depth of 270mm		10YR 4/2	10yr 8/4		
	209	130	70	80				280	0	0	0				0	Raised Flat	N, E,S	Branxton	28-Nov	Spit 1 to 2 - dark black degraded organic matter and silt, grass roots - ploughed throughout. Clay increasing with depth, with clay nodules evident throughout; Spit 3 - brown waxy clay with degraded organic material throughout, ploughing marks evident in the clay surface		7.5YR 3/1	SAME		
	210	100	80					180	0	0					0	Raised Flat	N, E, S	Branxton	28-Nov	0-20 - dark brown grassy topsoil; 20-160mm - dark brown siltyclay v compacted. Disturbed by ploughing; 160-180mm - dry dark brown clay		7.5YR 3/1	SAME		
	211	100	40					140	0	0					0	Raised Flat	S, W	Branxton	29-Nov	A1 to A2 - a dry and crumbly silty soil with roots common to a depth of 80mm. The soil below 80mm is moist and crumbly, containing few pockets of moist, sticky and pliable clay that is the same colour as the silt. Evidence of mixing ; B - at a depth of approx 140mm larger patches of homogenous, dense and heavily compacted clay is encountered		7.5YR 3/1	SAME		
	266	100	100	50				250	0	0	0				0	Upper Slope	E	Branxton	27-Nov	0-40mm - shallow topsoil. Loose, greyish brown with 0% surface visibility; 40-200/220mm - dark brown to greyish brown clay. Moderately compact. Soft orange and buff stone inclusions (<10%) and charcoal fragments especially towards SW corner; 200/220-250mm - dark reddish brown clay, moderately compact, homogenous and a little moist. Few inclusions		7.5YR 3/2	SAME		
	267	100	100					200	0	0					0	Upper Slope	E	Branxton	27-Nov	0-50mm - shallow topsoil. Dark brown loam, loose, 0% surface visbility; 50-150/180mm - dark brown compact clay with orange and buff flecking and few inclusions; 150/180-200mm - dark brown clay (slight reddish tinge), compact, homogenous, and a little moist. Orange, buff and black flecking		5YR 3/1	SAME		
	268	100	50					150	0	0					0	Mid Slope	E	Branxton	27-Nov	0-30mm - dark brown topsoil, very compact; 30-140mm - dark brown silty clay, heavily ploughed and with grass roots throughout + insect burrows; 140-150mm - dark brown clay		5YR 2.5/2	SAME		
	269	100	110	70				280	0	0	0				0	Raised flat	N, E	Branxton	27-Nov	Spit 1 - A1 to A2 - mixed through top 0-20mm (dark brown loam with increasing clay content with depth; Spit 2 to 3 - dark brown loam with increasing clay content with depth. Spit 3 @ c.250mm clay starts coming through. @ 210-250 gravel, stone and clay inclusions observed; B - dark brown cracked waxy clay***Note - NW corner - bleached orange hard brittle clay from Spit 1 to B - entire pit disturbed		5YR 3/2	SAME		

	270	100	50					150	0	0					0	Raised flat	N, E	Branxton	27-Nov	0-20mm - dark brown topsoil; 20-110mm - dark brown silty clay (ploughed); 110-150mm - dark brown clay with some silt, becoming more clayey with depth		5YR 3/2	SAME		
	271	100	200	50				350	1	0	0				1	Upper Slope	SE	Branxton	27-Nov	0-40mm - greyish brown clay topsoil. Loose. 0% surface visibility; 40-180mm - dark greyish brown clay. Moderately compact. Orange and black flecking. Few inclusions; 180-250mm - brown clay with slight reddish tint. Moderately compact, homogenous and a little moist. Few inclusions ***Note - 1 x mudstone flake recovered from spit 1 during excavation		5YR 3/2	SAME		
	272	100	80					180	0	0					0	Upper Slope	N, E	Branxton	27-Nov	Spit 1 - light grey silt with orange/brown clay mixing - grass roots and occasional burnt organics throughout; Spit 2 - same as spit 1 + gravels on surface of the clay; B - orangey brown hard clay, slightly sloping to east		10YR 5/3	SAME		
	273	110	90	90	20			310	0	0	0	0			0	Raised flat	N,E, S	Branxton	27-Nov	Spit 1 - dark brown loam with grass root inclusions. Compact, very disturbed; Spit 2 to 3 - very dark compact loam with increasing clay content with depth. Very disturbed; B - cracked waxy dark brown clay		5YR 3/1	SAME		
	274	100	100	70				270	0	0	0				0	Mid Slope	E,S	Branxton	27-Nov	A1 to A2 - topsoil (silt) is powdery, crumbly and dry. Forms clumps around roots (<1mm-40mm). Soil horizon has been heavily ploughed as evidenced by moist, rich and dark silt intermixed with pockets of similarly moist, rich and dark clay which is dense, compacted and especially sticky; B - at approximately 190mm and continuing down to 270mm depth below surface, dense sticky compacted clay is encountered. At 240mm this clay forms at least 70-80% of matrix, at 270mm almost 95%		7.5YR 3/1	SAME		
	275	110	90					200	0	0					0	Upper Slope	E, S	Branxton	28-Nov	Spit 1 - light brown silt with grass roots and natural gravel inclusions (A1 0-50mm, A2 50mm- slightly darker); Spit 2 - mid brown silty loam with increasing gravel content with depth. At 170mm hitting an orange brown waxy clay with many natural stone and gravel inclusions ***Note - Pit 275 much dryer than other TUs in area H - maybe due to slope		10YR 4/4	SAME		
	276	100	100	50				250	0	0	0				0	Upper Slope	E	Branxton	28-Nov	0-80mm - deeper than typical topsoil level, greyish brown silty clay, moderately soft to moderately compact (angular and sub angular gravel inclusions up to 50mm length (<10%)); 80-200/250mm - greyish brown silty clay, moderately compact. High proportion of gravel and charcoal fragments. Orange, red and buff stone. Soft. Especially concentrated in SW corner - up to 30%; 200/250-250mm - yellowish brown clay with orange and black flecking. COmpact. Few inclusions		7.5YR 4/4	SAME		
	277	100	90					190	0	0					0	Upper Slope	N, E	Branxton	28-Nov	0-10mm - thin dark brown topsoil layer with grass roots; 10-80mm - dark brown silty clay with evidence of ploughing (mixing) (some limestone, crumbly); 180-190mm - dark brown clay		7.5YR 3/1	SAME		
	278	120	80	100				300	0	0	0				0	Hill Top	N, E, W	Branxton	28-Nov	0-50mm - shallow clayey topsoil with 0% surface visibility; 50-200/250mm - brown compact clay with buff flecking, few inclusions; 200/2500-300mm - reddish brown clay. Compact. Orange felcking. Moist. Homogenous		7.5YR 3/1	SAME		
	279	100	100	60				260	0	0					0	Mid Slope	W	Branxton	28-Nov	0-30mm - dark brown topsoil; 30-200mm - dark brown silty clay, very compact with evidence of ploughing (mixing); 200-260mm - dark brown silty clay becoming increasing clayey with depth ***Note - southern half mixed with limestone from 100mm onwards - becoming more uniform with depth		7.5YR 3/1	SAME		
	280	100						100	0						0	Raised Flat	W	Branxton	28-Nov	0-20mm - dark brown silty clay topsoil; 20-100mm - dark brown silty clay transitioning to purer clay		7.5YR 3/1	SAME		
	281	100	60					160	0	0					0	Upper Slope	E	Branxton	28-Nov	0-40mm - dark brown silt; 40-130mm - dark brown silty clay, compacted; 130-160mm - dark brown silty clay becoming increasingly clayey with depth; 160mm- - clay		7.5YR 3/1	SAME		
	282	110	100					210	0	0					0	Upper Slope	N, E, S, W	Branxton	28-Nov	Spit 1 A1 - mid brown silty loam with grass root inclusions, bledning into A2 of dark brown loam with increasing clay content with depth + c.5% gravel inclusions; Spit 2 - dark brown loam (A2 as above); B - dark brown cracked waxy clay with orange clay flecking		7.5YR 3/1	SAME		
	283							0	0	0	0							Branxton		NO SHEET		7.5YR 3/2	SAME		
	287	100	100	70				270		0	0				0	Upper Slope - Raised Flat	All	Branxton	15.3.13	A1 - brown loam topsoil (5-10cm thick) with dipsersed charcoal flecks throughout; A2 - brown sandy clay loam with dispersed charcoal flecks throughout; B - mottled oj/brown/orange clay with dispersed charcoal flecks at interface to A; clay and mositure content increasing with depth; transition between units moderately clear		7.5YR 3/2	SAME		
	288	100	100	60				260								Raised Flat	S	Branxton	15.3.13	A1 - sandy loose dark brown soil (transition to A2 clear); A2 - light brown sandy loose compact soil; B - brown compact clay					
	289	100	100	100				300	0	2	0				2	Raised Flat (above slope to	W	Branxton	15.3.13	A1 - dark brown moderately compact sandy loam (60mm); A2 - lighter brown (mid brown) moderately compact sandy loam with <10% gravel inclusions; B - brown clay, compact, sticky		7.5YR 3/2	SAME		Broken flake, micro flake
	290	100	100	100				300	1	4	7				12	Raised Flat	W	Branxton	15.3.13	A1 - very dark brown/black sandy loam to 180mm; A2 - lighter brown sandy loam with <40% charcoal. Eastern side of spit consists of of burtn clay (50% in A2 soil horizon); B - burnt clay		7.5YR 3/1	SAME		Micro-flake broken, core, flakes, debitage
	291	100	100					200	0						0	Raised Flat	All	Branxton	15.3.13	A1 - brown loam topsoil with charcoal flecks throughout; A2 - brown sandy clay loam with charcoal flecks throughout; B - mottled brown/oj/cream clay; increasing clay and moisture content with depth; transition between soil units not particularly clear		7.5YR 3/2	SAME		
	292	100	100	100	20			320		1	1	0			2	Raised Flat	All	Branxton	15.3.13	A1 - brown loan topsoil (c5-10cm) with some charcoal flecks (<10%); A2 - brown sandy clay loam with charcoal flecks (<10%); B - mottled oj/brown/cream clay; increasing clay and moisture content with depth; transition between units moderately clear, compaction moderate		7.5YR 3/2	SAME		Flake, broken flake
	293	150	90					240	0	0					0	Raised Flat		Branxton	15.3.13	A1 - loose dark sandy loam (5-10cm thick); A2 - moderately loose dark brown/black clayey loam, SW corner contains charcoal (160-240mm); B - compact black/brown		7.5YR 3/1	SAME		

	294	100	100					200	4	1					5	Raised Flat	All	Branxton	15.3.13	A1 - moderately loose brown loam topsoil (5-10cm thick) with charcoal flecks (<10%); A2 - moderately compact light yellowish brown sandy loam with charcoal flecks (<10%); B - compact mottled oj/cream/brown clay; clay and moisture content increasing with depth; transition between units moderately clear		7.5YR 3/1	SAME		Core, debitage
	295	100	100	80				280	3	10	14				27	Raised Flat	All	Branxton	15.3.13	A1 - moderately soft brown loam topsoil (5-10cm) with charcoal flecks (<10%); A2 - moderately soft light yellowish brown sandy loam to sandy clay loam with depth + charcoal flecks throughout (<10%); B - moderately compact mottled brown/oj/cream clay; clay and moisture content increase with depth		7.5YR 3/1	7.5YR 3/2		Complete flakes, broken flakes, debitage
	296	100	100	60				260	0	0	0				0	Raised Flat	All	Branxton	15.3.13	A1 - moderately soft light brown loam topsoil (5-10cm thick) with charcoal flecks dispersed throughout (<10%); A2 - moderately compact sandy loam with pockets of clay in north section, + charcoal concentration near SE corner + ironstone gravel (<20%) towards bottom of the unit/interface to clay; B - moderately compact mottled oj/brown/cream claywith ironstone gravel near interface to A2 (<20%); clay and moisture content increase with depth; transition between units moderately clear		7.5YR 3/1	7.5YR 3/2		
	297	100	200					300		73					73	Raised Flat	W	Branxton	15.3.13	A1 - moderately soft brown loam topsoil (5-10cm thick - thickest in NW corner + layer of organic rich dark loam); A2 - moderately compact light brownish yellow sandy loam sitting ontop of clay (NE corner deeper due to undulating B surface); B - compact mottled brown/oj/cream undulating clay (natural clay hit at lowest point in NW corner); transition between units moderately clear + integrity of soils generally better than TUs excavated prior to this area		7.5YR 3/2	SAME		5 cores, flakes, debitage
	298	100	100					200	0	0					0	Raised Flat	S	Branxton	15.3.13	A1 + A2 - mid brown loosely compact sandy loam, well mixed with little distinction between two units (very fine grained as per all soils); B - moderately compact brown clay		7.5YR 3/2	SAME		
	299	100	100	50				250	0	2	0				2	Raised Flat	All	Branxton	15.3.13	A1 - light brown moderately soft topsoil (5-10cm) with charcoal flecks (<5%); A2 - moderately compact brown sandy clay loam with charcoal flecks (<5%); B - compact mottled brown/oj/cream clay; clay and moisture content increasing with depth; transition between units moderately clear compared to 298		7.5YR 3/2	SAME		Broken flakes
	300	100	100	100				300	0	2	1				3	Raised Flat	SW	Branxton	15.3.13	A1 - mid to dark brown loose sandy loam; A2 - light greyish brown loose sandy loam with <10% gravel inclusions; B - brown moderately compact sticky/waxy clay		7.5YR 3/2	SAME		Flake, debitage, Spit 3 = debitage 3 in clean up
	301	100	100	60				260	0	0	0				0	Raised Flat	W	Branxton	15.3.13	A1 - light brown loose to moderately loose fine grained sandy soil with <5% orange gravel inclusions (90mm deep); A2 - dark brown compact fine grained sandy soil with high clay content		7.5YR 3/2	SAME		
	302	100	100					200	0	2					2	Raised Flat	E, W	Branxton	15.3.13	A1 - mottled dark and light grey/brown loose fine sandy loam (112mm deep); A2 - mottled dark and light grey/brown loose fine sandy loam; B - brown sticky compact clay		7.5YR 3/2	SAME		Flakes
	303	100	100					200	0		2				2	Raised Flat	NW	Branxton	15.3.13	A1 - light grey/brown loose fine sandy loam (85mm deep) (transition clear); A2 - mid brown loose fine sandy loam with clay content, clay content increasing with depth; B - mittled light and dark brown compact sticky clay		7.5YR 3/2	SAME		Debitage
	305	100	100	30				230		0	0				0	Raised Flat/ Hilltop	SE	Branxton	18.3.13	A1 - light brown loose sandy, very fined grained with clear transition to A2 (60mm deep); A2 - brown moderately compact sandy loam (very fine) with high clay content; B - moderately compact sticky brown clay		7.5YR 3/2	SAME		
	306	100	100					200	3	11					14	Raised Flat	NE	Branxton	18.3.13	A1 - moderately compact organic brown fine grained sandy loam (50mm deep); A2 - moderately compact brown sandy loam with high clay content (clay increasing with depth); B - sticky red compact clay		7.5YR 2.5/2	SAME		Flakes, debitage
	307	100	100					200	0	0	3				3	Raised Flat	S	Branxton	15.3.13	A1 - brown loose sandy loam; A2 - slightly lighter more compact sandy loam than A1 - transition between A1 and A2 is not clear; B - sticky brown moderately compact clay		7.5YR 3/2	SAME		Flakes, broken flakes
	309	100	100	100				300	0	1	0				1	Raised Flat	E	Branxton	14.3.13-1	A1 - light brown moderately soft loam topsoil (top 5cm) with transition to brown clayey loam and riverstone pebbles/gravels dispersed throughout (<20%); A2 - moderately soft brown clay loam with river pebbles and gravels throughout (<20%); B - moderately soft brown clay; increasing clay and moisture content with depth		7.5YR 3/2	SAME		Quartz
	311	100	100	100				300	0	0	0				0	Mid Slope	S	Branxton	14.3.13	A1 - brown moderately soft loam topsoil; A2 - brown moderately soft clayey loam with gravels (<10%); B - brown moderately compact clay loam to clay - clay surface undulating; clay and moisture content increasing with depth		7.5YR 3/2	SAME		
	312	100	100	100	100	100		500	0	2	1	2	0		5	Raised Flat	All	Branxton	15.3.13	A1 - brown moderately soft loam topsoil; A2 - brown moderately soft clayey loam with charcoal fragments/flecks in spits 3 and 4 (towards clay); B - orangey brown moderately compact clay with fragments of orangey yellow degraded sandstone; clay and moisture content increasing with depth		7.5YR 3/2		Large concentration of charcoal	Micro flakes, broken micro flake
	313	100	100					200	0	0					0	Upper Slope - slope down to	S	Branxton	14.3.13-1	A1 - dark brown compact sandy loam with clay inclusions at interface to A2; A2 - dark brown compact sandy loam with extremely high clay content; B - dark brown compact clay with light brown streaking throughout		7.5YR 3/1	SAME		
	315	100	100	100				300	0	0	0	2			2	Mid Slope	E	Branxton	14.3.13	A1 + A2 - mid brown moderately compact mixed sandy loam with <10% grave;/charcoal inclusions; B - light brown moderately compact sticky clay		7.5YR 3/2	SAME		Micro core, micro flake.
	316	100	100					200	2	0					2	Mid Slope	SE	Branxton	14.3.13	A1 - light brown moderately soft fine grained sandy loam; A2 - brown moderately compact sandy loam with high clay content + increasing with depth; B - brown loose clay; transition from A2 to B quite clear		7.5YR 3/2	SAME		Clear quartz/ chalcedonny - transported?
	317	100	100	100				300	0	0	0				0	Mid Slope	S	Branxton	14.3.13	A1 - well mixed with little distinction between A1 and A2; A2 - clay content increasing significantly from 200mm onwards; B - brown highly compact clay, increasingly dense/sticky with depth		7.5YR 4/2	SAME		

	318	100	100	100				300	0	0	0				0	Lower Slope	S	Branxton	14.3.13	A1 - brown moderately soft loam topsoil (top 5cm); A2 - brown moderately compact clay loam; B - brown/orangey brown moderately soft clay; increasing clay and moisture content with depth; condition low to moderate, integrity of soil affected by cattle trampling		7.5YR 4/3	SAME		
	319	100	100	100				300	0	1	0				1	Mid Slope	E	Branxton	14.3.13	A1 - light brown sandy loam, moderately compact; A2 - brown compact sandy loam with high clay content which increases with depth; B - brown loose to moderately compact clay		7.5YR 4/3	SAME		Flake
	320	100	100	100				300	4	11	1				16	Lower Slope	S	Branxton	14.3.13	A1 - light brown moderately soft loam topsoil; A2 - brown moderately soft clayey loam; B - brown clayey loam to clay; increasing clay and moisture content with depth; particle size fine to medium; transition between units not particularly clear		7.5YR 3/2	SAME		Flakes, spit 3 - broken flake
	321	100	100	100				300	0	0	0				0	Creek Bank	S	Branxton	14.3.13	A1 - light brown moderately soft loam topsoil; A2 - brown moderately compact clayey loam; B - brown compact clay with charcoal flecks, burnt clay and gravels (10-20%) towards bottom of spit 3 (south side of pit - running in east west direction), some larger river pebbles assiated with these inclusions		5YR 4/3	SAME		
	322	70						70	0						0	Lower Slope/ Creek Bank	S	Branxton	15.3.13	A1 - mid brown loose sandy loam; A2 - non existent; B - brown compact clay		7.5YR 3/2	SAME		
	328	100	60					160	3	0					3	Lower Slope	N, E, S	Branxton	18.3.13	A1 - light greyish brown moderately compact loam topsoil with charcoal flecks (<10%); A2 - light greyish brown moderately compact loam transitioning to clayey loam with charcoal flecks (<10%); B - orange slightly softer clay (than A2) - transition to clay moderately clear; increasing clay and moisture content with depth		7.5YR 4/2			Flakes
	329	100	100					200	2	0					2	Lower Slope	N, E, S	Branxton	18.3.13	A1 - light greyish brown moderately compact loam topsoil with charcoal flecks (<10%); A2 - light greyish brown moderately compact loam transitioning to clayey loam with charcoal flecks (<10%); B - orange slightly softer clay (than A2) - transition to clay moderately clear; increasing clay and moisture content with depth		7.5YR 4/3	7.5YR 4/4		Flakes
	341	100	130					230							0	Ridgeline	N, E, W	Branxton	20.3.13	A1 - light greyish brown loose silty loam (50mm deep); A2 - brown loose silty loam 50-120mm transition to clay mixing from 120mm onwards; B - brown compact clay; silcrete cobbles everywhere in this area					
	343	100	200					300			0				0	Ridgeline	All	Branxton	20.3.13	A1 - thin layer of greyish brown silty loam 45mm; A2 - thin layer of greyish brown silty loam with orange and black flecking, clay content present from 170mm, <20-30% gravels; B - brown moderately compact stick clay with weak structure		7.5YR 3/3	SAME		
	350	100	80					180								Ridgeline	N, E, W	Branxton	19.3.13	A1 - lighgt greyish brown moderately soft loam topsoil with charcoal and clay flecks (<20%); A2 - brown moderately compact clayey loam with charcoal and clay flecks (<20%); B slight orangey brown compact clay with charcoal and clay flecks at/near interface to A2; moderately clear transition from A2 to B, transition from A1 to A2 not as clear - typical across the site***Note - orientation of pit incorrect - post at SW corner		7.5YR 4/2	SAME		
	371	100	100	20				220	0	0	0				0	Creek Bank	S	Branxton	4-Dec	Compact dark brown loam, tending to dark brown clay at base, condition fair, no evidence of burning (no other notes)		7.5YR 3/1	SAME		
	372	150	100	100				350	1	0	0				1	Mid Slope	S	Branxton	4-Dec	0-50mm - greyish brown loose silty clay with 0% surface visibility; 50-220/280mm - dark brown moderately compact clay with orange and black flecking. Few inlcusions; 220/280-300/350mm - mostly brown clay with little evidence of flecking and even fewer inclusions than stratum above. Moderately soft to moderately compact. Homogenous texture.		7.5YR 3/1	SAME		
	373	110	90	90				290	0	1	0				1	Mid Slope	N, W	Branxton	4-Dec	Spit 1 A1 (0-40mm) - mid brown silt with grass root inclusions + occasional gravels. Mixed with A2 (A2 dark brown loam with increasing clay content with depth and orange flecking throughout); Spits 2 to 3 A2 - clay content increasing with depth, approximately 60m from creek line, on an undulating heavily ploughed surface		7.5YR 3/1	SAME		
	374	110	90	90				290	0	0	0				0	Mid Slope	E, W	Branxton	3-Dec	Spit 1 to 2 - light grey silt heavily mixed with A2 - darker brown loam. Inclusions of grass roots and occasional gravels + clumps of clay (clay content increasing with depth); Spit 3 - As as above; B - yellow/brown waxy soft cracked clay ***Note - TU is in an area of alluvial and fluvial flow and near a soil dump		7.5YR 3/1	SAME		
	375	110	100	110				320	0	2	0				2	Mid Slope	E, W	Branxton	3-Dec	Spit 1 to 2 A1 - light brown grainy silt. A2 dark brown compacted loam. Very mixed due to ploughing. Grass roots and gravels throughout. Clay content increasing with depth; Spit 3 - dakr brown laom with clay content increasing with depth + gravels; B - dark brown/yellow clay, waxy and cracked ***Note - TU on a slope in a fluvial zone, heading SE to creek		7.5YR 3/1	SAME		
	376	100	100	100				300	0	0	0				0	Lower Slope		Branxton	4-Dec	0-60mm - loose, greyish brown silty clay topsoil with 0% surface visibility; 60-300mm - greyish brown clay with orange, black and white flecking. Few inclusions, compact ***Note - no obvious change at 300mm. Test unit is situated on the edge of a raised mound which may be artifical and the test unit may comprise redeposited clay?		7.5YR 4/2	SAME		
	377	100	100	110	30			340	0	3	3	0			6	Lower Gully	E	Branxton	4-Dec	Spit 1 A1 - light brown silt onto an A2 of dark brown loam with grass roots and occasional gravel inclusions; Spit 2 and 3 - light brown with increasing gravel and clay content with depth. Clay clumps coming up at base - gravel at interface; Spit 4 - gravel interface plus clay; B - orangey brown waxy clay with a lot of inclusions; pit shows evidence of disturbance; gravels possibly alluvial		7.5YR 3/1	SAME		
	378	100						100	7						7	Lower Slope	W	Branxton	4-Dec	Dry compact sand mid brown (A) coming down onto red brown compact clay with large crack. Shallow skeletal soil on rise next to small creek		7.5YR 4/3	SAME		
	379	100	100	100				300	0	0	0				0	Creek Bank	E	Branxton	4-Dec	Dark brown dry sand, quite loose (Spit 1), dark brown sand, some moisture, compact (Spit 2), dark brown sandy loam tending to dark brown compact clay at base (Spit 3)		7.5YR 4/3	SAME		

	380	100	100	100	100			400	0	0	0	0			0	Creek Bank	E	Branxton	4-Dec	0-80mm - Slightly deeper than usual topsoil. Greyish brown. Loose and moderately soft. Silty clay. 0% surface visibility; 80-400mm - dark brown to greyish brown clay with some orange, back and buff flecking. Few inclusions. Moderately compact. Becomes moister from about 350mm to 400mm but no change in matrix at 400mm. Has the feel of a clay which has been under water in boggy ground and possibly trampled		7.5YR 3/2	SAME		
	381	100	100	100	60			360	2	0	0	0			2	Creek Bank	S	Branxton	4-Dec	Spit 1?; Spit 2 - light brown silty clay, loose, friable; Spit 3 - same as Spit 2; Spit 4 - same as Spit 3 and 2; Spit 4 context 2 - change in soil at 330mm deep, orange silty clay, slightly more compact than above, increasing clay with depth, possibly A2 or mixture with clay		7.5YR 5/2	SAME		
	382	110	90	80				280	0	0	0	4			4	Upper Slope	S, W	Branxton	28-Nov	0-50mm - silty clay topsoil. Loose. Moderately soft to moderately compact. Dark greyish brown. 0% surface visibility; 50-200/250mm - brown clay with orange and black felcking. Some charcoal and mica fragments. Few inclusions. Compact; 200/250 - 280/300 - brown clay. Softer and moister than clay above (moderately soft to moderately compact). Also distinguished byd ecayed limestone inclusions (10%) up to about 10mm length		7.5YR 3/2	SAME		
	383	100	100					200	0	0					0	Raised flat	NW	Branxton	30-Nov	0-50mm - very dark brown silty clay topsoil. Loose and moderately soft to moderately compact. Possibly ploughed. 0% surface visibility; 50-120/150mm - very dark brown clay with some silt. Orange soft stone inclusions (5-10%). Very compact; 120/150-200 - very dark brown clay. Very compact. Homogenous. Orange flecking and few inclusions		7.5YR 2.5/1	SAME		
	395	120	80	100	50			350	0	0	0	0			0	Hill Top	E	Branxton	28-Nov	0-50mm - topsoil, brown clay, loose. 10% surface visibility; 50-250mm - dark brown moderately compact clay with few inclusions. Orange and buff flecking; 250-350mm - brown clay matrix, moderately compact, with high proportion of fine and coarse inclusions. Possibly decayed limestone/dolamite (?). About 30% clay in matrix		7.5YR 3/1	SAME		
	396	110	90	100				300	0	0	0				0	Upper Slope	E, S, W	Branxton	28-Nov	Spit 1 A1 - 0-50mm dark brown silty loam with grass roots - onto A2 of dark brown loam; Spit 2 and 2 A2 - southern area of TU degraded limestone with increasing clay content with depth; B - excavated into c.35% degraded limestone, 50% dark brown waxy clay, no cracking		7.5YR 3/1	SAME		
	397	100	90					190	0	0					0	Mid Slope	N, E	Branxton	28-Nov	0-30mm - grassy topsoil; 30-170mm - dark brown silty clay, compacted; 170-190mm - dark brown silty clay, compacted. Southern half of spit 2 - roundish pieces of timer (most likely to be historic - sample taken)		7.5YR 3/1	Same		
	398	100	100	70				270	0	0	0				0	Upper Slope	N, E	Branxton	28-Nov	Spit 1 A1 - 0-40mm mixed with A2, light brown silt mixed with mid brown loam + occasional gravel; Spit 2 and 3 A2 - clay content increasing with depth; B - waxy brown/yellow/orange clay with cracks; pit shows evidence of ploughing - very disturbed		7.5YR 3/1	SAME		
	11	100	100	100	40			340	0	0		0			0	Lower Slope	E, S, W	Hunter	20.3.13	A1 - Light greyish brown loam topsoil with charcoal flecs throughout; A2 light yellowish brown sandy loam with charcoal flecs throughout; B - mottled orange/brown/cream clay (all moderately compact, transition between units fairly clear)	Charcoal flecs in A1 and A2	7.5YR 4/2	SAME	Charcoal present (small smount)	
	12	100	100	100				300	1	1	0				2	Lower Slope	E, S, W	Hunter	20.3.13	A1 - Light greyish brown loam topsoil with charcoal flecs throughout; A2 light yellowish brown sandy loam with charcoal flecs throughout; B - mottled orange/brown/cream clay (all moderately compact, transition between units fairly clear)	Charcoal flecks in A1 and A2	7.5YR 3/2	SAME	Charcoal present (small smount)	Flakes
	30	100	100	100	100	100	160	660	0	0	0	0	0	0	0	Raised Flat	N, E, W	Hunter	19.3.13	A1 - (strata 1) brown loose silt (silty loam?); A2 -Strata 2 - light brown losse silt (255mm), Strata 3 - light grey brown loose sand + creek gravel (orange and black) (340mm), Strata 4 - dark greyish brown loose sand + creek gravel (orange and black) (460mm); Strata 5 - brown moderately compact sand with c.50% brown gravel (creek) **Excavation did not reach clay due to physical limitations of pit depth and dimensions (50x50)		7.5YR 4/3	SAME		
	32	100	50					150	11						11	Raised Flat	N, E, W	Hunter	19.3.13	A1 - very light grey powdery silt (loose) (65mm); A2 - brown loose silty loam with clay content of 40-50% (increasign with depth); B - light brown dry compact (friable) poorly structured clay		7.5YR 4/3	SAME		Flakes, debitage
	40	100	100	100	120			420	0	0	0	0			0	Raised Flat	N, E, S	Hunter	20.3.13	A1 - Strata 1 - light grey very loose silty loam topsoil with <50% charcoal flecks/fragments; A2 - Strata 1 - dark brown very loose silty loam with c.90% charcoal content and 40% burnt clay, Strata 2 - light orangey brown silty loam with c90% charcoal and 40% burnt clay; B - light greyish brown sticky moist clay (dips in SW corner - full of charocla and organic material)		7.5YR 2.5/1	SAME	Charcoal present (small amount)	
	43	100	100	60				260	0		0				0	Raised Flat	N, E	Hunter	20.3.13	A1- light grey powdery sandy silt (fine); A2 - Strata 1 - mottled light greyish brown sandy sily (powderly and fine grained), c.75% orange and black flecks, Strata 2 - brown moderately compact sandy silt (fine grained), mottled with c.50% clay; B - brown moderately compact clay					
	48	100	100	100				300	0	0	0				0	Raised Flat	N, E, S	Hunter	20.3.13	A1 - greyish brown sandy loam (increasing clay content with depth, charcoal flecks c.<20%); A2 - ligh brown sandy clay; B - brown clay		7.5YR 3/2	SAME	Charcoal present (small amount)	
	50	100	160					260	3	0					3	Upper Slope	N, E, S	Hunter	20.3.13	A1 - light grey powdery silty san (50mm deep); A2 - redish brown loose silty loam (50mm); B - orangey brown compact clay		7.5YR 4/2	SAME		Flakes
	57	100	100					200		3					3	Raised Flat	N, E, S	Hunter	20.3.13	A1 - light grey loose silty sand with c.<20% bacl and grey flecks (100mm deep); A2 - brown moderately compact silty loam with c.<50% clay particles (100-200mm deep); B - brown compact clay		7.5YR 4/2	SAME		Cores + flake
	127	100	60					160	1	0					1	Mid Slope	N, E	Hunter	3-Dec	A1 - non existent; A2 - brown mottled compact (moist) clayey loam + ironstone gravel and limestone deposits; B - brown mottled compact (moist) clay (A2 and B almost homogenous - compacted by long term trampling by cattle)		7.5YR 3/1	SAME		
	128	100	50					150	0	0					0	Mid Slope		Hunter	3-Dec	A1/A2? - dark brown very hard/compact clayey loam topsoil (ploughed); A2/B? same as above		7.5YR 3/1	SAME		

	129	100	80					180	0	0				0	Raised Flat	E, S	Hunter	3-Dec	A1 & A2 & B homogenous due to ploughing; Spit 1 and 2 - dark brown moderately soft homogenous loam; Spit 2 - same as Spit 1 + dark brown waxy clay (mixing due to ploughing)		7.5YR 3/2	SAME		
	130	100	100					200	9	2				11	Raised Flat		Hunter	3-Dec	No detail recorded - dark brown clayey loam topsoil - slightly lighter with depth - homogenous brown clay		7.5YR 3/2	SAME		1 core
	131	100	100	40				240	0	0	0			0	Raised Flat	N, E, S	Hunter	3-Dec	Spit 1 - mixed A1 and A2 - light grey silt mixed with mid brown loam + gravel (c.5%); Spits 2 & 3 - A2 - mid brown loam in clay context with gravel and organic rich clay; B - mottled yellow/brown soft waxy clay (evidence of ploughing - very disturbed)		7.5YR 3/2	SAME		
	132	100						100	0	0				0	Raised Flat		Hunter	3-Dec	Dark brown clayey loam topsoil, heavily ploughed, some slightly lighter clay at bottom of spit 2 with some specks of decaying sandstone (1 piece of quart recovered from bottom of spit 1)		7.5YR 3/2	SAME		
	133	100	100	40				240	0	0	0			0	Raised Flat	E	Hunter	3-Dec	A1 - no existent - probably due to erosion; A2 - rich mottled brown compacted clay with evidence of burnt clay and limestone deposits; B - brown compacted clay (homogenous) clay	Burnt clay in A2	7.5YR 3/1	SAME		
	134	100	90					190	0	2				2	Raised Flat	N, E, S	Hunter	3-Dec	Spit 1 - mixed A1 and A2 - light grey silt mixed with mid brown clayey loam + gravel (c.5%); Spit 2 - A2 - dark brown clayey loam (orange mottling) + gravel dispersed throughout; B - dark brown waxy clay with orange mottling (pit shows evidence of heavy ploughing)		7.5YR 3/2	SAME		
	135	100	100					200	0	0				0	Raised Flat	N, E, S	Hunter	3-Dec	Spit 1 & 2 - A1 to A2 - no clear differentiation in soil horizons, very disturbed - brown silt mixed with loam and clay; B - orangey brown soft clay with cracks (very disturbed due to ploughing)					
	136	100	100					200	0	1				1	Raised Flat		Hunter	3-Dec	Spit 1 - very clayey loam topsoil with lighter reddish clay at bottom of Spit 2, cracks evident in clay		7.5YR 3/1	SAME		
	137	100	80					180	0	0				0	Raised Flat	E	Hunter	3-Dec	A1 to A2 - Below the surface to a depth of approx 60mm a moist horizon of silty clay is encountered. It contains burnt clay fragments and isolated limestone deposits as well as roots with approx diam of 1mm; B - At approx 160-180mm depth below surface a densely compacted homogenous moist + sticky clay is enountered. Multiple roots (<1mm - >2mm) penetrate the soil horizon	Burnt clay				
	138	110	100					210	0	0				0	Raised Flat	N, E, S	Hunter	3-Dec	Spits 1 and 2 - heavily disturbed/mixed (0-20mm light grey silt mixed with brown loam), (20-210mm brown soft loam with burnt organic material and gravel throughout), compaction increasing with depth - along with clay; B - orangey brown waxy clay		7.5YR 3/2	SAME		
	139	100	100					200	0	0				0	Raised Flat		Hunter	3-Dec	Clayey brown topsoil, slightly lighter at bottom, some fragments of degraded sandstone		7.5YR 3/2	SAME		
	140	100	100	100	50			350	0	3	0	0		3	Raised Flat	E	Hunter	30-Nov	0-50mm - greyish brown silty clay topsoil. Loose. Few inclusions, 0% visibility; 50-250mm dark brown clay. Moderately compact. Sparse orange black and white flecking. Few inclusions; 250-300mm - transition from clay above to horizon below. Orange and white decayed limestone inclusions beginning to appear; 300-350mm - dark brown clay. Moister and softer than horizon above. Distinguished by presence of of white decayed limstone inclusions (about 5-10%)		7.5YR 3/1	SAME		
	141	100	100					200	0	0				0	Raised Flat	NE	Hunter	3-Dec	Spit 1 & 2- A1 and A2 - blurred, clay content (oj) increasing with depth; B - very compact dark brown clay with few inclusions (very disturbed by ploughing)		7.5YR 4/1	SAME		
	142	100	100	40				240	0	0	0			0	Raised Flat	N, W	Hunter	30-Nov	Heavily impacted, very dense and hard clay in large pockets characterise this test pit. Minimal evidence of burning eg burnt clay and fragments of charcoal that appear mottled within the clay horizon. Clay is dry and forms lumps at the surface up to a depth of 60-70mm, but then becomes slightly more moist and sticky at lower depths; Soil horizon is continuous from the surface to a depth of at least 240mm, no chnage, abandoned	Charcoal + burnt clay	7.5YR 3/2	SAME		
	212	100	100	100				300	1	0	0			1	Raised flat	N, E, S	Hunter	23-Nov	0-40/70mm - shallow topsoil with 0% surface visibility; 40/70-250mm - dark brown compact clay with few inclusions (angular gravel), and orange and black flecking; 250-300mm (end of excav) - brown compact clay with sight yelowish tint. Orage and black flecking evident. More homogenous than clay above + decomposing buff colured soft stone fragments appearing		5YR 3/1	Same + some 10YR 7/4 at bottom		
	213	130	70	90	100			390	0	0	0	0		0	Ridgeline	E, S	Hunter	23-Nov	Spit 1 to 3 - turned over A2 horizon with very few inclusions. A1 churned into the A2 within the first 40mm where grass roots were evident; Spit 4 - from 300mm onwards soil is dark brown waxy clay - at the base of the pit there was evidence of corroded limestone/bedrock - entire pit shows evidence of disturbance		5YR 2.5/2	SAME		
	214	100	90					190	0	1				1	Ridgeline	S	Hunter	22-Nov	Spit 1 - dark brown loam with grass and occasional gravels; Spit 2 - increasing clay content with depth, cracks identified in the clay, clay brown and waxy with increasing clay content and occasional gravel dispersed throughout, entire pit highly disturbed		7.5YR 3/2	Same		1x chalcedony distal blade
	215	100	100	100	80			380	0	0	0	0		0	Ridgeline	N, S	Hunter	23-Nov	A1 - no clear A or B horizon due to disturbance; Spit 1 - grass roots, gravel; Spit 2 - large amount of gravel; Spit 3 - increasing clay content; Spit 4 - patches of brunt clay identified in NW corner of pit, clay content very high c.90% **Note - entire pit highly diturbed - with clay content increasing beyond c.60% @ approximately 190mm. Organics and gravels decreasing beyond this level, with light flecking obersved throughout		5YR 3/1	Same + some 10YR 7/4 at bottom		
	216	110	90	100	75			375	0	0	0	0		0	Ridgeline	E, S, W	Hunter	23-Nov	Spit 1 - no clear A1 or A2 due to disturbance; Spit 2 to 4 - increasing clay content with depth, very compact and dry loam with cracks observed. Grass roots and occasional gravels in spits 2 and 3, with clay nodules found throughout; Spit 4 -B - natural clay hit at c250mm, a dark brown waxy natural clay with occasional smears of read gravel from context above		5YR 2.5/2	Same		

	217	100	100	100	80			380	0	0	0	0	0		0	Raised flat	S, W	Hunter	23-Nov	A1 to A2 - land has been extensively ploughed as evidenced by the mixing of rich, dark, moist, compact clay and silt. The clay is sticky and roots are common for the first 150mm below the surface. Disturbance is highly probable from both ploughing and worm activity at a depth of appox 280mm. At about 290mm a powdery, crumbling clay is encountered in small pockets (eg 10%). It has been burnt; A2 to B - rich moist clay transitioning to homogenous, light tan coloured marbled clay. Chalk line powdery (probably calcified limestone deposit) inclusions are also present (5% of horizon)		5YR 3/1	Same + some 10YR 7/4 at bottom		
	218	100	100	100	80			380	0	0	0	0			0	Raised flat	S, W	Hunter	23-Nov	A1 to A2 - rich dark silty clay with little silt but mostly compacted clay. Clay varies in consistency between compact and finer particles of silty clay (roughly 70% clay, 30% silt). Heavily disturbed by ploughing, no clear differentiation of surface soiul and the subsequent horizon. THis extends down to apporx 350-380mm below the surface. Especially moist clay; B - homogenous dense compacted moist clay encountered at the bottom at between 350-380mm below the surface		5YR 3/1	Same		
	219	100	100	100	50			350	0	0	0	0			0	Raised flat	SE	Hunter	22-Nov	Compact brown sticky loam (high clay content). Spits 2 and 3 contains high amount of crushed yellow rock with brown clay. Came down onto brown clay mixed with shale (natural). Condition of soils = ok		5YR 3/2	10YR 7/4		
	220	100	100	100	50			350	0	0	0	0			0	Hilltop	SW	Hunter	22-Nov	Spit 1 A1 - grassy silty loam with clay content of c.5%, grass roots present; Spits 2 to 4 A2 - dark brown/black loam with increasing clay content with depth. Very compact soil with few inclusions. @ 150mm in NE corner charcoal flecks associated with thick grass root clumps. Clay clumps found throughout and associated with disturbance - probably due to ploughing; B - dark brown waxy clay		5YR 2.5/1	Same		
	221	100	100	100	100			400	2	2	5	4			13	Raised flat	N, E, S	Hunter	22-Nov	A1 - heavily compacted, dense, dry soil, with no evidence of manipulation. Sil (dry, clay) transitioning to clay within 100mm spit, but still has clay content. Roots present within first 100-200mm (0.22mm thick). Soil is dry, crumbly, and contains medium sized powdery grains; A2 to A3 - dense, heavily compacted clay loam with few roots. Some inclusions of charcoal (<0.5%). Stne flake found in SE quadrant at approx 300mm. Largely dense, compact large clay matrix with finer silty loam present (3mm); A3 to A4 - compact clay silt loam transitioning to clay, no visible charcoal		7.5YR 3/2	10YR 4/4		Spit 3 banded mudstone(possible usewear)
	222	100	100	100				300	1	0	0				1	Raised flat	N, E	Hunter	22-Nov	A1 - fairly loose, dry, powdery loam topsoil transitioning to pockets of dense, compacted clay and loam, with evidence of disturbance. Roots of c.2mm diamater common; A2 - silty loam transitioning to pockets of compacted silty clay in spits 2 and 3. Roots and charcoal (1%) present; B - dense compact clay with few loam pockets ie homogenous clay					
	223	100	100	100				300	3	1	0				4	Upper slope	N, E	Hunter	22-Nov	0-50mm - shallow topsoil. Loose. 0% surface visibility; 50-150mm - compact brown clay with orange and black flecking, few inclusions (rounded); 150mm+ (end of excav) - yellowish brown compact clay with orange flecking and inclusions (few, sub-angular)		5YR 3/3	Same		
	224	100	100	100	100			400	0	0	5	1			6	Raised flat	N,E, S	Hunter	22-Nov	0-70mm - shallow topsoil to varying depths. Loose. 0% surface visibility. Greyish brown; 70-200/250mm - clay subsoil. Compact. Dark brown with orange and black flecking. Few inclusions (rounded); 200/250-400mm (end of excav) - yellowish brown clay. Compact. Few inclusions (rounded). Orange flecking NB: Artefacts seemed to appear at interface between the A2 and B horizons					
	225	100	100	20				220	1	0	0				1	Hilltop	W	Hunter	22-Nov	A1 - disturbed horizon of granulated light grey silty loam with grass roots throughout 0-30mm; A2 - dark brown loam with c.15% charcoal flecking and increasing clay content with depth; B - waxy brown clay slightly overlapping with surface **Note - entire pit shows evidence of disturbance - probably heavily ploughed leading to high degree of mixing					
	226	100	60	110				270	1	0	0				1	Hilltop	W	Hunter	22-Nov	A1 0-100mm - granulated silty loam with grass root inclusions and burnt clay in the eastern wall (c.5%); A2 - granulated loam with clay content increasing with depth on the northern side of the pit; Spit 2 and 3 - orangey brown clay along the eastern wall, sloping down towards the west. Clay = orangey brown and waxy, with cracks throughout **Note - entire pit disturbed		10YR 3/4	10YR 3/5		
	227	90	120	90	100	50		450	2	19	0	2	0		23	Raised flat	N, E, S	Hunter	22-Nov	Topsoil - compact dark gritting loam, some brick inclusions; Clay - dark brown clay mixed with dark brown loam(beneath topsoil but is redeposited from ploughing) - includes sandy stone (with some shale) from 210mm, mixed into clay (redposited) (density increases with depth)		7.5YR 2.5/1	10YR 5/2		
	228	100	60					160	0	0					0	Raised flat	E	Hunter	22-Nov	A1 - compact sticky loam with high clay content		5YR 3/2	Same		
	229	100	100					200	2	0					2	Raised flat	N, E, S	Hunter	22-Nov	0-60/200mm - greyish brown clay. Compact. Few inclusions. Some orange flecking. Varying depth; 60/200+ - yellowish brown compact clay. Natural. Few inclusions. Some orange flecking (soil deeply cracked)					
	230	100	70					170	0	1					1	Raised flat	E, S	Hunter	22-Nov	A1 - compact sticky brown loam with clay content and grass roots		5YR 3/2			
	231	100	100	50				250	0	1	0				1	Raised flat	N, E, S	Hunter	22-Nov	0-50mm - very shallow topsoil. Sticky clay. Loose. 0% surface visibility; 50-120/200mm - claysubsoil. Compact. Dark brown. Occasional orange flecking. Few inclusions. Possibly ploughed; 120/200-250mm (end of excavation) - yellowish brown compact clay. Few inclusions. Some orange flecking. Disturbed and discoloured in part by an ants nest					
	232	120	60					180	0	0					0	Creek Bank	N, E, S	Hunter	23-Nov	Spit 1 A1 and 2 - mixed and with no clear distinction (A1 identifiable in patches - gravel and root inclusions - dark brown loam); Spit 2 - dark brown loam mixed with yellow/brown clay, clay reached at 150mm. No inclusions; B - undulated dry and cracked clay		5YR 4/2	5YR 4/3		

	233	100	90	30				220	0	0	0				0	Creek Bank	N, W	Hunter	23-Nov	Spit 1 - granulated light grey silt with A2 from 70mm; Spit 2 - dark brown loam in north of pit, clay content increasing with depth, flecking of gravels and clumps of clay throughout; Spit 3 - loam and clay @ approx 210mm; B - waxy brown/yellow clay undulating and cracked throughout **Note - entire pit disturbed		5YR 3/1	SAME		
	234	90	100	110	20			320	0	0	1	0			1	Creek Bank	E, S, W	Hunter	26-Nov	Spit 1 - compact loam heavily ploughed with grass roots and gravel inclusions; Spit 2 and 3 - dark brown loam with increasing clay with depth and occasional charcoal flecking and orange orange clay flecking onto a dark brown waxy clay; Spit 4 - dark brown waxy clay with flecking of orange clay c.2%		5YR 3/1	SAME		
	235	100	20					120	1	0					1	Creek Bank; Lower Slope	N, E	Hunter	26-Nov	Spit 1 - very clayey/possible ploughing, with small clumps of burnt clay and brown silt; Spit 2 - clay within 20mm - dark brown		5YR 3/1	SAME		
	236	100	150					250	0	0					0	Raised flat	N, E	Hunter	26-Nov	0-40mm - shallow topsoil. 0% surface visibility. Loose dark brown clay; 40-100/150mm - dark brown compact clay with orange and black felcking. Few inclusions; 100/150-200/250mm (end of excav) - natural dark yellowish brown clay. Compact. Orange and back flecking with few inclusions		5YR 3/2	SAME		
	237	100	100	50				250	0	2	0				2	Raised flat	N, E	Hunter	23-Nov	0-60mm - shallow topsoil. 0% surface visibility; 60-150/200mm - dark brown clay. Orange and black flecking. Few inclusions. Compact; 150/200-250mm (end of excav) - yellowish brown, compact clay. Orange flecking. Few inclusions		5YR 3/2	SAME		
	238	100	40					140	0	0					0	Creek Bank	E	Hunter	23-Nov	A1 - loosely compacted dry silty clay with fine crumbly texture and roots (<2mm). Multiple patches of darker clay and burnt, powdery clay suggests burning might have occurred? More moist and crumbly as depth increases; B - The soil horizon tranisitions to homogenous moist and compact clay with root material (<1mm) present throughout a great portion of the layer (30% contains root shoots)		5YR 3/2	SAME		
	239	120						120	1						1	Creek Bank	E	Hunter	23-Nov	A1 - rich dark but dry loosely packed silty clay with pockets of finer silt (more crumbly) and roots of <1mm thickness. Most of the silt has eroded away to the creek - the soil horizon is a mere 100-200mm in depth; B - homogenous, copmpact, moist and sticky clay with root material 1mm in diamater		5YR 3/2	SAME		
	240	110	90	50				250	0	0	0				0	Upper slope	N, E, S	Hunter	26-Nov	Spit 1 - clearly defined A1 becomes mixed with A2 horizon - grass roots and gravels present; Spit 2 - dakr brown loam with gravel and orange clay + brown waxy clay inclusions - in NW corner bleached clay from approx 120-190mm; Spit 3 - hard waxy dry cracked clay with clay inclusions ***Note - pit disturbed throughout due to ploughing		7.7YR 4/2	SAME		
	241	110	90	40				240	0	0	0				0	Upper slope	N, E, S	Hunter	26-Nov	Spit 1 - dark brown silty loam with large grains. Grass roots and gravel inclusions (A1 and A2 mixed together through ploughing); Spit 2 - dakr brown very compact loam with gravel and orange clay inclusions @ approx 180mm; Spit 3 B - waxy brown clay with orange inclusions, very dry and cracked ***Note - highly disturbed		7.5YR 3.2	SAME		
	242	100	60					160	0	1					1	Raised flat; Hilltop	N, E	Hunter	26-Nov	Spit 1 - dark brown v clayey loam (lumpy), with some dry silt mixed throughout; Spit 2 - dark brown clay with evidence of ploughing		5YR 3/2	SAME		
	243	100	80					180	0	0					0	Raised flat	N, E, S	Hunter	26-Nov	Spit 1 A1 0-20mm - grainy light brown silt mixed with light brown loam (A2 context) - orange clay present on northern side of pit; Spit 2 - southern and central areas of pit contain light brown loam coming down onto dark brown/orange waxy clay ***Note - pit highly disturbed		7.5YR 4/2	SAME		
	244																	Hunter		NO SHEET					
	245	100	100	100	30			330	0	0	0	0			0	Raised flat	N, E, S	Hunter	27-Nov	Spit 1 - light grey fine grained silt (A1) mixed with A2 loam; Spit 2 - A1 to 100-120mm then A2 - light brown soft to lightly compacted silt with increasing clay content with depth. Orange clay and charcoal flecking increasing with depth; Spit 3 and 4 - same as spit 2; B - orangey brown soft waxy wet clay		7.5YR 4/4	SAME		
	246	100	100	100	60			360	0	0	0	0			0	Flat		Hunter	27-Nov	Topsoil - is dry but consists of crumbly silt with few pockets of sticky compacted clay with evidence of insect activity (ants); The material has been ploughed as evidenced by the mixing of fertile silt and compacted clay; At a depth of approx 360mm the soil horizon transitions to homogenous, dense, compacted and moist clay		7.5YR 4/4	SAME		
	247	100	100					200	0	0					0	Flat		Hunter	26-Nov	0-20 - light brown silty topsoil with grass roots; 20-180mm - compacted v dry and dryable light brown silty clay; 180-200mm - orangey brown clay with small ironstone gravel inclusions		7.5YR 4/2	SAME		
	248	100	50					150	0	0					0	Raised flat		Hunter	26-Nov	0-20mm - shallow topsoil with grass roots; 20-100mm - light brown silty clay, very dry and compacted; 100-175mm - compacted light brown clay with yellow sandy/ironstone inclusions through - no changes		7.5YR 4/3	SAME		
	249	100	60					160	0	0					0	Raised flat	E	Hunter	26-Nov	0-30mm - topsoil with grass roots; 30-100mm - compacted dark brown silty clay (mainly clay); 100-160mm - clay content increasing with depth		5YR 2.5/2	SAME		
	250	100	100	100	50			350	1	0	1	2			4	Raised flat	N, E	Hunter	26-Nov	0-50mm - shallow topsoil of loose silty clay with 0% surface visibility; 50-200/300mm - greyish brown silty clat, moderately compact, with orange and buff (soft) stone inclusions (<10%) (1 artefact recovered during excavation; 200/300-350 - brown clay with orange and black flecking. Compact with few inclusions		2.5YR 4/3	SAME		
	251	100	100					200	0	0					0	Raised flat	N, E	Hunter	26-Nov	0-50mm - shallow clayey topsoil with 0% surface visibility; 50-100/150mm - dark brown compact clay with orange, black and buff flecking, few inclusions; 100/150-200mm - yellowish brown clay. Compact. Orange, black and buff fleckling evident. Few inclusions. More homogenous than clay unit above		7.5YR 3/2	SAME		
	252	100	40					140	0	0					0	Raised flat	N, E	Hunter	26-Nov	0-90mm - dark brown silty clay with grass roots (topsoil shows evidence of disturbance, probably through ploughing); 90-140mm - dark brown clay with silty interface to natural clay beneath ***Note - all of the soil has been highly compacted and dried - due to cattle trampling etc		5YR 4/2	SAME		

253	100	90					190	0	0					0	Raised flat	N, E, S	Hunter	26-Nov	Spit 1 A1 - light grey silt (fine) mixed with brown loam (A2). Clay inclusions throughout. Very compacted and disturbed; Spit 2 - dark brown loam with gravels and orange clay inclusions (compacted); B - brown waxy clay with cracks (compacted)		7.5YR 4/2	SAME		
254	100						100	0						0	Upper slope	N, E	Hunter	26-Nov	0-30mm - shallow topsoil. Loose. 0% surface visibility; 30-60/80mm - brown compact clay with orange flecking and few inclusions; 60/80-100mm - yellowish brown clay with orange and black flecking. Compact. Few inclusions ***Note - The natural clay appeared at a very shallow depth, between 60-80mm below the surface. The test unit is located towards the edge of the raised flat and gently sloping. The topsoil horizons appear to have largely been eroded away		7.5YR 3/2	7.5YR 5/6		
255	100	100	100	100			400	0	0	0	0			0	Upper slope to raised flat	E, S	Hunter	26-Nov	0-50mm - shallow clay topsoil. Loose. 0% surface visibility; 50-250/350mm - dark brown compact clay with few inclusions. Clumpy. Possibly ploughed over; 250/350-400mm - dark brown compact clay with yellow/buff coloured soft stone inclusions/ Probable natural soil horizon		7.5YR 3/2	SAME		
256	100	100					200	0	0	0				0	Upper slope to raised flat	S	Hunter	26-Nov	0-80mm - shallow greyish brown topsoil. Loose. 0% surface visibility; 80-150/200mm - dark brown compact clay with orange and black flecking. Also, gravel and soft buff coloured stone inclusions. Gravel is angular. Dense concentration in SW corner of the pit; 150/200+ - Probable natural clay. Brown with a yellowish tinge. Orange and black flecking. Few inclusions. Compact		5YR 3/3	SAME		
257	150	100					250	0	0					0	Raised flat	SW	Hunter	27-Nov	0-40mm - shallow greyish brown loose topsoil with 0% surface visibility; 40-120/150mm - compact dark brown clay with orange and bacl flecking. Few inclusions. Very clumpy; 120/150-200/250mm - compact yellowish brown clay with orange and black flecking. Few inclusions. Cracks evident		7.5YR 5/4	SAME		
258	100	50					150	0	0					0	Mid Slope	E, S	Hunter	27-Nov	0-20mm - topsoil with grass roots; 20-130mm - brown silty clay, v dry and compacted; 130-150mm - orangey brown clay		7.5YR 3/2	7.5YR 4/4		
259	100	40					140	1	0					1	Mid Slope	E	Hunter	27-Nov	0-10mm - shallow topsoil with grass roots; 10-100mm - mixed brown silty clay, v dry and compacted; 100-140mm - light orangey brown clay ***Note - ironstone flecking throughout pit		7.5YR 4/2	SAME		
260	100	100	50				250	0	0	0				0	Upper Slope	E	Hunter	27-Nov	0-50mm - shallow greyish brown silty clay topsoil. Loose. Few inclusions. 0% surface visibility; 50-200/220mm - moderately compact to moderately soft greyish brown silty clay with orange and back managnese pebbles (<5mm); 200/220-250mm - compact yellowish brown clay with orange flacking and soft stone inclusions. Managenese pebbles (sub-angular, >10mm length). More homogenous than clay above		7.5YR 4/2	SAME		
261	100	80					180	0	0					0	Upper Slope	E,S	Hunter	27-Nov	Spit 1 - light brown silt with A2 clay clumps throughout (mixing); Spit 2 - light brown laom without clear interface. Orange and brown clay waxy and cracked (@ c.150mm) ***Note - entire pit shows evidence of disturbance		7.5YR 4/3	SAME		
262	100	50					150	0	0					0	Upper Slope	S	Hunter	27-Nov	0-40mm - shallow greyish brown loose topsoil with 0% surface visibility; 40-120 - moderately compact greyish brown clay with orange and bacl flecking. Few inclusions. Clumpy; 120-150mm - compact yellowish brown clay with orange and black flecking. Few inclusions. Evidence of cracking		7.5YR 4/3	SAME		
263	100	80					180	1	0					1	Upper Slope	E, S	Hunter	27-Nov	Spit 1 A1 to A2 - A1 light grey grainy silt mixed through an A2 horizon (clay clumps throughout); Spit 2 A2 - dark brown silt with increasing clay content with dept. Orange clay mottling and gravels throughout; B - brown waxy clay with orange clay flecking and cracks throughout ***Note - entire pit disturbed, probably due to ploughing		7.5YR 4/2	SAME		
264																	Hunter		NO SHEET					
265	100	80					180	0	0					0	Raised flat	E, S	Hunter	27-Nov	A1 to A2 - dry powdery topsoil up to a depth of 70-80mm. Roots present. Crumbly fine and medium sized granules of predominantly silt with few rare patches of clay; B - at depth of approximately 140-180mm below the surface - dense compacted homogenous 'sticky' moist clay encountered		7.5YR 4/3	7.5YR 5/4		
330	100	100	100	100	70		470	0	0		0	0		0	Creek Bank (Lower Slope)	N, E	Hunter	19.3.13	A1 - grey loose extremely fine grained sandy silt (95mm); A2 - Strata 1 (95-145) - greyish brown fine grained sany silt with <10% charcoal flecking, Strata 2 (145-260mm) - light greyish brown with 50% charcoal and orange flecking, Strata 3 (260-350mm) - brown fine grained sandy silt with very few inclusions, Strata 4 - same as strata 3 with clay mixed in; B - weak brown clay		7.5YR 4/3	SAME		
332	100	130					230	0						0	Raised Flat	N, E, W	Hunter	19.3.13	A1 - greyish brown loose very fine (powdery) loam; A2 - very light greyish brown loose (powdery) silty loam with <30% burnt clay; B - greyish brown loose clay, sticky with poor strength/structure with burnt clay lumps					
333	100	100	100				300		4	0				4	Raised Flat	N, E	Hunter	19.3.13	A1 - light grey loose silt (powdery) (90mm deep, transition 40mm thick); A2 - Strata 1 (160-220mm) - light grey loose silt with <30% orange and black flecking, Strata 2 (220-300mm) same as Strata 1 but mixed with clay; B - weak brown clay as per other pits		7.5YR 4/3	SAME		Flakes
334	100	100	100	34			334	1?	1					1	Mid Slope	N, E	Hunter	19.3.13	A1 - dark brown loose silty sand loam (not sure can be this combination - probably due to mixing?); A2 Strata 1 (125-230mm) - light greyish brown silty sand loam (?) with 50% orange and black flecking, Strata 2 (230-330/340mm) - clay mixed with Strata 1, contains burnt tree root which impacted pit depth (deeper in south end); B - bright brown loose orangey brown clay		7.5YR 3/2	7.5YR 4/4		Flake
335	100	100	100				300	0	0	0				0	Raised Flat	N, E, W	Hunter	19.3.13	A1 - 110mm brown loose silt with black and orange flecks (<40%); A2 Strata 1 (110-190mm) -light greyish brown loose silt with black flecks <40%, Strata 2 (190-300mm) - brown moderately compact silt mixed with clay; B - brown moderately compact sticky clay (week strength)		7.5YR 4/3	7.5YR 4/4		

	336	100	100	100	40			340	0	0	0	0			0	Raised Flat	N, E, W	Hunter	19.3.13	A1 - 70mm dark brown to black loose very fine silty loam; A2 Strata 1 (70-230mm) - light brown loose very fine sandy silt with <20% charcoal flecking, Strata 2 (230-330mm) - light brown loose silt mixed with clay particles, <10% gravels; B - brown moderately compact clay with weak composition - as per pit 30, 335, 32 and 332		7.5YR 4/3	SAME		
	338	100	180					280	3	0					3	Upper Slope	N, E	Hunter	20.3.13	A1 - light greyish brown loose silty sadn with <10% gravels (ironstone) 80mm, clear transition to A2; A2 - brown moderately compact silty loam with clay mixed through 80-180mm; B - brown moderately strong/compact clay		7.5YR 4/3			Cores + flake
	348	100	100					200	0	0						Ridgeline	N, E, W	Hunter	19.3.13	A1 - light greyish brown compact loam topsoil with distinct band of ironstone gravel <40% sitting above A2; A2 - light greyish brown moderately soft sandy loam with charcoal flecks (<10%) sitting ontop of natural clay; B - orangey brown moderately compact clay with iron manganese staining and charcoal flecks/fragments <40%		7.5YR 3/2	SAME		
	357	100	100					200		0						Ridgeline	N, E, W	Hunter	20.3.13	A1 - light grey loose silty sand (very powdery) with <50% gravel, clear interface to A2; A2 - brown moderately compact silty loam with clay mixed in <50%; B - brown moderatelty compact clay (medium strength)		7.5YR 4/2	SAME		
	358	100	90					190		0						Upper Slope	N, E	Hunter	19.3.13	A1 - light greyish brown loose silty sand 60mm; A2 Strata 1 (120mm) - light greyish brown sandy silt with 50% charcoal and orange flecking, Strata 2 (160-190mm) - S1 mixed with clay, mid brown moderately compact; B - brown clay (weak structure)		7.5YR 4/3	SAME		
	363	100	180					280	0	0						Upper Slope (above Raised	N, E, W	Hunter	20.3.13	A1 - grey loose silty sand (powdery) to 90mm; A2 - light grey loose silt (powdery) with <10% orange and black flecking; B - brown compact clay with high strength		7.5YR 4/2	SAME		
	365	100	100	20				220	0	1	0				1	Raised flat	E	Hunter	3-Dec	A1 to A2 - predominantly clay soil with silt particles present. Top 60mm is powdery and dry, but as depth increases soil transitions more toward moist, sticky and yett loose and pliable clay. This contains multiple burnt clay fragments, limestone and other rock deposits, and roots <1mm are commom. Stone artefacts found in NE quadrant of spit 2. This was found in a cilty clay deposit. Clear evidence of ploughing; B - at depth of 200-220mm an easily pliable homogenous light coloured clay is encountered		7.5YR 3/2			
	366	100	60					160	0	0					0	Upper Slope	W	Hunter	3-Dec	A2 to B - characterised by patches of dense, compact + softer, more pliable clay intermixed with small, individual clumps of clay 3-4mm in diamater. Roots + worm activity are obvious, as are few, isolated fragments of burnt clay		7.5YR 3/1	SAME		
	367	100	100	50				250	0	1	0				1	Raised flat	NE	Hunter	3-Dec	Spit 1 to 3 - dark brown loam with increasing clay content with depth, from spit 3 just dark brown clay; B - dark brown clay, waxy and cracked; area shows evidence of ploughing		7.5YR 4/1	SAME		
	368	100	100	60				260	0	0	0				0	Raised flat	N, E, S	Hunter	3-Dec	Spit 1 to 2 - no clear A1 or A2, very loamy dark brown soil with grass roots throughout both spits with increasing clay content with depth; Spit 3 - very loamy with a large amount of clay (increasing with depth); B - dark brown cracked waxy clay		7.5YR 3/1	SAME		
	369	100	100	70				270	0	0					0	Raised flat	ES	Hunter	3-Dec	Spit 1 to 3 - no clear differntiation in horizons, very mixed due to ploughing, clay content increasing with depth with occasional gravels and orange clay flecking + brown clay clumps and organics; B - dark brown waxy clay with occasional inclusions; entire pit very disturbed		7.5YR 3/1	SAME		
	370	100	40					140	0	1					1	Lower Slope	N, E	Hunter	3-Dec	Soil is especially dry and powdery, and predominantly silt due to (probably) erosion - deposition of silt from upper slope. At a depth of approx 90mm the silt is transitioning to a dense and compacted relatively moist clay. Roots <2mm are prevalent, as are deposits of ironstone and other stone (limestone?); B - from about 90mm depth, dense and compacted, homogenous clay is encountered and makes up a large part of the soil (80%). At a depth of 140mm, large pockets of dense, homogenous and compacted clay is encountered		7.5YR 3/1	SAME		
	388	100	50					150	0	0					0	Upper slope		Hunter	23-Nov	0-50mm - shallow topsoil with 0% surface visibility; 50-70/100mm - compact brown clay with orange and black flecking. Few inclusions; 70/100-150mm - yellowish brown clay. Compact. Orange flecking. Few inclusions		5YR 3/2	Same		
	389	100	100	100				300	0	1	0	0			1	Upper slope	N, E	Hunter	22-Nov	0-50mm - shallow topsoil. 0% surface visibility; 50-200/220mm - compact brown clay with orange flecking and few inclusions; 200/220-300mm - compact brown clay with orange and black flecking. More homogenous and a little ligher than the horizon above		5YR 3/1	Same		
	390	100	100	50				250	0	0	0				0	Upper slope	N, E, S	Hunter	22-Nov	0-50mm - shallow, loose topsoil. Clay. 0% surface visibility; 50-200mm - dark brown compact clay. Orange flecking with few inclusions; 200-250mm - dark yellowish brown clay with orange and black flecking. Compact		5YR 3/2	5YR 3/3		
	391	100	120					220	0	0					0	Raised flat	S, W	Hunter	23-Nov	A1 to A2 - surface is dry and powdery clay transitioning to slightly more moist, sticky clay at a depth of 80-90mm. Roots are present. Burnt clay fragments occur rarely (brick like in texture); B - At a depth of 180-220mm a compacted silty homogenous moist clay is encountered		5YR 3/3	7.5YR 4/3		
	500	100	100	100	50			350	0	0	0	0			0	Raised flat	SW	Hunter	5-Dec	0-70mm - dark greyish brown topsoil. Loose and moderately soft. Silty clay. 0% surface visibility; 70-200/250mm - dark brown clay. Moderately compact. 10% inclusions (soft orange stone, manganese and rounded pebbles). Possible plough zone; 200/250-250mm - dark brown clay. moderately compact. Few inclusions compared to stratum above and more homogenous. Moister with depth. Buff, orange and black flecking		7.5YR 3/1	7.5YR 3/2		

	501	100	100	100				300	0	0	0				0	Upper Slope	W	Hunter	5-Dec	0-60mm - dark greyish brown silty clay. Loose and moderately soft. Few inclusions. 0% surface visibility; 60-200mm - dark greyish brown clay. Moderately compact. Orange, buff and black flecking. Few inclusions (possible plough zone); 200-300mm - dark brown clay. Slight yellowish tint. Orange and black flecking. Few inclusions. more homogenous and consistent matrix than stratum above. Moister		7.5YR 3/2	SAME		
	502	100	100					200	0	0					0	Upper Slope	SW	Hunter	5-Dec	0-50mm - dark greyihs brown silty clay topsoil. Loose and moderately soft. Few inclusions. 0% surface visibility; 50-150/180mm - dark brown clay. Moderately compact. Few inclusions. Orange flecking mostly; 150/180-20mm - brown to yellowish brown clay. Orange flecking. Consistent texture, few inclusions ***NOTE - the topsoil and A2 horizons appear to have been truncated - leaving the underlying clay less than 200mm below the surface		7.5YR 3/1	SAME		
	503	100	100	100	50			350	0	0	0	0			0	Raised flat	NE	Hunter	5-Dec	0-60mm - dark brown silty clay topsoil. Loose and moderately soft. 0% surface visibility. Few inclusions; 60-300mm - dark brown clay. Moderatelty compact and clumpy. Few inclusions and little flecking; 300-350mm - dark brown clay with decayed limestone (buff coloured) inclusions in concentrated patches (about 10%). Compact		7.5YR 2.5/1	SAME		
	504	100	50					150	4	1					5	Raised flat	NE	Hunter	5-Dec	0-60mm - greyish brown topsoil (silty clay) loose and moderately soft. Few inclusions. 0% surface visibility; 60-80/100mm - dark brown moderately compact. Orange flecking. Rounded pebble inclusions (few in number). Possible remnant plough zone; 80/100-150mm - yellowish brown clay. Compact. Some orange flecking. Few inclusions. Consistent texture; ***NOTE - topsoil and A2 appear to have been truncated and a shallow plopugh zone remains above the underlying clay		7.5YR 4/2	SAME		
	505	100	100					200	0	0					0	Raised flat	N, E	Hunter	5-Dec	0-70mm - dark greyish brown silty clay. Loose and moderately soft. Few inclusions. 0% surface visibility; 70-160mm - dark brown clay, moderately compact. Little presence of flecking. Few inclusions; 160-200mm - dark brown clay with slight yellowish tint. Orange and buff flecking. Moderately compact. Few inclusions ***NOTE - A1/A2 horizons appear to have been truncated		7.5YR 3/2	SAME		
	506	100	100	50				250	0	0	0				0	Raised flat	NE	Hunter	5-Dec	0-50mm - greyish brown silty soil. Loose and moderately softy. Few inclusions; 50-200mm - dark greyish brown clay. Few inclusions. Moderately compact; 200-250mm - brown clay with slight yellowish tint. Moderately compact. Few inclusions and little flecking. Consistent texture		7.5YR 3/2	SAME		
	512	100	80					180	1	1					2	Upper Slope	N	Hunter	7-Dec	0-60mm - dark brown clay topsoil. Loose and moderately soft. Few inclusions. 0% surface visibility. 1 x flake recovered during excation; 60-150mm - dark brown clay. Moderately soft and moist. Few inclusions and little flecking; 150-180mm - reddish brown clay. moderately soft and moist. Few inclusions and some orange and black flecking		7.5YR 3/1	7.5YR 3/3		
	513	100	100					200	1	1					2	Mid Slope	E	Hunter	7-Dec	Compact brown clayey loam (A horizon) coming down onto dark brown clay (B horizon) at base - soil quite dry. Clay contains cracks		7.5YR 2.5/1	SAME		
	514	100	100					200	3	1					4	Upper Slope	SE	Hunter	7-Dec	0-50mm - greyish brown silty clay. Loose. Few inclusions. 0% surface visibility; 50-170mm - greyish brown silty clay. More clay content with depth. Moderately soft to moderately compact. Few inclusions, little flecking; 150-200mm - yellowish brown clay. Moderately soft and moist. Some orange and black flecking. few inclusions. 1 x rounded pebble (70mm)		7.5YR 3/2	7.5YR 3/3		
	7							0	0	0	6				6			Rothbury		Sheet with no data BUT have 2 spit tags		7.5YR 3/1	7.5YR 3/2	Charcoal present (moderate amount)	Debitage
	10	100	110					210		0					0	Upper Slope	W	Rothbury	15.3.13	A1 - light grey brown loosely compact sandy loam, <20% gravel inclusions; A2 - corner down onto thick, compact brown clay with gravels pushed in (soil generally disturbed - on the verge of a road)		7.5YR 3/2	SAME		
	83	100	100	70				270	2	10	1				13	Mid Slope	E	Rothbury	14.3.13	A1 - dark grey moderately compact sandy loam (120mm deep) (clear transition to A2); A2 - light grey compact sandy loam; B - dark brown clay		7.5YR 3/2	SAME	on soil interchange	Broken flakes, Spit 3 - flake in clean-up, core tool?
	84	100	100	100	100	100	100	600	0	2	0	0	0	0	2	Creek Bank	W	Rothbury	14.3.13	A1 - Strata 1 - brown moderately soft (fine) loam topsoil (top 50mm); A2 - Strata 2 - light yellowish brown silty clay, Strata 3 - light yellowish brown silty clay; A3 - Strata 4 - orangey/redish brown soft clayey sand (coarse/massive), Strata 5 - same as Strata 4 + charcoal flecks and gravel, Strata 6 - same as Strata 4 + charcoal flecks and gravel; B - did not hit pure clay due to physical limitations of pit depth and dimensions (50 x50) (moisture and clay content increasing with depth)	Charcoal flacks evident at bottom of A3 (Strata 5 and 6)	7.5YR 2.5/1	7.5YR 3/2		Micro flakes
	85	100	100	50				250	0	0	3				3	Lower Slope	S	Rothbury	14.3.13	A1 - brown moderately dry/compact loam topsoil; A2 - brown (slight orange tint) moderately compact clayey loam; B - orangey brown moderately compact clay (clay and moisture content increasing with depth)		7.5YR 3/2	SAME		Broken flakes + debitage
	86	100	100	100				300	0	1					1	Lower Slope	S	Rothbury	14.3.13	A1 - light brown dry/soft loam topsoil; A2 - brown slightly compact clayey loam; B - orangey brown moderately compact clay (clay and moisture content increasing with depth)		7.5YR 4/3	SAME		
	165	100	100					200	0	0					0	Ridgeline	N, W	Rothbury	6-Dec	A1- a very fine (thin) layer of predominantly silty loam, particles tend to be fine to medium sized. This stratigraphic unit extends for approx 20-30mm; A2 - below the silt unit, a mix of silt and clay is present. It is predominantly moist and sticky and compact, with clay pockets and channels of softer, less dense silty clay that forms in clumps about 3-4mm thick; B - base consistency of dense and compacted especially sticky dark brown homogenous clay. Roots do not appear to penetrate those large pockts of clay		7.5YR 3/1	SAME		

	166	100	20					120	0	0					0	Ridgeline	N, W	Rothbury	6-Dec	A1 - think lense of silt with particles 2-3mm in thickness that extends for approx 20-30mm below surface. Relatively moist but powdery, and contains roots larger than 2mm and smaller roots <1mm; A2 - lense of silty loam which crumbles, intermixed with large pockets of very dense and compacted, homogenous clay. The silt forms in channels within pockets of clay; B - unmodified homogenous clkay horizon. Sticky, dense and compacted dark brown clay		7.5YR 3/1	SAME		
	167	100	70					170	0	0					0	Ridgeline	N, E	Rothbury	6-Dec	0-40 - shallow topsoil, very dark brown clay. Loose. 0% surface visibility; 40-130mm - very dark brown clay. Compact. Few inclusions. Little orange and manganese flecking. Clumpy; 130-170mm - very dark brown clay. Moderately compact. Few inclusions, little flecking. More consistent texture than compared to stratum above. Moister ***NOTE - it appears that A1 and A2 horizons have been truncated. The strata from 0-130mm appears to be B horizon clay which has been ploughed over		7.5YR 3/1	SAME		
	169	100						100	0						0	Ridgeline	N	Rothbury	6-Dec	Heavy compact dark brown sandy loam overlying dark red brown clay. Clay has cracks and a waxy lustre		7.5YR 3/2	SAME		
	170	100						100	0						0	Ridgeline	E	Rothbury	5-Dec	Dark brown brown dry sandy loam, reaching dark brown red clay @ 100mm, clay has large cracks and waxy appearance		7.5YR 3/1	SAME		
	171	100	50					150	0	0					0	Ridgeline	E	Rothbury	5-Dec	Spit 1 - dark brown sandy loam, compact and dry; Spit 2 - dark brown sandy loam, leading to red brown clay base		7.5YR 3/1	SAME		
	172	100	140					240	0	0					0	Ridgeline	N, E, S, W	Rothbury	5-Dec	Spit 1 - A1 - 0-50mm light brown grainy silt with grass root inclusions mixed with an A2 of dark brown loam with increasing clay content with depth; Spit 2 - A2 - still very disturbed; B - very compact dark brown clay		7.5YR 3/1	SAME		
	173	100	70					170	0	1	0				1	Ridgeline	N, E, S,W	Rothbury	5-Dec	Spit 1 - A1 to A2 mixed - A1 = a light brown grainy silt; A2 - dark brown loam with clay content increasing with depth, grass roots throughout; B - mid brown compact clay with occasional bleached clay inclusions - evidence of ploughing and general distrubance		7.5YR 3/1	SAME		
	174	100	60					160	0	1					1	Ridgeline	N, W	Rothbury	5-Dec	A1-A2 - dry silty clayey soil of medium particle size that contains a high frequency of silstone and other stone inclusions. Transition to a predominantly clayey matrix, which still contains root matter, as does the soil towards the surface. An ants nest is visible in the SW quadrant of the pit; B - at depth of 120-160mm the mixed silty clay has been replaced wby a dense and compacted homogenous clay that exhibits a waxy texture, and is easily dried out		7.5YR 4/2	SAME		
	175	100	100					200	0	0					0	Ridgeline	N	Rothbury	5-Dec	A1 - up to a depth of approx 20mm soil is characterized by predominantly silty loam, where particles are medium-small sized and waxy,-moist; A2 - below 20mm the soil is a mix of silt and clay, but is transitioning to predominantly clay. The clay is moist and compacted and at times sticky, but still contains small channels silt. Small roots <1mm are present; B - at a depth of approx 200mm, a homogenous, compact, moist and sticky clay is encountered		7.5YR 3/2	SAME		
	176	100	110					210	0	0					0	Ridgeline	N	Rothbury	6-Dec	Heavy compact dark brown sandy loam overlying dark red brown clay. Clay has cracks and a waxy lustre					
	177	100						100	0						0	Ridgeline	N, W	Rothbury	5-Dec	A dry, fine and powdery silty clay is encountered. Roots 1mm thick are common, as are siltstone and other stone nodules. At a depth of 90 to 100mm below the surface is a dense and compacted, almost waxy textured clay. It is quickly dried out and cracks appear shortly after exposure. It is homogenous in nature and a light brown even colour		7.5YR 5/3	SAME		
	178	100	100					200	2	1-0					2	Ridgeline	N, W	Rothbury	5-Dec	A1 to A2 - dry, silty, clayey would with frequent inclusions of siltstone, ironstone and other rocks. At depth of approx. 180mm the dry powdery silt begins to transition to dried out dense, almost waxy clay which is homogenous and contains fewer rocky inclusions and limestone powder; B - clay reached at approx 180-200mm depth ***Note - stone artefacts found at depth of 130mm in SW quadrant of spit 2		7.5YR 5/2	SAME		
	179	100	110					210	0	1					1	Ridgeline	N, E, S, W	Rothbury	5-Dec	Spit 1 - A1 - at 0-100mm light brown soft silt with grass root inclusions and occasional gravel; Spit 2 - A2 - light grey fine silt with bedrock gravel inclusions and bleached clay; B - SW end is bedrock gravels, while mid to N end is red clay, E end is slightly more brown in colour		7.5YR 4/2	SAME		
	180	100	90					190	0	0					0	Ridgeline	N, E, S, W	Rothbury	5-Dec	Spit 1 A1 - 0-100mm light brown/grey fine silt with grass roots and occasional bedrock gravel; Spit 2 A2 - light grey alluvial silt with c.30% bedrock gravel; B - W end is orange clay, E end is orange bedrock, pit is mildly disturbed		7.5YR 6/2	SAME		1 Quartz Core
	181	100	90					190	1	0					1	Ridgeline	N, E, S, W	Rothbury	5-Dec	Spit 1 A1 to A2 - light brown grainy silt with grass root inclusions 0-50mm onto an A2 of mid brown loam with decaying rock, clay lumps and bleached clay inclusions - very mixed and compact; B - a mixture of mid brown compact clay and decaying rock and bleached clay - pit is very disturbed		7.5YR 5/2	SAME		
	182	100	80					180	0	1					1	Ridgeline	N, E, S, W	Rothbury	5-Dec	Spit 1 A1 to A2 - 0-40mm light grey fine silt with grass roots onto an A2 of mid brown loam with bleached clay inclusions, very compacted with increasing clay inclusions with depth; B - compact yet waxy in places, brown/greeny yellow clay, cracked and dry in most places		7.5YR 5/2	SAME		
	183	110	90					200	0	0					0	Ridgeline	N, E, S, W	Rothbury	5-Dec	Spit 1 A1 to A2 - 0-40mm a mid brown greeny silt holding grass roots onto an A2 of light brown compact loam with increasing clay content with depth + bleached clay and gravel inclusions; B - a hard compact undulating clay surface - pit is mildly disturbed		10YR 5/3	SAME		
	184	100	100					200	1	0					1	Ridgeline	N, W	Rothbury	5-Dec	A1 - consists of a layer of fine, powdery and dry silty clay that is relatively compacted. Siltstone and other stones are present; A2 - at a depth of 70mm a white powdery lense is encountered - probably a calcified limestone deposit?; B - at depth of 120mm below the limestone an exceptionally dense, compacted and almost waxy textured clay is encountered		7.5YR 6/2	SA<E		

	185	100	100	40				240	0	0	0				0	Ridgeline	N, W	Rothbury	5-Dec	A1- a dry powdery fine silty, clayey soil that contains frequent inclusions of siltstone, ironstone and other rocks. At a depth of 110mm the soil begins to transition to a dry and almost waxy dense clay, but consisting predominantly of siltstone and other rocks; B - at 240mm a homogenous dense waxy clay is encountered		7.5YR 5/2	7.5YR 7/2		
	186	100	100					200	3	0					3	Ridgeline	N, W	Rothbury	5-Dec	A1 to A2 - dry fine and powdery silty clayey soil containing frequent inclusions of ironstone, siltstone and other rocks. At a depth of approx 90-100mm the soil is visibly lighter grey and contains more clay and limestone despoits, as well as a greater abundance of siltstone and other rock nodules; B - a hard, compacted and fairly dense but dry almost waxy lay is encountered at approx 180mm below surface		2.5YR 5/1	SAME		
	187	100						100	1						1	Ridgeline	N, W	Rothbury	5-Dec	A1 - non existent; A2 - a thin layer of silty clay with inclusions of siltstone and limestone + other stone is encountered to a depth of between 30 and 90mm below the surface. Roots are present; B - a dense compacted clay with very few channels of silt is encountered just below the surface. It is homogenous and contains few roots - 1mm in diameter		2.5YR 4/2	SAME		
	188	110	100					210	1	0					1	Ridgeline	N, E, S,	Rothbury	5-Dec	Spit 1 A1 - at 0-40mm light brown granulated silt with grass root inclusions onto an A2 of mid brown loam with bleached clay and gravel inclusions with lumps of clay throughout; Spit 2 A2 - increasing clay content (clumps) with depth; B - undulating compact dark brown clay with occasional inclusions - pit is very disturbed, probably due to ploughing		2.5YR 5/2	SAME		
	189	100	100	100	100	160		560	5	0	1	0	0		6	Ridgeline	N, E, S, W	Rothbury	5-Dec	Spit 1 (A1 and A2 present) - A1 - 0040mm light brown/grey silt holding grass roots; Spits 2 to 5 A2 - light grey fine silt very uniform throughout with increasing gravel with depth, at 500-560mm clay and bedrock reached. Silt soil likley to be alluvial deposit; B - N end of pit = bedrock (shale), clay = orange/brown clay with inclusions		7.5YR 7/2	SAME		
	190	100	100	100	100	100		500	0	0	0	1	0		1	Ridgeline	N, W	Rothbury	5-Dec	A1 - non existent; A2 - dry fine powdered soil (silty?), characterised by frequent deposits of shale like limestone and ironstone. This rocky deposits extends to a depth of about 480-500mm below the surface, where a light brown clay and natural bedrock is encountered; B - characterised by a light brown moist and compacted homogenous clay, and large outcrops of shale like (bunded, crumbling into slivers?) rock		7.5YR 6/2	SAME	1 Charcoal sample retrieved	
	191	90	110	100	120			420	0	6	7	0			13	Ridgeline	N,S,E,W	Rothbury	4-Dec	Spit 1 A1 - 0-40mm light brown silt holding grass root inclusions, A2 - light grey alluvial silt with c.15% gravel material, no other evidence of disturbance; Spits 2 to 4 A2 (as above); Spit 4 - onto a dark yellow/brown hard compacted alluvial clay. Undulating and with no evidence of ploughing; B - yellow/brown compact hard alluvial undulating clay		7.5YR 6/2	SAME		1 Core in Spit 3
	192	110	90	50				250	0	0	0				0	Hilltop	N,S,E,W	Rothbury	4-Dec	Spit 1 A1 - light grey granulated silt mixed with A2 - a dark brown compacted loam, grass root inclusions throughout; Spit 2 to 3 - dark brown loam with increasing clay content with depth and few inclusions of gravel; B - cracked hard and dry dark brown clay with few inclusions		7.5YR 3/1	SAME		
	193	90	30					120	1	0					1	Ridgeline	N,S,E,W	Rothbury	4-Dec	Spit 1 - mixed fine grained silt and dark brown compacted loam, grass roots in top 0-40mm; Spit 2 - very loamy dark brown soil with clay @ approx 100mm in some sections; B - dark brown very compacted cracked clay with occasional inclusions, pit is very disturbed throughout		7.5YR 3/2	SAME		
	284	100	100					200	0	0					0	Hill Top	NW	Rothbury	28.11.11	0-60mm - loose brown clay loam topsoil with 0% surface visibility; 60-130/150mm - moderately compact dark brown clay with buff coloured flecking and few inclusions; 130/150-200mm - compact reddish brown clay, homogenous, moist, and with few inclusions		5yr 3/3	SAME		
	285	100	110					210	0	0					0	Upper Slope	N, E	Rothbury	28.11.12	0-30mm - topsoil; 30-150mm - reddish brown silt, compacted and fryable; 150-210mm - gradual change to silty clay to clay		5YR 3/2	SAME		
	286	100	100					200	0	0					0	Upper Slope		Rothbury	27.11.12	0-20mm - topsoil; 0-120mm - reddish brown silt, fryable; 120-180mm - reddish brown silt becoming more clayey with depth; 180-200mm - reddish brown clay		2.5YR 3/2	SAME		
	304	100	100	100				300	0	5	2				7	Raised Flat/ Hilltop	NE	Rothbury	18.3.13	A1 - loose light grey sandy, very fined grained, with gravel inclusions at interface to A2; A2 - <50% gravels (ironstone etc) light grey brown moderately compact sandy soil, very fined grained; B - moderately stick and compact brown clay		7.5YR 3/2	SAME		Flakes, debitage
	308	100	100	100				300	0	0	0				0	Raised Flat	S	Rothbury	14.3.13-1	A1 - light grey moderately compact sandy, fine grained, with <30% gravels, burnt clay and charcoal (180mm deep); A2 - dark greyish brown compact stick moist loam with high clay content and gravels + burnt clay <30%; B - dark brown clay with charcoal and gravels at interface to A2		7.5YR 3/1	5YR 5/8		
	310	100	100					200	0	0					0	Raised Flat	E	Rothbury	14.3.13	A1 - light greyish brown moderately compact sandy loam (5mm deep); A2 - broan compact loam with high clay content, clay content increasing with depth; B - dark brown compact sticky clay		7.5YR 3/2	SAME		
	314							0	1	0	0	0			1			Rothbury	14.3.13	SHEET BUT NO DATA ENTERED					Broken flake
	392	100	100	50				250	0	0	0				0	Hill Top	N, W	Rothbury	28-Nov	A1 to A2 - topsoil and horizon to a depth of 180-250mm is predominantly medium sized particles and clumps of moist, rich dark silt. At a depth of approx 180mm pockets of clay that is compacted and sticky begin to form, predominantly in SW corner; B - at approx 250mm depth below surface, a dense, compacted, stick and moist homogenous light brown clay is encountered		5YR 3/2	SAME		
	393	100	120					220	0	0					0	Hill Top	E	Rothbury	28-Nov	0-50mm - shallow clay topsoil, loose, 0% surface visibility; 50-100/150mm - brown clay with a reddish tin, varying depth. Moderately compacted. Orange and black flecking. Few inclusions; 100/150-200/220mm - reddish brown clay, moderately compact. Orange, buff and black flecking. Inclusions concentrated in NW corner (soft, buff coloured stone fragments averaging 5-20mm in length)		5YR 3/2	SAME		

	394	110	90	40				240	0	0	0				0	Upper	N, E, S	Rothbury	27-Nov	Spit 1 - dark brown compacted loam with A1 and A2 + clay mixed together; Spit 2 and 3 - dark brown loam mixed with orange/brown clay base - no inclusions in the layers besides clay		5YR 3/3	SAME		
	507	100	100	100	100			400	1	2	0	0			3	UpperSlope	N, S	Rothbury	6-Dec	Spit 1 and 2 - light brown soft airated silt with grass roots between 0-40mm + gravels starting at 50mm and increasing with depth; Spit 3 - light grey silt with inclusions increasing with depth; Spit 4 - light grey silt with inclusions coming up at approx 350mm; (alluvial in the ridgeline area of rock deposits in the surface)		7.5YR 5/2	SAME		
	508	100	60					160	0	0					0	Upper Slope	S, W	Rothbury	6-Dec	A1 to A2 - porckets of soft, powdery silty loam withpockets of dense, compacted clay. Clay is stick and large cracks are present. It is here that the loam is trapped and builds up to form channels of softer material. Through the silty loamy channels roots <1mm are common. At a depth of 160mm few silt channels are present and the base consists of dense, homogenous sticky dark brown clay		7.5YR 3/1	SAME		
	509	120	80					200	2	0					2	Upper Slope	S, W	Rothbury	6-Dec	0-30mm - light greyish brown topsoil. Silt with very low clay content. Loose. Few inclusions. 10% surface visibility; 30-120mm - light greyish brown silty soil. Moderately soft. Few inclusions. 1 x small silcrete flake recovered during excation; 12-150/200mm - interface between silt above and bedrock below. COmprises decomposing bedrock within a silt matrix. 50% + stone content. Fragmentary; 150/200mm - bedrock - uneven, brocken and friable surface		7.5YR 5/2	SAME		
	510	100	100	110				310	0	4	0				4	Upper Slope	N	Rothbury	6-Dec	Spit 1 - light brown silt with grass root inclusions 0-30mm, gravels @ 40mm (alluvial, airated and soft); Spit 2 A1 - from 100-150mm A2 - light grey soft airated soft silt with increasing gravel content with depth; Spit 3 A2 - with bedrock chunks and slabs coming up at c.270mm		7.5YR 5/2	SAME		
	511	100						100	0						0	Upper Slope	N, E	Rothbury	6-Dec	A1 - layer of predominatly clay with few silt particles. Silt forms within crack in clay as channels. Clay is moist and stick and especially dense and compact; At depth of 80-100mm below surface the clay pockets dominate/ Clay is homogenous and dark brown in colour. Few silt channels remain		7.5YR 3/2	SAME		
	1							0																	

Appendix F

Context Sheets

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	5
Excavators	TS + WS	Date	15.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Working of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS reference (check)	Easting	Northing	
Soil landscape	Residuary	Transport	Hunter
Landform	Creek bank Size Lower, Mid, Upper slope	Raised flat	Ridge line Hilltop
Aspect	N E S W	Slope %	< 10 %
Soil		Mass	

EXCAVATION wet sieved dry sieved

Scale	Depth (mm)	Soil Horizon	Soil Pit code	Grass/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		Charcoal flecs	Grass roots + ants	
2	200	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil reconstruction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity * Same as surrounding *

Signs of burning/heating Yes Charc flecs

TU expansion?

1. Light brown loam topsoil
2. Brown clayey loam + ironstone gravel.

* Both mod soft.

B = oil/cream mottled clay — moderately clear differentiation between A2 & B.

incr clay + moist content

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	6
Excavators	Norm + Trevor.	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS reference (Map)	Easting		Northing			
Soil landscape	Rathbury	Brimstone	Dunbar			
Land Form	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	< 10 %
pH			Munsell			

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Cultural Material	Carbon/Burnt/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B		No	Yes - grass roots	
2	200	A1 A2 B		Charcoal flecs		
3	270	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, mottling, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit) partic size fine - mod

Condition and integrity Good / poor - mod.

Signs of burning/heating Yes + spit 2 + 3 charcoal flecs.

TH expansion?

1. Light brown loam topsoil, mod. soft,
2. Brown clayey loam } charc. flecs
3. " }

increasing clay + moist content

*B oj/cream mottled clay - moderately clear differentiation between A2 and B

ANAMBAH TEST EXCAVATION 11-0227		TEST UNIT # PLAN #	7
Excavators	Trevor & Norm	Date	15.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Work to expansion? How?	
Photographs?	
Samples (description or number)	

LOCATION

GPS precision (1 sec)	Easting					Northing		
Soil landscape	Kalibury			Branston			Humber	
Landform	Crest/ridge	Flat	Lower Mid	Upper slope	Raised flat	Ridgeline	Lift up	
Aspect	N	E	S	W	Slope %			
pH					Munsell			

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Depth	Factor/Sorting/Heating	Distance/Sublimation	Aboriginal Objects
1		A1 A2 B				
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil composition, composition, surface size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

TU expansion?

ANAMBAH Test Exc 12-0227
Date: 15/3/13
Pit: 7 Spit: 1
Excavator: TREV + NORM
ANAMBAH Test Exc 12-0227

	AVATION	TEST UNIT # PLAN #	7
	rm	Date 15.3.13	

Context sheet 7 scanned twice accidentally
Yellow tag reads
15/3/13
Pit: 7 Spit: 2
Excavator: Trev/Norm

Reverse of sheet blank.

Photograph #	
Samples (description & number)	

LOCATION

GPS/Grid Easting	Easting		Northing	
Site landscape	Rolling	Bracketed	Frontal	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hill top
Aspect	N	E	S	W	Slope %	
[illegible]					Aspect	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Texture	Colour/Mottling/Fixing	Quartz/Charcoal/Bone/Shell	Significant Objects #
1		A1 A2 B				
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, colour/texture, and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/firing

[illegible]

ANAMBAH TEST EXCAVATION 32-0227		TEST UNIT # PLAN #	8
Excavators	MS WS	Date	15-3-13

SUMMARY OF EXCAVATION

Found Aboriginal Objects	
Others witness?	
Worthy of expansion? Notes	
Photographs	
Samples (description & number)	

LOCATION

GPS (location/area)	Easting			Northing			
Soil landscape	Kalibrary		Branxton			Hunter	
Landform	Creek bank	Fan	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope S	<10%	
pH					Moisture		

EXCAVATION wet sieved dry sieved

Sample	Depth (cm)	Soil Horizon	Soil Dry Code	Colour/Sorting/Heating	Disturbance/Intrusions	Aboriginal Objects
1	100	A1 A2 B		No charcoal flecs	Yes - grass roots	
2	200	A1 A2 B				
3	220-270	A1 A2 B				
4		A1 A2 B		cream/dry mottled clay		
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and colour, moisture, inclusions and segments for each stratigraphic unit)

Contacts and integrity

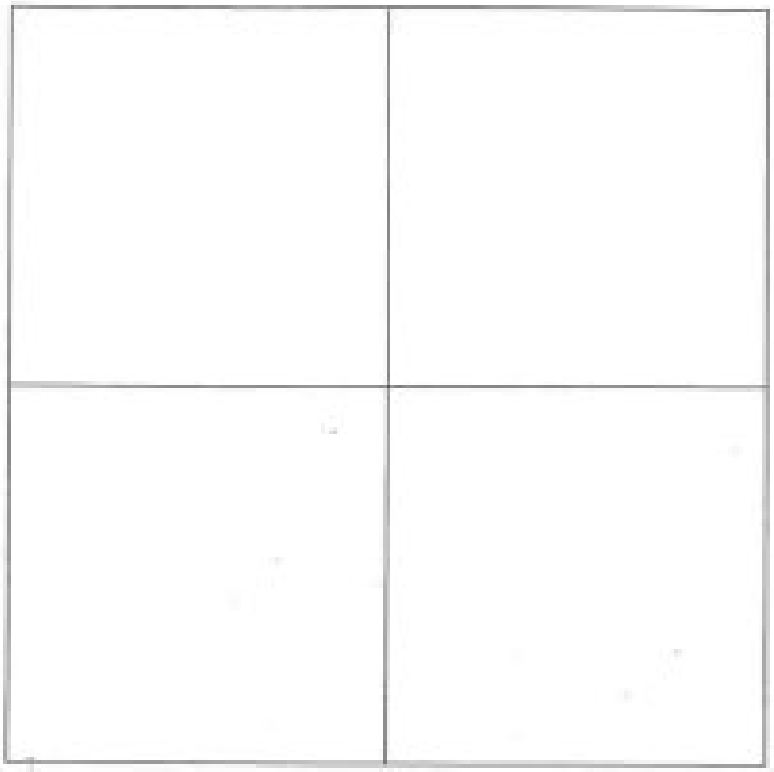
Signs of burning/heating Yes -- charc. flecs spit 2 + 3.

TCI expansion?

1. Brown loam topsoil (mod rich in organics) -- mod. fruit.
2. Brown clayey loam (charcoal flecs).
3. "
4. ~~Clayey~~ Moderately clear differentiation between A2 & B.

increas. clay content + moist.

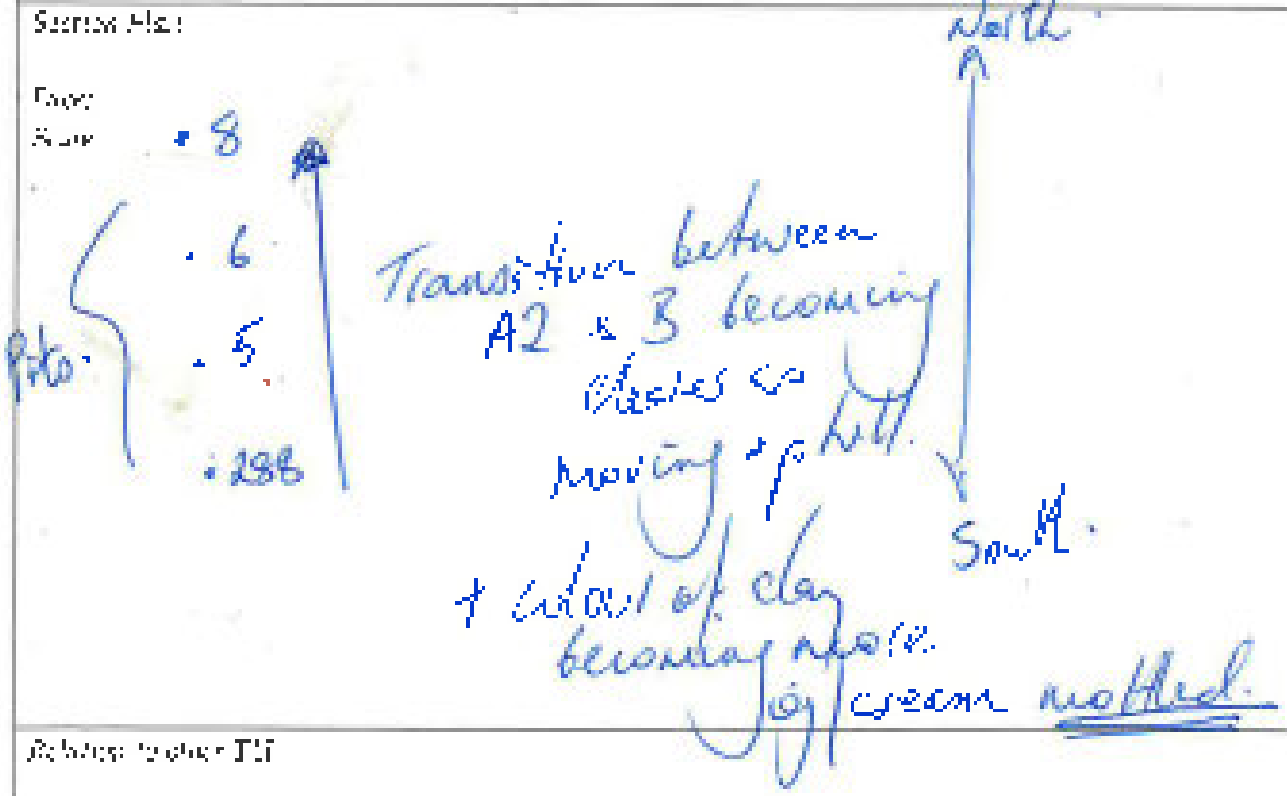
Plan



Site Elevation

Section Plan

Type:
Scale



Relation to other TP

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	9
Excavator:	DC	Date: 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? Hole?	
Photographs?	
Sampled (description & number)	

LOCATION

GPS (Accuracy / Easy)	Easting		Northing	
Soil landscape	Rubbery	*	Ramsden	Hunter
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised Flat / Ridge line / Hilltop
Aspect	N	E	S	W
Slope %	0-10			
pH			Moisture	

EXCAVATION wet sieved dry sieved

Split #	Depth (mm)	Soil Horizon	Soil Type	Colour/Texture/Structure	Disturbance/Perturbation	Aboriginal Objects
	100	A1 A2 B				
2	200	A1 A2 B		slopes down hill to 230mm at w, [illegible]		
3	Brown clay	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation to each stratigraphic unit)

Condition and Integrity

Signs of Burning/Heating

TCI expansion?

A1 – dark brown-black very fine sandy loam 111mm deep
sand interface – clear.

A2 – light grey brown fine sandy loam with < 20% charcoal + gravel inclusions.

B – brown clay - mottled light & dark.

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	10
Excavation	DC TS WS	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Southern Wales)	Easting		Northing	
Soil landscape	Bathbury	Transition	Cluster	
Landform	Creek bank	Slope	Lower Mid	Upper slope / Raised flat / Ridgeline / Hilltop
Aspect	N E S (W)	Slope %	10 – 15	
Site		Munsell		

EXCAVATION (wet sieved) dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Type	Colour/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	100mm	(A1) A2 B				
2	200mm	A1 A2 (B)				
3		A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil boundaries, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity — disturbed — on the verge of a road.

Signs of burning/heating

TU expansion?

A1 — light grey brown sandy loam (loosely compact) < 20% gravel inclusion

A2 — Coarse brown onto thick, compact brown clay with gravels pushed in.

Grassroots to depth.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	11
Excavators	TS + BS + AS + WS.	Date	20.3.13

2 = exactly same minus spit 4.

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? Why?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (or access to map)	Easting			Northing			
Site Landscape	Rockbury			Boulder		Hunter	
Landform	Creek bank	Flat	Lower	Mid. Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	10 – 20 %	
Soil					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Nodes	Ocean/Fishing/Hearing	Unfortunate/Disturbance	Aboriginal Objects #
1	100	A1 A2 B		Yes – charcoal flecs + frags	Yes – gravel cuts throughout	
2	200	A1 A2 B				
3	300	A1 A2 B				
4	340	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and colour, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity: Transition between units fairly clear.

Signs of burning/heating: Yes – charcoal flecs + frags

TU expansion?

1 Light greyish brown loam topsoil

2 Light yellowish brown sandy loam

3 " "

4 " "

5 Mottled oj/Brown/cream clay.

moderately compact.

river gravel increasing with depth

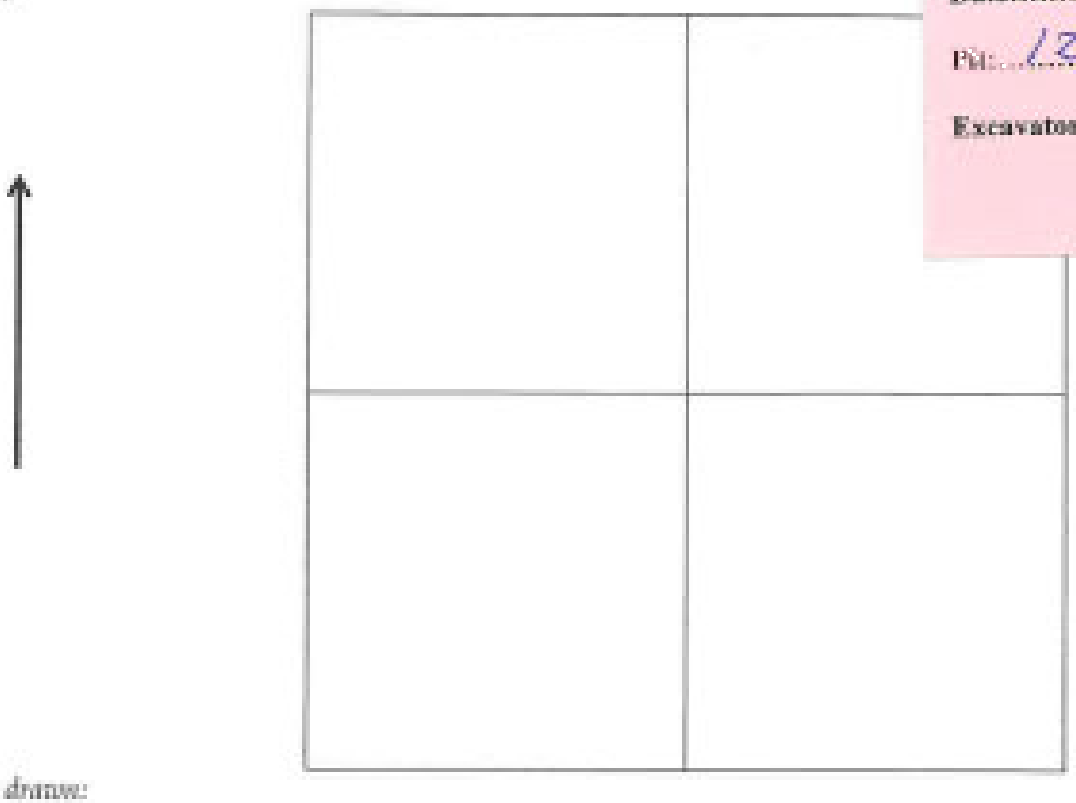
ANAMBAH Test Exc 12-0227

Date: 20.2.13

Pit: 12 Spit: 3

Excavator: CS 05

Plan



Spit drawn:

Section Plan

Face:

Scale:

Spit Cut number [illegible]

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	PIT 13
Excavators	C.S S.G D	Date	13-3-13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Accuracy/Warp)	Easting	Northing	
Soil landscape	Rothbury	Branxton: [illegible] with soil cropping	Hunter
Landform	Creek bank Flat Lower/Mid Upper slope Raised flat Ridgeline Lith. ap		
Aspect	N (L) S W	Slope S 10 - 20%	
pH		Munsell	

EXCAVATION (wet sieved) dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Ex. code	Colour/Burning/Heating	Inclusions/Disturbances	Aboriginal Objects #
1 100	100	(A1) A2 B				
2	100	(A1) (A2) B				
3	300	A1 (A2) B				
4	350	A1 (A2) B				
5		A1 A2 (B)				
6		A1 A2 B				
		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, [illegible] and [illegible], [illegible], and vegetation for each [illegible])

Condition and integrity

Signs of burning/heating

Tol expansion? Moderatly Packed.

GRASS

A1 & A2 — LOAM -- dark brown black with high clay content

CLAY — undulating light brown sticky compact clay base

A1 — 140mm

A2 - orange flecking + orange degraded gravel at base

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	14
Excavators	CLIVE	Date	13 3 13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Why they are [illegible]? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS [illegible]	Easting		Northing	
Soil landscape	Rutherford	Branxton	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised [illegible] Ridgeline Hilltop
Aspect	N E S W		Slope %	10-30%
Soil			Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Pit code	Lithocolumn/Texture	Thumbnail/Translation	Aboriginal Objects
1	120	A1 A2 B		Brown clay	Yes.	
2	200	A1 A2 B		"	Yes / grass roots.	
3	210	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

OTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and colour, moisture, [illegible] and vegetation for each stratigraphic unit)

Landslide and [illegible]

Signs of burning/heating Yes - in both spits

Is expansion?

1 Moderately compact Brown Loam

2 Moderately compact Brown Clay orange gravel inclusions

2 large pieces of silcrete - one a core.

spit 3 bag is actually end of spit 2 -- spit 3 only 10mm deep.

increasingly clayey

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT 4 PLAN 4	15
Excavators	SANDRA + MARIE	Date	8 2 3

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (or assumed) Easting				Northing			
Soil landscape	Rothbury		Branxton		Hunter		
Landform	Creek bank	Flat	Lower	Mid	Upper slope	Raised flat	Ringline	Hilltop
Aspect	N	E	S	W	Slope %	□ — \ ◯		
Unit					Munsell			

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon			Soil Ht.	Outcrop/Burning/Heating	Disturbance/Bioturbation	Abo. g.m./Obl.
1	100	A1	A2	B		Yes ~~[illegible]~~ flecs.	Yes - grass roots	which
2	200	A1	A2	B			go to clay.	
3	300	A1	A2	B				
4		A1	A2	B	Brown	moist sticky clay.	Not as loose as	24.
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Total								

OTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, hardness and extent, moisture, mottling and organics for each stratigraphic unit)

Condition and integrity

Signs of burning/heating Charcoal flecs spit 1 + a couple of orange gravels at base of A1 ~ 180mm

TU expansion?

A1 moderately compact Brown silty loam topsoil — artefacts clearly evident.

2 Brown loam with high clay content. Compact. No inclusions.

transition to A2 not particularly clear 50mm

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	16
Excavators	TC CW Nairn	Date 13.7.15	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Zone 56 Name)	Easting		Northing	
Soil landscape	Rothbury	# Branches	Hunter	
Landform	Crest/bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridge line / Hilltop
Aspect	N	E	S	W
pH			Slope %	
			Munsel	

EXCAVATION wet sieved dry sieved

Depth from 4x4 sieve	Depth from	Soil Horizon	Soil Type code	Factor/Form by/Reason	Disturbance/Foundation	Aerogen Objects
1	140mm	A1 A2 B				
2	300mm	A1 A2 B				
3		A1 A2 B	Brown moderately compact - becoming more compact with depth + CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil formation, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Sign of burning/heating

Will expansion?

A1 - light brown moderately compact silty loam like 24 cuts, charcoal, cracking/lumps

A2 - brown compact loam with very high clay content increasing with depth.

B - Brown clay w/ abundant stone.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	17
Excavators	DC, CW, Alcim	Date 13.8.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (Easting/Northing)	Easting		Northing	
Soil landscape	Rotatory	* Branston	Hunter	
Landform	Creek bank	Flat	(Lower) Mid, Upper slope	Raised fl. Ridgeline Hilltop
Aspect	(N) — (E)	S	W	Slope: 0 — 10
pH			Munsell	

EXCAVATION (wet sieved) dry sieved

Spit	Soil Horizon Depth (cm)	Soil Horizon	Soil to code	Carbon/Burnt/Heating	Disturbance/Naturalness	Aboriginal Objects
1	130mm	(A1) A2 B				
2	300mm	A1 (A2) B				
3	Brown clay	A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity — as per others in this area.

Signs of burning/heating

Soil expansion?

A1 - light brown moderately compact silt with 10% charcoal inclusions.

A2 - compact brown silty loam with high clay content increasing with depth.

B - brown loosely moderately compact clay as per 23

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	18
Excavators	[illegible]	Date 13 . 5 . 13	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS Coordinates (Zone)	Easting		Northing	
Soil Landscape	Rothbury	Branston	Hunter	
Landform	Creek bank	Flat	Lower Mid-Upper slope	Raised flat Ridgeline Hilltop
Aspect	N E S W		Slope %	
Soil			Munsell	

EXCAVATION wet sieved dry sieved

Strata	Depth (mm)	Soil Horizon	Soil Type code	Carbon/Sunstone/Heating	Disturbance/Bioturbation	Aboriginal Objects
1		A1 A2 B				
2	180mm	A1 A2 B				
3	320mm	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil construction, composition, particle size, inclusions, thickness and extent, moisture, compaction and vegetation for each stratigraphic unit)

Condition and integrity

Signs of sand/sheeting

TU expansion?

A1 – ~~[illegible]~~ moderately compact light brown silty loam.
A2 – compact brown loam with high clay content

B – brown clay. very Loosely compact. Unsure if [illegible] still present. Not particularly moist so it is crumbler than other pits.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	19
Excavators	[illegible] Sandra	Date 13/3/2013	1

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion?	
Photographs?	
Samples (description & number)	

LOCATION

GPS or Vector Study	Easting				Northing		
Site landscape	Rockbury		Brewster		Hunter		
Landform	Creek bank	Flat	Lower	Mid. Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	0 – 10 %	
Soil					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	B & Dry	Depth cm	Soil Horizon			Soil Pit note	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	5½	100	A1	A2	B		light to Med Soil	grass, roots,	
2	5	200	A1	A2	B		Med Soil roots	ants, some	
3	10	300	A1	A2	B		Dark Soil with clay,	some roots	
4			A1	A2	B				
5			A1	A2	B				
6			A1	A2	B				
7			A1	A2	B				
Totals									

OTHER DESCRIPTIONS

Soil (consolidation, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TSI expansion?

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	20
Excavators	VC	Date 17.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS recorded values	Easting			Northing			
Soil Landscape	Rothbury		(Branxton)		Hunter		
Landform	Creek bank	Flat	(Lower, Mid, Upper slope)	Raised flat	Ridgeline	Hilltop	
Aspect	N	(E)	(S)	W	Slope %	0 – 10%	
pH					Wet well		

EXCAVATION (wet sieved) dry sieved

Sieve	Soil Horizon Depth (mm)	Soil Horizon			Soil Type	Cultural/Burning/Hearing	Disturbance/Bioturbation	Aboriginal Objects
1	130mm	(A1)	A2	B				
2	130mm	A1	(A2)	B				
3	Brown clay	A1	A2	(B)				
4		A1	A2	B				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Total								

FURTHER DESCRIPTIONS

Soil (consistency, composition, particle size, inclusions, thickness and extent, moisture, distribution and vegetation for each stratigraphic area)

Condition and integrity

Signs of burning/hearing

Tool excavation?

A1 – light brown fine grained sandy silt, moderately compact, interface not clear – 60mm

A2 – brown compact clayey loam with some silt but high clay content which increases with depth

B – brown clay as per others in mid-low area of Area Q

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # 13.3.13 PLAN #	21
Excavation #	DC, CW, [illegible]	Date 14.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Weathy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Accuracy / Datum)	Easting			Northing			
Soil landscape	Rothbury			Branch		Hunter	
Landform	Crest/Ridge	Flat	Lower	Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	0 – 10%	
pH					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Soil Location Depth (cm)	Soil Horizon	Soil Dry Colour	Carbon/Burning/Bleeding	Disturbance/Bioturbation	Abnormal Objects #
	140mm	A1 A2 B		Soil horizon depths		
2	300mm	A1 A2 B		Spit 1 - 100mm deep		
3	Brown clay	A1 A2 B		Spit 2 - 100-200mm (10mm deep)		
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil transmission, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Conditions and imaging

Signs of burning/bleeding

Other evidence?

A1 — light brown compact silty soil

Interface — blended mix 80mm gravel

A2 — brown compact silty loam with high clay content which increased with depth <20% ironstone gravels.

ANAMBAH TEST EXCAVATION TE 0227 cw 3 warm		TEST UNIT # PLAN #	22
Excavators	Unknown	Date 13.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other Evidence?	
Worthy of exposure / How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS Location (Zone)	Easting			Northing			
Soil Landscape	Kalabury		Branston		Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	0 -- 10 %	
					Mineral		

EXCAVATION Not sieved Dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dry Code	Carbon/Burning/Hearth	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B		Yes - charcoal flecs	Yes - grass roots	
2	200	A1 A2 B			" "	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil Composition, compaction, variable soil, inclusions, Disturbance and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and Integrity

Signs of burning/heating

TU excavation?

1. Brown loam, moderately compact, fine - med. pitic size + increasing moisture with depth / good condition - mod to low integrity (mixing of loam + clay evident.

2. Orange brown loam, mod. compact, fine - mod. fine particle size, condition + good integrity / ~~mod~~ - low (mixing of loam + clay evident) Inc clay cont + ~~mod~~

* increasing clay + moisture content with depth

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	23
Excavator	Unknown	Date	13-3-13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence:	
Working or expansion? How?	
Photographs #	
Samples (description & number)	

LOCATION

GPS (Recorded / Map)	Easting		Northing	
Site landscape	Rafabury	Branson	Hunter	
Landform	Crest/rank	Flat	Lower/Mid/Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
Slope %	10--20%			
pH			Munsel	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Texture code	Colour/Boundary/Inclusions	Disturbance/Reduction	Aboriginal Objects #
1	100	A1 A2 B		Charcoal flecs	Yes - grass roots	
2	200	A1 A2 B			"	
3		A1 A2 B			"	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil information: composition, organic, any inclusions, disturbance and extent, moisture, bioturbation and rigidity for each stratigraphic unit?

Condition and integrity

Signs of burning/heating: Yes - charcoal flecs. (Spit 1)

Interpretation?

1. Brown loam topsoil, good / increasing
2. Brown of clayey loam compact / clayey with
3. Brown of clay compact - depth

* Particle size fine / soil condition = good / integrity moderate.

* increasing moisture with depth.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	23
Excavators	DC, SG, CS	Date 13.8.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (Zone/Easting/Northing)	Easting		Northing	
Site Landscape	Rolling	Plateau	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
Slope %	0 - 10%			
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spit (Soil Location)	Depth (mm)	Soil Horizon	Soil Tx code	Carbon/Burning/Mixing	Disturbance/Disturbation	Aboriginal Objects #
1	110mm	A1 A2 B				
2	320mm	A1 A2 B				
3		A1 A2 B	loose, brown clay,		stiky	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

3 spits dug, vacuum each

FURTHER DESCRIPTIONS

Soil (Compaction, compaction, [illegible]) for each stratigraphic unit

Condition and integrity

Signs of mixing/disturbing

Fit expansion?

Grassroots ← depth.

A1 - light brown silty, compact

A2 - brown compact, sticky with high clay content. Silty loam

B - as per above.

No inclusions really.

ANAMBAH TEST EXCAVATION 1340027		TEST UNIT # PLAN #	21
Excavators	DC, AU, KW	Date 13.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Additional Tracks)	East-up ☐☐☐☐☐☐	North-up ☐☐☐☐☐☐☐	
Soil landscape	Rothbury	x Branxton	Hunter
Landform	Creek bank Flat (Lower) Mid, upper slope Raised flat Ridgeline Hilltop		
Aspect	N (E) (S) W	Slope % 0 – 10%	
pH		Munsell	

EXCAVATION (wet sieved) Dry sieved

Soil #	Depth level	Soil Horizon	Soil Density	Carbon/Bearing/Heating	Ochre/Other Mineralisation	Aboriginal Object
1	< 100mm	(A1) A2 B				
2	250mm	A1 (A2) B				
3	300mm	320mm A1 A2 (B)	Spit	dug into loose clay to test that it is		
4		A1 A2 B	just	clay (wasn't) by all the rain or if there		
5		A1 A2 B	is	still silt mixed in		
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Oil expansion?

Alluvial deposit.

A1 moderately compact light brown silty loam with < 10% charcoal inclusions

A2 – compact brown loam with < 10% charcoal inclusions and gravel inclusions

B – Brown clay – like pit 23 15 (orange & red upstream but disappears by these pits) very loose at top but becomes more compact with depth.

ANAMBAH TEST EXCAVATION 17-0727	TEST UNIT # PLAN #	15
Excavators: Jenny C, Carly B.	Date: 13.3.13	

SUMMARY OF EXCAVATION

Found Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (location, slope)	Easting		Northing	
Soil landscape	Bolinbury	Brandon	Hunter	
Landform	Creek bank	Flat	Lower/Mid. Upper slope	Raised flat	Ridgeline	Landing
Aspect	N	E	S	W	Slope %
pH					Moisture

EXCAVATION Not sieved dry sieved

Spit # (Buckets)	Depth (mm)	Soil Horizon	Soil Horizon	Colour/Boundary/Fraction	Disturbance/Deformation	Aboriginal Objects
1 6	100	A1 A2 B				6
2 5½	200	A1 A2 B				1
3 8	300	A1 A2 B				16
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compression, composition, particle size, inclusions, structure and extent, moisture, bioturbation and vegetation for each stratigraphic unit): Sp.1 Med brown top soil, lots of grass, roots, worms, ants nest

Condition and integrity: Sp.2 Dark brown soil mixed with clay, ants & larvae, lots of roots, some charcoal.

Signs of bioturbation: Sp.3 Dark brown soil with lots of clay, Roots.

TU extension?

Note: NE corner had high nos of artefacts.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	26
Excavators	BERNIE + GREG	Date 13/3/13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Q1 – new items?	
Worthy of expansion? How?	
Photograph?	
Samples (description & number)	

LOCATION

GPS recorded? Easting		Northing	
Landscape	Rotbury	Brandon	Hunter
Landform	Creek bank Flat Lower, Mid Upper slope Ridge line Hilltop		
Aspect	N E S W	Slope % 10	
pH		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Dry Color	Carbon/Gamma/Glaucus	Disturbance/Recalcitrant	Aboriginal Objects
1	100	A1 A2 B			[illegible]	
2	150	A1 A2 B				
3	300	A1 A2 B				
4	Red clay	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, compression, [illegible], [illegible], [illegible] and [illegible] moisture, bioturbation [illegible] vegetation for [illegible] stratigraphic [illegible])

Conditions and integrity

Signs of [illegible]

Will expansion?

moderately compact

A1: Top layer of silty loam, with [illegible] present. Fine particles with [illegible] [illegible] [illegible] [illegible] [illegible] 130mm deep.

Interface between A1 and A2 70mm – uncker

A2: Compact orange brown loam with high clay content.

Cracknock in depth.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	27
Excavators	[illegible]	Date	13.5.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Objects cleared	
Worthy of expansion? (Yes/No)	
Photographs	
Samples (description & number)	

LOCATION

GPS (Reduced Precision)	Easting		Northing	
Soil landscape	Rotabury	Brandon	Hunter	
Landscape	Creek bank	Flat	Lower (Mid) Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	(S)	W	Slope %	10 - 25%
pH			Munsell	

EXCAVATION (wet sieved) dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Type	Cultural Stratigraphy/Testing	Disturbance/Disturbance	Aboriginal Objects
1	130 mm	(A1) mixed A2 B				
2	Red clay	A1 A2 (B)				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil recognition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity — fair — newly deposited / eroded from slopewash

Significant burning/heating

Soil expansion

Very shallow light brown well mixed topsoil. Grassicals to depth. Moderately compact.

4 [illegible]

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	28
Excavators	DC, LS, SG.	Date 18.3.13	

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Pooling up of	
Samples (description & number)	

LOCATION

GPS or other Above	Easting			Northing			
Soil Landscape	Richmond			# Branxton		Hunter	
Landform	Creek bank	Flat	Lower	Mid	Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	10 – 20		
pH					Munsell			

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm) down/Proper	Soil Horizon	Soil %	Colour/Boundary/Sieving	Disturbance/Bioturbation	Abundance Objects #
		average sieve				
1	10-120mm	A1 A2 B				
2	END clay	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, uniformity, distinctness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity — as per 27.

Signs of burning/heating

Other sources

Light brown silty moderately compact well mixed, shallow topsoil – like pit 27.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	30
Excavators	DC + Clyde + Tim + Shannon	Date	14.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? Why?	
Photographs?	
Samples (description & number)	

LOCATION

GPS or access notes	Easting		Northing	
Fed landscape	Rest bury	Brake Air	* Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	(Raised flat) Ridgeline Ridge
Aspect	(N) (E) S (W)	Slope %	10%	
pH		Vacuole		

EXCAVATION (wet sieved) dry sieved

Spit #	Depth (cm)	Soil Carbon	Soil Fe code	Carbon/Burning/Heating	Disturbance/Disturbation	Aboriginal Objects #
1	100	(A1) A2 B				
2	200	A1 (A2) B				
3	300	A1 (A2) B				
4	400	A1 (A2) B				
5	500	A1 (A2) B				
6	600	A1 (A2) B				
7		A1 A2 (B)	excavation did not reach clay but ceased due to physical limitations of the depth			
Notes						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, mechanisms and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

"Unexpected"

Alluvium with fine quartzy sand

— strata 1 — brown silt loosely compact 170mm

— strata 2 — lighter brown silt, loosely compact 255mm

— strata 3 — light grey brown, loosely compact 50% gravels sandy soil (refined) (orange and black) 340mm

— strata 4 — dark grey brown loosely compact 60% sandy soil (refined) gravels (orange and black) creek gravel 460mm

— strata 5 — brown sandy soil moderately compact with 50% brown gravel inclusions.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	32
Excavators	DC - Sheet Shaftoon	Date	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS/Easting/Northing	Easting		Northing	
Soil landscape	Rothbury	Branston	40	Hunter
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat (circled) Ridgeline Hill top
Aspect	N (circled) E (circled) S W (circled)		Slope %	0 - 10
pH			Munsell	

EXCAVATION wet sieved (circled) dry sieved

Notes	Depth (mm)	Soil Horizon	Soil Water	Pedestrian/Mineral/Bearing	Disturbance/Vegetation	Aboriginal Objects
	100	A1 (circled) A2 B				
2	100	A1 A2 (circled) B				
3		A1 A2 B (circled)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, thickness and extent, moisture, inclusions and segregations) (see stratigraphic units)

Conductivity and integrity

Signs of burning/heating

Thermoluminescence

thin deposit of alluvial soil over clay.

A1 - very light grey powdery silt, loosely compact 65mm in depth

A2 loosely compact brown silty loam with moderate 40-50% clay content (increases with depth)

B - compact dry, blocky, poorly structured light brown clay.

ANAMBAR TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	40
Excavators	Clive, Shannon, DC	Date 20.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS or other stack	Easting	Northing	
Pit Landscape	Rothbury	Branxton	Hunter
Landform	Creek bank, Ex.	Lower, Mid, Upper Slope	Raised flat, Ridgeline, Hilltop
Aspect	N E S W	Slope % 0-10	
pH		Munsell	

EXCAVATION Wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Carbon/Burnt/Stratum	Ochre/Burnt/Stratum	Aboriginal Objects
	100	A1 A2 B				
2	200	A1 A2 B		Yes		
4	300	A1 A2 B		Yes		
4	420	A1 A2 B		Yes.		
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Notes						

FURTHER DESCRIPTIONS

Soil composition, compaction, particle size, inclusions, thickness and matrix, moisture, bioturbation and irregularity for each stratigraphic unit?

Condition and integrity

Signs of burning/heating

Illumination?

A1 — light grey silty loam 130mm <50% charcoal inclusions

A2 — brown silty loam 130 – 230 mm 90% charcoal 40% lumps of burnt orange clay

— strata 2 — lighter mid brown/orange silty loam 230mm → base 90% charcoal 40% lumps of burnt orange clay.

— B — light brown/grey sticky, moist strong clay.

dips down in SW corner which is full of burnt charcoal / organic stuff.

ANAMBAH TEST EXCAVATION 13-0227		TEST UNIT # PLAN #	43
excavators	[illegible]	Date 20.3.13	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Worthy of excavation? Why?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Accuracy 15 mm)	Easting		Northing	
Soil landscape	Kalibbury	Ecanoton	Hunter	
Landform	Creek bank	Flat	Lower/Mid/Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N / E / S / W		Slope % 0-10	
pH			Munsell	

EXCAVATION wet sieved / dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dry Code	Colour/Hardness/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B				
2	200	A1 A2 B				
3	260	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, inclusions, inclusions, hardness and extent, moisture, disturbation and separation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Tie excavation?

A1 – 50mm light grey sandy silt (powdery, extremely fine grained) loosely compact

A2 strata 1 – mottled light grey brown sandy silt (powdery, extremely fine grained) 75% orange and black flecks, loosely compact.

strata 2 – brown moderately compact sandy silt (fine grained), mottled with 50% clay mixed in

B – brown moderately strong compact clay.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	4-3
Excavator: Bonda Tony Beo	Date: 20 · 3 · 17	

SUMMARY OF EXCAVATION

Local Aboriginal Objects	
Other – [illegible]	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS reference (Easy)	Easting		Northing	
Soil landscape	Rothbury		Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N E S W		Slope %	0 – 10
Soil			Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Ks vers	Carbon/Burning/Heating	Disturbance/Disturbance	Aboriginal Objects
1	100	A1 A2 B				
2	200	A1 A2 B				
3	300	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil composition, compaction, particle size, inclusions, thickness and extent, moisture, [illegible] of vegetation for each stratigraphic unit?

Condition and integrity

Signs of burning/heating

TU expansion?

spit - 1 - buckets 6 grass light grey brown sandy loam

spit 2 - " 5 light sandy grey brown loam with clay. charcoal flakes < 20%

Spit 3 " 6 Clay mixed with light sandy brown loam

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	30
Excavator #	DC TS BS WS	Date 20.8.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (as stated in Map)	Easting	Northing	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creek bank, Flat, Lower, Mid, Upper slope, Raised flat, Ridgeline, Hilltop		
Aspect	N E S W	Slope % 0 - 10	
pH		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pit code	Lithics/Burrows/Bioturbation	Disturbance/Dislocation	Anomalous Objects #
1	100	A1 A2 B				
2	160	A1 A2 B				
3	[illegible]	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Other comments?

A1 – thin light grey silty sand (powdery), loosely compact. 50mm deep.

A2 – brown (red) silty loam, loosely compact. 50mm – clay bright

B – orange brown clay, strong structure, compact

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	57
Excavator:	DC	Date: 20.5.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographic	
Samples (description & number)	

LOCATION

GPS (Zone 56 / 56 / 56)	Easting		Northing	
Soil & Landscape	Rotatory	Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N / E / S / W		Slope %	0 – 10
pH			Munsell	

EXCAVATION wet sieved / dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil & note	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects#
1	100	A1 A2 B				
2	200	A1 A2 B				
3	~~330~~	A1 ~~A2~~ B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil transportation, composition, particle size, inclusions, clk brass and extra, moisture, bioturbation and regeneration for each stratigraphic unit?

Correlation and integrity

Signs of heating/heating

TU expansion?

A1 — light grey silty sandy soil with ≤ 20% black & grey flecks, 100mm deep loosely compact

A2 — brown silty loam with 50% clay particles mixed in, 100 – 200mm

B – Compact brown strong clay.

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	68
Excavators	[illegible]	Date 20.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Positions Mode)	Easting		Northing	
Soil landscape	Rotatory		Branxton ?	Hunter
Landform	Creek bank	Flat	Lower/Mid/Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope % 0-10
pH					Munsell

EXCAVATION wet sieved dry sieved

Sp. #	Depth (cm)	Soil Horizon	Soil Dis. mode	Carbon/Burning/Heating	Disturbance/Reduction	Aboriginal Objects #
1	100	A1 A2 B				
2	200	A1 A2 B				
3	[illegible]	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil composition, compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

TS assessment

A1 - dark grey brown silty sandy soil, loosely compact 60mm clear transition

A2 - black brown sandy loam, fine grained moderately compact 60-200mm, clay mixed in from 130mm, orange/white gravels < 30%.

B - compact, sticky, strong black brown soil clay.

ANAMBAH TEST EXCAVATION ID-0227	TEST UNIT + PLAN #	6 3
Excavators: Gordon Tony B & C	Date: 20 3 13	

SUMMARY OF EXCAVATION

Cultural Artefacts/Features	
Other evidence?	
Worthy of expansion? Why?	
Photographed?	
Sample - Discriminatory number:	

LOCATION

GPS (Zone/Easting/Northing)	East:				North:		
Soil landscape	Rothbury		Brooklyn		Hunter		
Location	Creek bank	Flat	Lower, Mid, Upper Slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %		
pH					Microrelief		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon			Soil Texture	Cultural Material Present	Distribution/Density	Abnormal Objects*
1	100	A1	A2	B				
2	200	A1	A2	B				
3	300	A1	A2	B				
4		A1	A2	B				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Total								

FURTHER DESCRIPTIONS

Soil Composition, consolidation, particle size, inclusions, thickness and colour, horizons, boundaries and exposures for each stratigraphic unit

Stratigraphic relationship

Signs of burning/smoking

Other Notes

Spit 1 bucket grass light Sandy loam

Spit 2 " dark loamy bits of gravel

Spit 3 "

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	87
Excavators	Sandra & Maree	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Datum Zone)	Easting		Northing	
Soil landscape	Rotatory	Branxton	~~[illegible]~~	Hunter
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hill top
Aspect	N E S W		Slope % 0 - 10%	
pH			Munsell	

EXCAVATION wet sieved / dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Vis. code	Colour/Burning/Heating	Dichotomy/Occupation	Abs Spot Objects
	100	A1 A2 B		No	Yes - grass, root	
2	200	A1 A2 B				
3	300	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil transparency, composition, particle size, inclusions, thickness and relative moisture of sedimentation and regression for each stratigraphic unit

Condition and integrity	Same as surrounding
Signs of burning/heating	No
Tick expansion?	

1. Brown loam topsoil (top 5cm) + river stone fragments
2. Brown clayey loam
3. " " } river stone/pebble fragments / throughout | increasing clay + moisture + slight of colour

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	82
Excavators Sandra + marec	Date 14 - 3 - 13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Geoscience Map)	Easting		Northing	
Site landscape	Rolling	Bottom	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
pH					Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Unit code	Carbon/Burnt/Roofing	Transducer/Kinetic	Abnormal Objects
1	100	A1 A2 B				
2	200	A1 A2 B				
3	300	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

OTHER DESCRIPTIONS

Soil (consistence, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Comments and insights

Signs of burning/hearing

TU expansion?

spit 1 buckets 6 grass rocky lots of pebbles
spit 2 buckets 6 grass roots
spit 3 buckets 4 gd clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	83
Excavators	DC Greg, Kerri	Date 19.3.13	

SUMMARY OF EXCAVATION

Ground Artificial Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS/as assessed Assess.	Easting					Northing		
Sub-landscape	Kalimnty			Braceton ? or 12 14 changing?			Trunks	
Landform	Creek bank	Flat	Lower	Mid	Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	0 – 10		
Soil					Mottle			

EXCAVATION Not sieved dry sieved

Spike	Depth level	Soil Horizon	Soil Vis. code	Colour/Gamma/Heating	Dates/Feet/Excavation	Abnormal Objects
	100mm	A1 A2 B				
2	100mm	A1 A2 B				
3	27mm	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and organisms, for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Tie expansion?

A1 – dark grey brown moderately compact sandy loam 100mm

clear transition

A2 – light grey compact sandy loam

B – dark brown clay

ANAMBAH TEST EXCAVATION 22-0227		TEST UNIT # PLAN #	84
Excavators	Steve + Norm	Date	14.3.23

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS or sample number	Easting				Northing		
Fit Landscape	Rotatory			Branches		Hunter	
Landform	Creek bank	Flat	Lower Mid	Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	10-20%	
pH					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil as code	Carbon/Burning/Heating	Disturbance/Bioturbation	Additional Observations
1	100	A1 A2 B		No.	Yes - [illegible]	
2	200	A1 A2 B			Roots	
3	300	A1 A2 B			No	
4	400	A1 A2 B				
5	500	A1 A2 B		Yes, chec		
6	600	A1 A2 B		Rare		
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil Irrespection, compaction, [illegible] size, inclusions, [illegible] and [illegible] moisture, [illegible] and vegetation for each stratigraphic unit?

Condition and Integrity

Signs of burning/heating No.

TU expansion?

1. Soft-mod. brown sandy loam (top 5cm) → mod. fine
2. Soft-mod. compact yellow (light) / silt. ↓ inc. clay content
3. Soft "
4. Soft orange/red/brown clayey sand (river sand) → fine.

↓ moisture + clay content increasing with depth → marine/coarse.

5. Same as 4 + inclusions: charcoal, [illegible] + gravel.

6 = same as 4 & 5

Same as pit 321

ANAMBAH TEST EXCAVATION 13-0227		TEST UNIT # PLAN #	Sec
Excavators	Kessie + Greg	Date	14.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Off-Reviewer?	
Worthy of expansion? How?	
Photograph?	
Samples (description & number)	

LOCATION

GPS (generated on sheet)	Easting		Northing	
Soil landscape	Rothbury		Erosion	Hunter
Landform	Creek bank	Flat	Lower	Mid-Upper slope / Raised flat / Ridgeline / Hilltop
Aspect	A	B	S	Slope % 0 -- 10 %
pH				Munsell

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Sample Rate	Concentration/Heating	Dimensions/Transmission	Aboriginal Objects
1	100	A1 A2 B		No	Yes - grass roots	
2	200	A1 A2 B		↓	↓	
3	250	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil transmission, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and degradation (in each stratigraphic unit)

Condition and integrity * Same as surrounding *

Signs of burning/heating

TU expansion?

* Pit wider than 50 x 50 - more like 60 x 60.

1 Brown loam (mod dry) topsoil.

2 Brown clayey loam

3 ↓ slightly of colour with depth ↓ increasing clay + moisture content.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	85
Excavators	Sandra - Maree	Date 19-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other Evidence?	
Weather of excavation? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (in Mean Water)	Easting		Northing	
Soil Landscape	Kolebury	Branxton		Lower
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Tray/line / Lower
Aspect	N	E	S	W
pH			Slope %	0-10 %
			Vanish	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dry Core	Undisturbed/Burning/Heating	Disturbance/Disturbance	Aboriginal Objects
1	100	A1 A2 B		No	Grass root	
2	200	A1 A2 B		↓	↓	
3	300	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

Tile operator?

spit 1-5 buckets grass
spit 2-5 buckets grass roots worms
spit 3-4 buckets scharkal flecks

1 light brown loam topsoil (relatively dry + soft)
2 brown clayey loam
3 " slight change in colour = more of tint.

increasing clay + moist content.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	87
Excavators	OC, TS, WS	Date 18.8.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? Loss?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Zone/Easting/Northing)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower Mid	Upper slope	Raised flat	Ridge line	Hill top
Aspect	N	E	S	W	Slope % 30 MAX.
Pit					Vanscill

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Tests	Carbon/Burning/Heating	Disturbance/Disturbation	Aboriginal Objects #
1	80mm	A1 A2 B				
2	8mm sticky clay	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, compositions, particle size, inclusions, diseases and extent, moisture, bioturbation and regularity) for each stratigraphic unit:

Condition and integrity: — Heavy affected

Signs of burning/heating:

Is expansion?

2cm (20mm) fine grained

A1 – very thin, compact sandy loam, high clay content

A2 – non existent

B – compact, very sticky brown clay

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT 4 PLAN 4	84
Excavators	DC	Date 18.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Location to 10 m)	Easting				Northing			
Soil landscape	Rothbury			Branxton			Hunter	
Landform	Creek bank	Flat	Lower Mid	Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	100 - 400		
pH					Munsell			

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon			Soil Texture	Carbon/Burnt/Heating	Disturbance/Modification	Aboriginal Objects #
1	80mm	A1	A2	B				
2		A1	A2	B				
3		A1	A2	B				
4		A1	A2	B				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Total								

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Tel expansion?

A1 - low sandy (extremely fine) light grey/brown loam.

No A2 - missing due to erosion.

B - light brown, compact, dry clay.

A NAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	91
Excavators	SXC	Date 18.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

Grid (Location Name)	Easting		Northing	
Soil landscape	Red Hill	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
pH			Slope %	
			Measel	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pit Size	Colour/Boring/Heating	Disturbance/Disturbation	Aboriginal Objects
1	0.5mm	A1 A2 B				
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

OTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, burning and extent, moisture, bioturbation and regimens, fire tank, stratigraphic units)

Condition and integrity

Signs of burning/heating

TU expansion?

A1 - 30mm light grey brown extremely fine sandy loam. Compact.

No A2 - Erosion.

B - Compact brown clay. Some gravels

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	92
Excavators	CS + SG	Date 18.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence	
Working on expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Accessed 50 m)	Easting			Northing			
Site landscape	Rotfibury		Fraction		Tumbles		
Landform	Cross bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	<10 %	
TIS					Marks		

EXCAVATION wet sieved dry sieved

Sp. #	Depth Level	Soil Horizon	Soil Lab code	Carbon/Burning/Heating	Organisms/Roots/Other	Aboriginal Objects
1	100	A1 A2 B		charcoal flecs	Yes - grass roots throughout	
2	200	A1 A2 B				
3	240	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Depth						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, mesofaunas, and vegetation, per each stratigraphic unit)

Condition and Integrity * Spot 2-3 moderately compact

Signs of burning/heating * Charcoal flecs.

TIS expansion?

1. Light brownish grey loam topsoil
2. Brown clayey loam
3. " " + river pebbles/gravel
4. Brown/oj/cream mottled clay + dry brown clay.

* increasing clay + moisture content with depth
* increasing river pebbles/gravel with depth

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	94
Excavators	OC, TS, WS	Date	8.3.13

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (northing / easting)	Easting		Northing	
Soil landscape	Rockbury	Branxton	Hunter	
Landscape	Creek bank	Flat	Lower, Mid, Upper slope	Rolled flat / Ridgeline / Hilltop
Aspect	N / E	S	W	Slope % 0 - 10
PID			Munsell	

EXCAVATION wet sieved / dry sieved

Spit #	Depth (cm)	Soil Thickness	Soil Dc code	Carbon/Burning/Lenses	Bioturbation/Disturbance	Aboriginal Objects #
1	100	A1 A2 B				
2	100	A1 A2 B				
3	Water Bearing	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Tools						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation / to form stratigraphic unit)

Condition and integrity

Signs of burning/heating

TS expansion?

A1 – very thin (40mm) very fine sandy light brown/grey loam.

A2 – compact brown sandy loam (fine grained) with high clay content increasing with depth.

B – compact brown clay with moderate stickyness.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	96
Excavators		Date 18.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? Flows	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Northing/Easting)	Easting		Northing	
Soil landscape	Rodhurst	Branxton	Hunter	
Landform	Creek bank	Flat, Lower, Mid, Upper slope	Raised flat, Ridgeline	Hill
Aspect	N E S W	Slope %	< 10 %	
Soil		Munsell		

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Type code	Colour/Boundary/Texture	Disturbances/Disturbation	Abundant Objects #
1	50	A1 A2 B		[illegible]	Yes-[illegible]	
2		A1 A2 B		[illegible]	[illegible]	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and extent, [illegible] for each stratigraphic unit.

Compaction and integrity: Transition to clay not particularly clear.

Signs of burning/heating

Tool expansion?

1. Light brown loam topsoil (clayey loam) increasing clay + moisture with depth.
B. Orangey brown clay.
+ clayey loam -> clay :- mod. compact.

X 96.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	42
Excavators	Sand	Date 18-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS or Access Map	Easting	Northing	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creek bank, Flat, Lower, Mid, Upper slope	Raised flat, Ridgeline	Fill rep
Aspect	N E S W	Slope % < 10 %	
pH		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Fe code	Carbon/Burning/Heating	Other cultural indicator	Aboriginal Objects #
	100	A1 A2 B		Yes-charcoal	Yes-grass	
2	200	A1 A2 B		flecs + frags.	roots throughout.	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil transparency, transparency, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

Fit expansion?

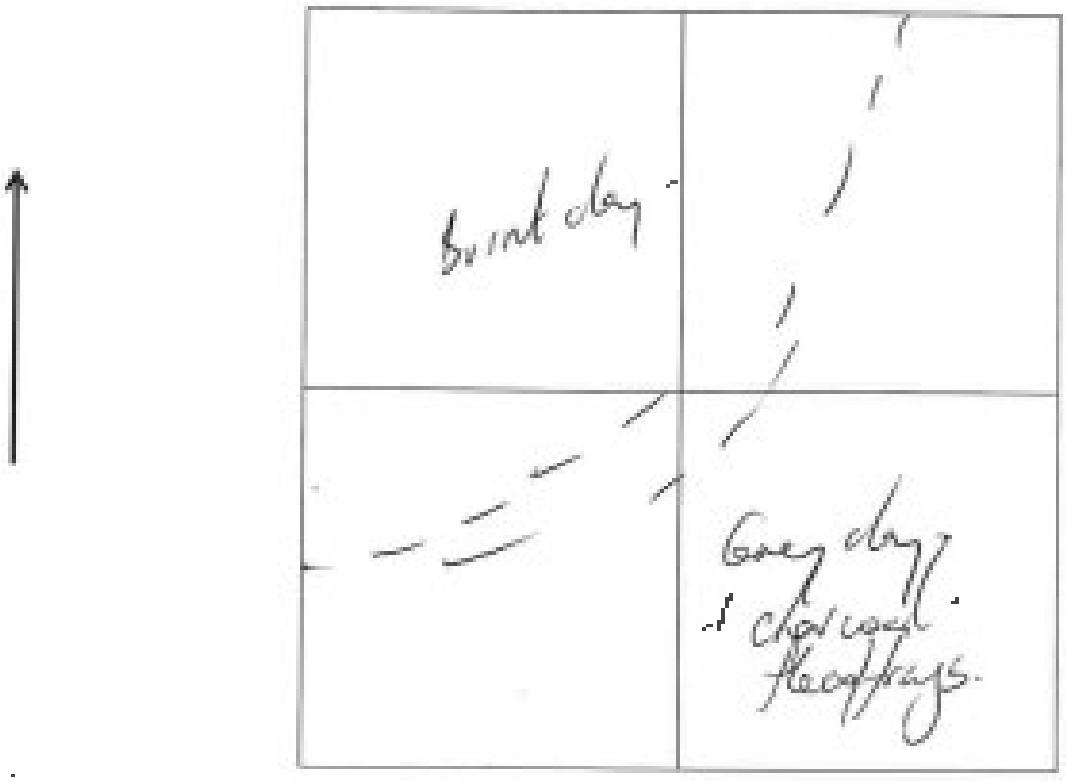
Spit 1 6

Spit 2 5

A2 almost non-existent @ NE corner → burnt clay loams to just below topsoil. OR because of clay content in A2 some of it looks like pure burnt clay

1. Light brownish grey loam topsoil
2. Brownish grey clayey loam + charcoal flecs + fragments
3. Grey clay + charcoal on western side / burnt clay on eastern side + burnt clay flecs + frags

Plan



Spit dimensions

Section Plan

Fire
Scale

Relation to other TU

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	100
Excavators	Sandra + Tony	Date 19 - 3 - 13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Priority of excavation? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (or sieved) Tools	Easting		Northing	
Soil landscape	Kathleen	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hill top
Aspect	N / E / S / W	Slope S	< 10 %	
Soil		Munsell		

EXCAVATION wet sieved / dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Ks code	Occupation/Heating/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B		No	Yes - some roots	
2	200	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, hardness and extent, moisture, bioturbation & disturbance with stratigraphic units)

Condition and integrity	Transition from loam to clay - gradual.
Signs of burning/heating	No
Oil expansion?	1. Brown loam topsoil (3-5cm thick)
Spit 1 6 5	2. Orangey brown clayey loam
Spit 2 4	3. Orangey brown clay
Spit 3	

inc. clay, orange with depth + moist

ANAMBAH TEST EXCAVATION T2-0327		TEST UNIT # PLAN #	P2
Excavators	Sandra & Tony	Date 19.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (document datum)	Easting				Northing		
Soil landscape	Rothbury		Branxton			Hunter	
Landscape	Creek bank	Flat	Lower, Mid, Upper slope		Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	< 10 %	
pH					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		No.	Grass roots	-
2	110	A1 A2 B		No.	Very hard	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit) * Fine -- medium

Contacts and integrity * Fair + clear transition from ~~clay~~ loam to clay - some mixing evident

Signs of burning/heating

PH expansion?

1. Light brownish grey loam topsoil (0--3cm)
2. Orangey Brown clayey loam
3. Orange brown + cream mottled clay

inc. clay content with depth

ANAMBAH TEST EXCAVATION 124227		TEST UNIT # PLAN #	10 2
Excavators	Sandra Hony	Date 19 3 13	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other Artifacts?	
Why Fly at expansion? Know?	
Photograph #	
Samples (description & number)	

LOCATION

GPS Location (Easting)	Easting						Northing							
Soil Landscape	Rothbury				Branston				Hunter					
Land Form	Creek bank	Flat	Lower, Mid, Upper slope				Raised flat		Ridgeline		Hillside			
Aspect	N	E	S	W	Slope %									
Soil					Munsell									

EXCAVATION wet sieved dry sieved

Spit #	Destroyed	Soil Horizon			Soil % Gravel	Carbon Sorting/Fusting	Disturbance/Disturbation	Abnormal Objects #
1	10	A1	A2	B				
2		A1	A2	B				
3		A1	A2	B				
4		A1	A2	B				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Totals								

FURTHER DESCRIPTIONS

Soil (compactness, compressions, sediment size, inclusions, Disturbance and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of Landing/Flooding

Tile excavation?

Spit 1 6

Spit 2 2 clay

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	104
Excavators	Sandra & Tony.	Date 19.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs #	
Samples (description & number)	

LOCATION

GPS/Horizontal Datum	Easting			Northing			
Soil Horizontal	Kalimeny		Branxton		Hunter		
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	<10%	
pH					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Tx code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B		No	Yes - Scans roots	
2	200	A1 A2 B				
3		A1 A2 B				
		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil transportation, composition, particle size, inclusions, Diagnostic and extent, moisture, bioturbation and vegetation for each stratigraphic unit?

Condition and integrity: Fair - transition to clay moderately clear however mixing of clay & loam apparent.

Signs of burning/heating

TU expansion?

1 Brown loam topsoil

2 Brown clayey loam

B- Orange brown clay

increasing clay + moisture content with depth.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	1084
Excavators: Bendra & Tony	Date: 19 [illegible] 2013	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Easting & Northing)	Easting		Northing	
Soil landscape	Richmond	Hawkesbury	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N / E / S / W		Slope %	
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Tx code	Carbon Burning/Heating	Disturbance/Pitch Location	Aboriginal Objects #
		A1 A2 B	[illegible]	[illegible]		
2		A1 A2 B	[illegible]	[illegible]		
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, mechanical modification and vegetation for each soil/granular unit: Dark Soil (Clay) little roots & gravel

Condition and integrity: not compact.

Signs of burning/heating

TU expansion? [illegible]

ANAMBAH TEST EXCAVATION 12-0222		TEST UNIT # PLAN #	105
Excavators	Cedric	Date 19-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Sample (description & number)	

LOCATION

GPS/Accuracy Tests	Easting			Northing			
Site landscape	Rothbury		Brandon		Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	<10%	
pH					Mass		

EXCAVATION wet sieved dry sieved

Unit #	Depth (cm)	Soil Horizon	Soil Type	Calcination/Cleaning	Disturbance/Excavation	Average Depth
1	100	A1 A2 B		No	Yes - brass coats	
2	[illegible]	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, thickness and extent, moisture, undulation and segments, for main stratigraphic units)

Condition and integrity: Fairly clear transition to clay - not clear if A2 exists or A1 sitting directly on clay. (B).

Signs of burning/heating

Will expansion?

1. Light brownish grey loam topsoil -- thin -- 2-3cm
   → transition to clayey loam (A2)
2. Orangey brown clay

* increasing clay content with depth

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	107
Excavators	Cedric + LM	Date 19.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Northing/Easting)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower	Mid-Upper slope	Raised flat	Ridgeline	Lit. [illegible]
Aspect	N	E	S	W	Slope %	<10%	
pH					Munsell		

EXCAVATION wet sieved dry sieved

Spit	Experiment	Soil Horizon	Soil Unit Code	Cultural/Burning/Heating	Distribution/Orientation	Aboriginal Objects
1	100	A1 A2 B		No	Grass roots throughout	
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit) Particle — fine — med.

Condition and integrity Poor — transition unclear.

Signs of burning/heating No

Tile expansion?

A1 Light brown/grey loam topsoil (thin ~3-5cm)
A2 Brown clayey loam + Ironstone gravel
B Brown with some of clay coming through.
* Ironstone gravel in A1 & A2

ANAMBAH TEST EXCAVATION 12-0327		TEST UNIT # PLAN #	108
Excavators	Sake + Grey.	Date	19.3.13.

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (in-stress) Easting		Northing		
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hinter
Aspect	N / E / S / W	Slope %	< 10 %	
pH		Moist		

EXCAVATION wet sieved dry sieved

Sub #	Depth (cm)	Soil Horizon	Soil Pit Type	Colour/Texture/Heating	Disturbance/Inclusion	Aboriginal Objects #
	100	A1 A2 B		No	[illegible]	
2	160	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
TOTAL						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation (in each stratigraphic unit)

Condition and integrity: Poor – transition from loam to clay under.

Signs of burning/heating

Pit expansion?

1. Light brownish grey loam topsoil. (3.5cm).
2. Dark brown clayey loam
3. Dark brown clay with some limit of

clay content increases. + moist.

ANAMBAH TEST EXCAVATION 13-0227		TEST UNIT # FLAX #	110
Excavators	Jake + Greg	Date 19-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS or Sensor Mode	Easting		Northing	
Soil landscape	Kalabury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope % < 10%
pH					Munsell

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Texture	Soil Ex code	Cultural/Natural/Sterile	Disturbance/Reinstatement	Aboriginal Objects #
1	100	A1 A2 B		No	Yes - grass roots	
2		A1 A2 B				
3		A1 A2 B				
4		A2 A2 B				
5		A1 A2 B				
6		A2 A2 B				
7		A2 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil transmission, compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity: Transition unclear -- mixing evident

Signs of burning/heating: No.

TU expansion?

1. Brown loam topsoil.
2. Dark brown clayey loam. } rich organics
3. Dark brown clay.

increasing clay & moist

fragments of silcrete (quartz present) (< 5cm long).

ANAMBAH TEST EXCAVATION (2-0227)		TEST UNIT # PLAN #	113
Excavators	LM + CW	Date	19.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Off-site Items?	
Worthy of expansion? How?	
Photograph #	
Samples (description or number)	

LOCATION

GPS (Standard Tracks)	East up		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Pipeline / Ridge
Aspect	N	E	S	W
Slope %	<10%			
Site			Mantell	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Bands	Colour/Boundary/Clearing	Disturbance/Saturation	Aboriginal Objects
1	10-0	A1 A2 B		No.	Yes - grass roots	
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, phases and mixed, moisture, bioturbation and vegetation for each stratigraphic unity: Particle size = fine - medium

Conditions and Integrity: Transition from loam to B not clear.

Signs of burning/heating: No

TU expansion?

1. Light brownish grey loam topsoil (A1 almost non-existent).
2. ~~A2 almost non-existent~~ (Clayey loam brown) (inc. clay content)
3. Clayey brown clay

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	114
Excavators	Jake + Greg	Date 19.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Grid Zone)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N / E / S / W		Slope %	<10 %
pH			Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (cm)	Soil Horizon	Soil Type	Colour/Mottles/Hardness	Disturbance/Orientation	Aboriginal Objects #
1	100	A1 A2 B		No.	Yes, Grass root.	
2	150	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, structure, inclusions and expansion for each stratigraphic unit)

Condition and integrity: Transition to clay not clear.

Signs of burning/heating: No.

TU expansion?

1 Light brownish grey loam topsoil

2 Brown clayey loam

3 Orangey brown clay

x some (few) fragments of reasonable gravel evident near interface to clay

* Pit placed with post @ NE corner

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	116
Excavators	[illegible]	Date 18.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Geo Ref / 10 Ref)	Easting				Northing		
Soil landscape	Rothbury		Branxton			Thrubo	
Landform	Crest/Ridge	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	0 10	
pH					Vitamin E		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pit code	Carbon/Burning/Hearth	Disturbance/Bioturbation	Abnormal Objects #
1	100	A1 A2 B				
2	230	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil formation, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit?

Condition and integrity

Signs of burning/heating

Expansion?

A1 — 100mm at thickest/deepest. Light grey brown very fine sandy loam with charcoal fleeking at base. Moderately compact

A2 — compact very fine sandy loam, mid brown, charcoal + burnt clay flecking. Increased clay with depth.

B — compact ~~sandy~~ sandy brown clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	107
Excavator	[illegible]	Date 18-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (previous Easting)	Easting		Northing	
Soil landscape	Kathleen	Branston	Hunter	
Landform	Creekbank	Flat	Lower, Mid, Upper slope	Rolled flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	<10%
pH					Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		charcoal flecs	fine grass roots	
2	200	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

OTHER DESCRIPTIONS

Soil (compaction, composition, moisture size, inclusions, thickness and extent, moisture, bioturbation and vegetation for corn stratigraphic unit)

Conditions and integrity Topsoil + unit 2 moderately dry/compact

Signs of burning/heating → ~~increasing soil~~ clay also compact

TU expansion? * Transition between loam and clay moderately clear.

Spit 1 6 grass +

Spit 2 grass rocks + artefacts

1. Brown loam topsoil (5-10cm).
2. Orangey brown clayey loam.
3. Orangey brown/clay.

increasing clay + moisture content.

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	18
Excavators	Jate + Greg	Date 18.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Accuracy)	Easting	Northing	
Soil landscape	Rotatory	Excavation	Lunatic
Landform	Creek bank Flat Lower Mid Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope %	< 10 %
pH		Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Vis. code	Colour/Textural Grading	Disturbance/Disturbation	Aboriginal Objects
1	100	A1 A2 B			Yes - grass roots throughout.	
2	200	A1 A2 B		Charcoal flecs + burnt clay		
3	300	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and colour, moisture, mottlenesses, soil regeneration for contrasted graphs used?

Condition and integrity: * Moderately powder transition between soil units.

Signs of burning/heating: Yes - as above.

Tilt expansion?

1 light brown loam topsoil (5-15cm).

2. Brown clayey loam

3 " + river pebbles/gravel + burnt clay + charcoal flecs.

B Orangey brown clay + burnt clay + charcoal flecs.

increase clay + moist with depth.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	119.
Excavator	Luke Hickey	Date 18.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other Evidence?	
Working or expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (accessory)	Easting	Northing	
Soil Landscape	Rollbury	Branxton	Hunter
Landform	Creek bank Flat Lower Mid Upper Slope Raised Flat Ridgeline Hollow		
Aspect	N E S W	Slope % < 10 %	
Pit		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Code	Colour/Boundary/Heating	Disturbance/Notification	Aboriginal Objects
1	100	A1 A2 B				
2	120-270	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, compaction, particle size, inclusions, thickness and colour), sandstone, bioturbation and expansion for each stratigraphic unit?

Condition and integrity

Signs of burning/heating Charcoal evident in spit 2 + specs burnt clay.

Tip expansion?

1. Light brownish grey* loam topsoil
2. Brown clayey loam/ + river pebbles & gravel. + burnt specs clay.
3. Orangey brown clay.

increasing * clay + moisture content.

* more river pebbles + gravel

* Could be used to describe most topsoil @ Anambah.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	120
Excavators	TS WS	Date	18.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Standard Datum)	Easting		Northing	
Soil landscape	Redbury	Branch	Hunter	
Landform	Creek bank	Flat	Lower Mid. Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
Slope	<10%			
pH			Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Disturbance/Disturbation	Abrupt/Diffuse
1	100	A1 A2 B		No	Yes Grass	
2	200	A1 A2 B		✓	roots	
3	300	A1 A2 B			No	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, mottling and vegetation for radiotransmission

Condition and integrity: Mixing evident between spits 2-3.

Signs of burning/heating: No

Other expansion?

1 Light Brown/grey loam topsoil.
2 Brown/oj sandy clay loam
3 Light brown/yellow sandy clay.
B Brown/oj mottled clay.

* mod. soft.

increasing clay + moist content with depth

* small fine pebbles/gravel evident from spits 2-3

ANAMBAH TEST EXCAVATION 48-0227		TEST UNIT # PLAN #	121
Expedition	Jake + Greg	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? Why?	
Photograph #	
Samples (description & number)	

LOCATION

GPS or source Y-ray	Easting	Northing	
Soil landscape	Rothbury	Branbeau	Hunter
Landform	Creek bank	Tet	Lower, Mid, Upper slope / Rise/Hill / Ridge / Hilltop
Aspect	N E S W	Slope % < 10%	
pH		Munsell	

EXCAVATION wet-sieved dry-sieved

Spit #	Depth (mm)	Sub-Horizon	Soil Pit code	Colour/Boring/Fixing	Dist. of sand/Distribution	Aboriginal Objects #
1	100	A1 A2 B		No	Grain/soft.	
2	200	A1 A2 B		No	↓	
3	300	A1 A2 B		Some charc. flecs.		
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, hardness, dryness and colour, [illegible] and excavation for each stratigraphic unit?

Condition and integrity: * loam & clay mixing = integrity pass-mod

Signs of burning/bearing: * Some charcoal flecs in close proximity to B.

TU expansion?

1. Brown loamy topsoil (tp 5-10cm) - moderately compact
2. Brown clayey loam
3. ↓
B. Brown with of mottling clay.

increasing clay & moisture content.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	122
Excavators	DS + CW	Date	18.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Standard TU key)	Easting	Northing	
Soil landscape	Rothbury	Transition	Lunatic
Landform	Creek bank, Flat, Lower, Mid, Upper slope, Raised Ld, Ridgeline, Hillslope		
Aspect	N E S W	Slope % 10 - 20 %	
pH		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Structure	Soil Type	Colour/Inclusion/Heating	Disturbance/Disturbation	Aboriginal Objects
1	100	A1 A2 B		charcoal flecs/fragments dispersed (small)	Yes - grass roots throughout	
2	200	A1 A2 B				
3	250	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Depth						

FURTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, thickness and extent, moisture, contamination and organisms, to form stratigraphic unit)

Condition and integrity: Transition from loam to clay, fairly clear.

Signs of burning/heating: Yes - charcoal + burnt clay flecs (dispersed throughout)

TU expansion?

1. Light brownish grey loam topsoil
2. Brownish grey clayey loam
3. " "
3. Orange brown clay
4. loam/clayey loam mod compact.

+ river pebbles/gravel + charcoal flecs/frags

increasing clay + moist content with depth.

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	123
Excavators	TS + WS	Date	18.7.13

SUMMARY OF EXCAVATION

Cultural/Aboriginal Objects	
Other evidence?	
Priority of excavation? Low?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Easting/Northing)	Easting		Northing	
Soil landscape	Katabury	Branxton	Lower	
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat Ridgeline Hilltop
Aspect	N E S W	Slope % < 10 %		
pH		Munsell		

EXCAVATION wet sieved dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Texture	Colour/Heating/Burning	Disturbance/Intrusion	Aboriginal Objects #
1	100	A1 A2 B		Charcoal	Yes - grass	
2	200	A1 A2 B		flecs	roots throughout	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, ambulation and vegetation for each stratigraphic unit) Mod

Condition and integrity: Sharp transition from silty loam to

Signs of burning/heating: clayey

Transmission: loam + silty loam mod compact.

1. Brown (light) loam topsoil (top 5-10cm)
2. Brown/ ~~clayey~~ silty loam (v. dry) cream
3. Orange/brown clay.

↓ increasing clay & moisture

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT 4 PLAN 4	127
Excavators	LARESSA + JOE	Date 3/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidences	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS/Grid/Zone/Points	Easting		Northing	
Soil landscape	Rothbury	Bonnevue	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N E S W	Slope % 10%		
Soil		Moisture		

EXCAVATION

wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pockets	Lacker/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B			Rock [illegible]	
2	160	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

OTHER DESCRIPTIONS

Soil (compaction, compaction, mottle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Other comments

At the surface + even below to a depth of at least 160mm, the soil horizon is characterised by dense, compact and moist clay which is mottled with ironstone + limestone deposits. Few pockets of crumbly clay exist at a depth of 160mm; the soil is typically homogeneous, compact clay with small root (<1mm) inclusions, and worm activity. Evidently has been trampled for a long period of time + clay has compacted.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	128
Excavators		Date 3/12/2012	AREA N

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photograph #	
Sampler (description & number)	

LOCATION

GPS (present at Survey)	Easting					Northing		
Full landscape	Rotherry			Brandon			Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper - upr		Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %			
					Moisture			

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Texture	Colour/Boundary/Bedding	Disturbance/Bioturbation	Aboriginal Objects
1	[illegible]	A1 A2 B				
2	[illegible]	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				

FURTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TU expansion?

DARK BROWN, CLAYEY, VERY HARD TOPSOIL (PLOUGHED)

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT 4 PLAN 4	[illegible] [illegible]
Excavators: Josh + Cedric	Date 3/12/12	

SUMMARY OF EXCAVATION

Found Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Sketches (description & number)	

LOCATION

GPS coordinates (Zone 56)	Easting ☐☐☐☐☐☐	Northing ☐☐☐☐☐☐☐
Soil landscape	Richmond	Blacktown	Luddenham
Landform	Creek bank / Flat / Lower, Mid, Upper slope / (Raised flat) / (Ridgeline) / Hilltop	
Aspect	N (E S) W	Slope %
		Munsell

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil in scale	Charcoal/Burning/Heating	Bioturbation / Roots/Bioturbation	Aboriginal Objects
1	[illegible]	(A1) (A2) (B)			[illegible]	○
2	[illegible]	A1 (A2) (B)			Mottled	○
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
						○

FURTHER DESCRIPTIONS

Soil composition, compaction, particle size, inclusions, thickness and colour, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity
Signs of burning/heating
TU expansion?

Spit 1 + 2 : dark brown loam with humics throughout. Grass root distributed in the top 80mm. 1 in clay content with ...

Base / clay : dark brown mottled orange clay with few inclusions

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	130
Excavators		Date 3/12/2012	[illegible]

SUMMARY OF EXCAVATION

Claim Aboriginal Objects	[illegible]
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Possible Survey)	Easting		Northing	
Site Landscape	Rainbow	Bank	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised Flat / Ridgeline / Hilltop
Aspect	N	E	S	W
			Munsell	

EXCAVATION [illegible] dry sand

Spit #	Depth (cm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Disturbance/Interaction	Aboriginal Objects #
1	100 cm	A1 A2 B				1 [illegible]
2	100 cm	A1 A2 B				2
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
						1 [illegible]

FURTHER DESCRIPTIONS

Soil in excavation composition, particle size, inclusions, thickness and extent, moisture, [illegible] and vegetation for each stratigraphic unit:

Condition and integrity

Signs of burning/heating

TU expansion?

DARK BROWN CLAYEY TOPSOIL TO SLIGHTLY LIGHTER, HOMOGENOUS BROWN CLAY.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area A (3)
Excavators	Dash + Cedric	Date 3/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (or access to Map)	Easting	Northing	
Soil landscape	Kalabore	Kamaran	Hunter
Landform	Creekbank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Phenetic	
		Munsell	

EXCAVATION Low-sieved? Dry-sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dry Code	Colour/Forming/Clearing	Disturbance/Reduction	Aboriginal Objects
1	10-20	A1 A2 B			Grass root, clayey	
2	20-40	A1 A2 B			"	
3	40-60	A1 A2 B			"	
4	Dark	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and extent, material distribution and sequence for each stratigraphic unit

Condition and integrity: Spit: Mixed A1 + A2: light grey silt mixed with mid brown loam

Signs of burning/heating

Any expansion? Inclusions — grass roots, ands rest, gravels ~5% + clay.

[illegible] with [illegible] bleached clay.

[illegible] with few inclusions

[illegible] very disturbed

ANAMBAH TEST EXCAVATION 124027		TEST UNIT # PLAN #	93L
Excavator	[illegible]	Date 5-12-[illegible]	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS recorded (Zone)	Easting		Northing	
Soil landscape	Rothbury	Branston	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
					Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pit code	Carbon/Burning/Heating	Disturbance/Mineralisation	Aboriginal Objects
1	100	A1 A2 B				
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						

FURTHER DESCRIPTIONS

Soil Description, consistence, [illegible], Distance and extent, moisture, bioturbation and vegetation (for each stratigraphic unit)

Condition and Integrity

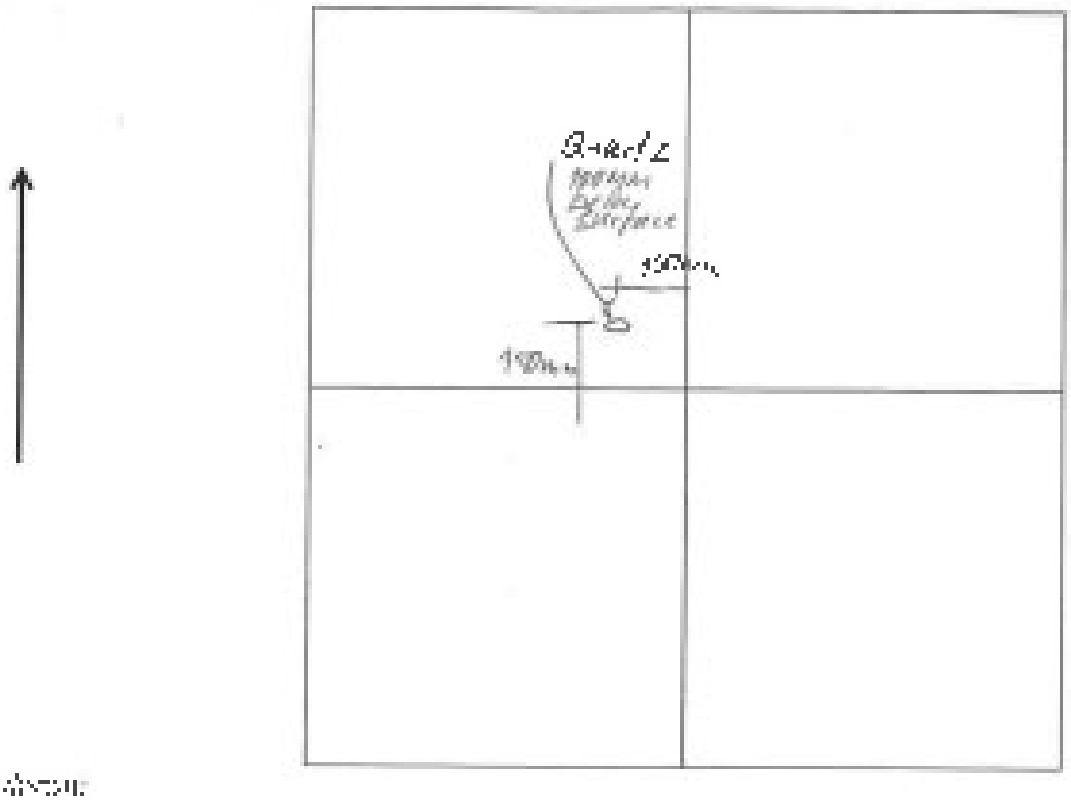
Signs of Site Formation

Disturbances

DARK BROWN CLAYEY TOPSOIL, HEAVILY PLOUGHED, SOME SLIGHTLY LIGHTER CLAY AT BOTTOM OF SPIT 2 WITH SOME SPECKS OF DECAYING SILT(?) STONE.

1 piece of quartz at bottom of spit 1 (see over)

Plan



Split Section:

Section Plan

Date:
Scale:

Relative Number TLI

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	35
Excavators	LARESSA + JOE	Date 5/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (as WGS84 Easting)	Easting			Northing			
Soil landscape	Rothbury		Branxton		Hunter		
Landform	Creek bank	Flat	Lower/Mid	Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope % 3%		
					Munsell		

EXCAVATION wet sieved dry sieved

Sample	Depth (cm)	Soil Horizon	Soil Texture	Colour/Sorting/Sensitive	Oxidation/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		Burnt clay	roots	
2	200	A1 A2 B		Burnt clay	roots	
3	200	A1 A2 B			roots	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Conductance and integrity

Signs of burning/heating

TU expansion?

A1: No topsoil/silt encountered, probably eroded?

A2 B: From the surface to a depth of 240mm below, soil horizon is characterised by moist, strong and semi-compacted rich brown mottled clay with inclusions of burnt clay and limestone deposits, scarcely concentrated. At a depth of 240mm - 250mm, a homogeneous semi-compacted clay is encountered with fewer particles of crumbly clay encountered than in previous spits.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area M 134
Excavators	Josh + Cedric	Date 3/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (to 4 dec. 7 dec.)	Easting	Northing	
Soil landscape	Ardbury	Branston	Hunter
Landform	Creek bank Flat Lower Mid Upper slope (Raised flat) Ridgeline Hilltop		
Aspect	(N) (E) (S) W	Slope %	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Texture	Carbon/Burning/Heating	Other Cultural Information	Aboriginal Objects
1	100	(A1) (A2) B		occasional gravel	Grass roots ploughed	0
2	140	A1 (A2) B		"	"	2
3	Unex	A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
						2

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, Natural lines and vegetation for each stratigraphic unit)

Condition and integrity Spit 1: Mixed A1 & A2 in top 0-40 cm

Signs of burning/heating light grey fine soft silt ↑ in clay

Tin excavation? contact with ↓

Spit 2: dark brown loam ↑ in clay contact with ↓ orange clay to gravel inclusions throughout

Base: dark brown very crushed clay with occasional orange clay inclusions

heavily ploughed area

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavators	Josh Cedric	Date 3/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Why by of expansion?	
Photograph #	
Samples (description & number)	

LOCATION

GPS/Accurate Alone	Easting				Northing		
Fill Hand Scale	Kalibrary		Bar [illegible]		[illegible]		
Landform	Creek bank	Flat	Lower Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %		
					Munsell		

EXCAVATION wet sieved dry sieved

Sp #	Depth (cm)	Soil Horizon	Soil Pit Code	Carbon/burning/bitumen	Disturbance/bioturbation	Aboriginal Objects
1	100	A1 A2 B			plough [illegible]	○
2	100	A1 A2 B			plough [illegible]	○
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						○

FURTHER DESCRIPTIONS

Soil (compaction, occupation, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity: Spit 12 No clear differentiation [illegible] soil horizons. Very disturbed in [illegible]

Signs of burning/heating: [illegible] brown silt — lower with clay content & with [illegible]. Gas rocks [illegible] occasional gravel & clay clumps throughout.

TCI expansion?

[illegible] occasional [illegible]. Very [illegible] [illegible]

Very [illegible] [illegible] [illegible] [illegible]

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	136
Excavators	FJ / TODD	Date 3/12/12	AREA M

SUMMARY OF EXCAVATION

Count Aboriginal Objects	probable during digging
Other evidence?	[illegible]
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS location (Easting)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower / Mid / Upper slope	Raised flat / Ridgeline / Hilltop
Aspect N/A	N	E	S	W
			Slope %	
			Munsell	

EXCAVATION wet sieved dry sieved

Unit #	Depth (cm)	Soil Horizon	Soil Dx code	Carbon Dating/Dating	Disturbance/Reburial	No. Aboriginal Objects
	100 cm	A1 A2 B				0
2	100 cm	A1 A2 B				1
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
						1

FURTHER DESCRIPTIONS

Soil Ice-wedges, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Contacts and integrity

Signs of burning/heating

Other comments

Very clayey Topsoil, dark brown, with lighter, reddish brown clay at bottom of 2nd spit, some cracks, some grass roots

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # ~~127~~ 157 PLAN #	
Excavators	CARESSA + [illegible]	Date 3/12/12	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Priority of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

Grid (if assessed) Variety	Easting					Northing		
Soil Inclusion	Kathleen			Brandon			Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat		Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope % 5%			
					Munsell			

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Ordered Ranging/Sieving	Inclusions of Interpretation	Assessment Objects
1	100	A1 A2 B		burnt clay	roots 1mm, 2mm	
2	180	A1 A2 B			roots 1mm, 2mm	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, structure, bioturbation and vegetation) for each stratigraphic unit)

Condition and integrity

Signs of burning/sieving

TU expansion?

M/R Below the surface to a depth of approx 60mm a more horizon of silty clay is encountered + contains burnt clay fragments + isolated limestone deposits as well as roots approx 1mm in diameter.

c. M approx 120-180mm depth below surface a densely compacted, homogenous moist + sticky clay is encountered. Multiple roots (<1mm and >2mm) penetrate the horizon.

ANAMBAH TEST EXCAVATION 32-0227		TEST UNIT # PLAN #	Area M 138
Excavators	Josh, Cedric	Date 6/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS coordinates (Zone)	East/Top	North/Top	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creek bank Flat Lower/Mid/Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope % —	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dry Code	Carbon/Burnt/Ash/Lime	Disturbance/Bioturbation	Aboriginal Objects
1	0-10	A1 A2 B			[illegible]	
2	10-20	A1 A2 B				
3	20	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil Compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

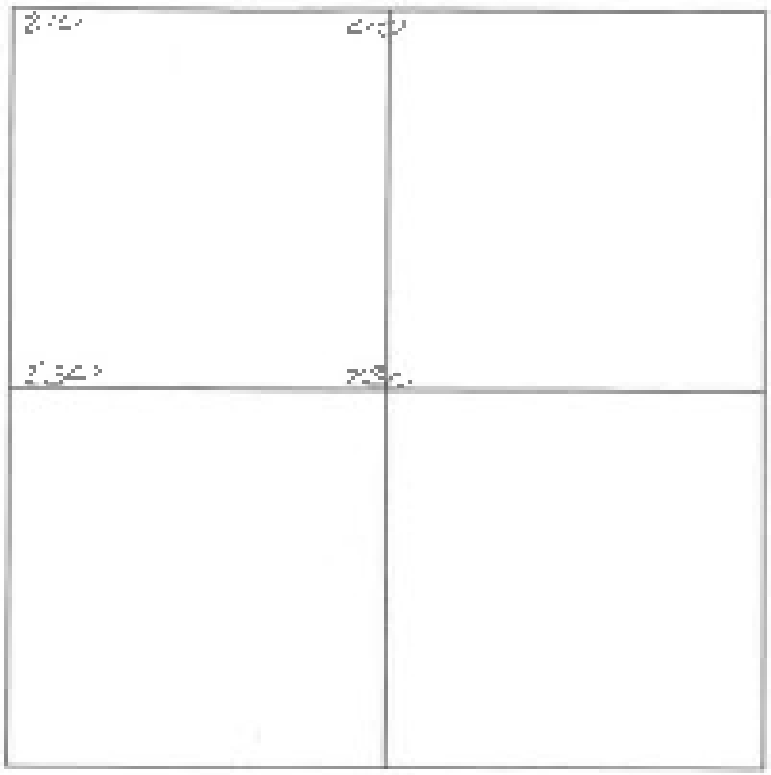
Condition and integrity: Spits 1 & 2: heavily disturbed & mixed. At 10-20 a light grey silt is mixed into the brown loam.

Signs of harvest/ploughing

TU expansion: 20-210: Brown soft loam with occasional burnt organics & gravels throughout ↑ in clay content with ↓ & becoming harder & weaker with ↓

Soil: [illegible] clay [illegible] inclusions

Plan:



Split drawing:

Screen Plan

Rate:
Scale:

Relation to other TU:

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	129
Excavators		Date 3/12/2011	Attachment [illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other Items?	
Worthy of expansion? Flow?	
Photograph #	
Sample (description & number)	

LOCATION

GPS (Standard Image)	Easting							Northing							
Soil Landscape	Kotabang					Beaufort						Fraction			
Landform	Creek bank	Flat	Lower Mid	Upper slope	Raised flat	Ridgeline	Hilltop								
Aspect	N	E	S	W	Slope %										
					Munsell										

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon			Soil Pit Area	Carbon/Burning/Flowing	Disturbance/Bioturbation	Abnormal Objects #
1	100 mm	A1	A2	B				
2	100 mm	A1	A2	B				
3		A1	A2	B				
4		A1	A2	B				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Total								

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TSI excavation?

CLAYEY BROWN TOPSOIL, SLIGHTLY LIGHTER CLAY AT BOTTOM
SOME FREQS OF SILT(?) NONE

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible] L 140
Excavators	R. WOODLEY / A. FRENCH	Date 30/11/12	

SUMMARY OF EXCAVATION

Quant Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS Reference Name	Easting		Northing	
Site Landscape	Rothbury	Pearson	Hunter	
Landform	Creek bank (Upper edge)	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N / E / S / W	Slope S	5% - 10%	
Soil		Munsell		

EXCAVATION wet sieved / dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Sample/Manipulation	Aboriginal Objects
1	180	A1 A2 B	[illegible]		[illegible]	0
2	200	A1 A2 B	Clay			0
3	300	A1 A2 B	Clay			0
4	350	A1 A2 B	Clay			0
5	[illegible]	A1 A2 B	Clay			
6		A1 A2 B				
7		A1 A2 B				
Totals						0

FURTHER DESCRIPTIONS

Soil formation, composition, particle size, inclusions, Dimensions and extent, moisture, bioturbation and vegetation for each stratigraphic unit?

Condition and integrity

Signs of burning/heating

Is it expansion?

0 - 50mm: Greyish brown silty clay topsoil. Loose. Few inclusions. 10% surface visibility.

50 - 250mm: Dark brown clay. Moderately compact. Sparse orange black and white flecking. Few inclusions.

250 - 300mm: Transition from clay above to horizon below. Orange and white decayed limestone inclusions beginning to appear.

300 - 350mm: Dark brown clay. Moister and softer than horizon above. Distinguished by presence of white decayed limestone inclusions (about 5 - 10%).

(20 of excavation).

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area 2 [illegible]
Excavation	[illegible]	Date 30/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Accuracy to 10 m)	Easting			Northing			
Site landscape	Rathbury		Branston		Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %		
					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Acids	Ground/Burning/Heating	Other cultural/Disturbance	Aboriginal Objects
1	100	A1 A2 B			Grass [illegible]	
2	100-200	A1 A2 B			Clay [illegible]	
3	Ohm	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, [illegible] for each stratigraphic unit)

Condition and integrity: Spt 1,2: A1 + A2: blurred but ↑ in clay content orange clay inclusions with depth

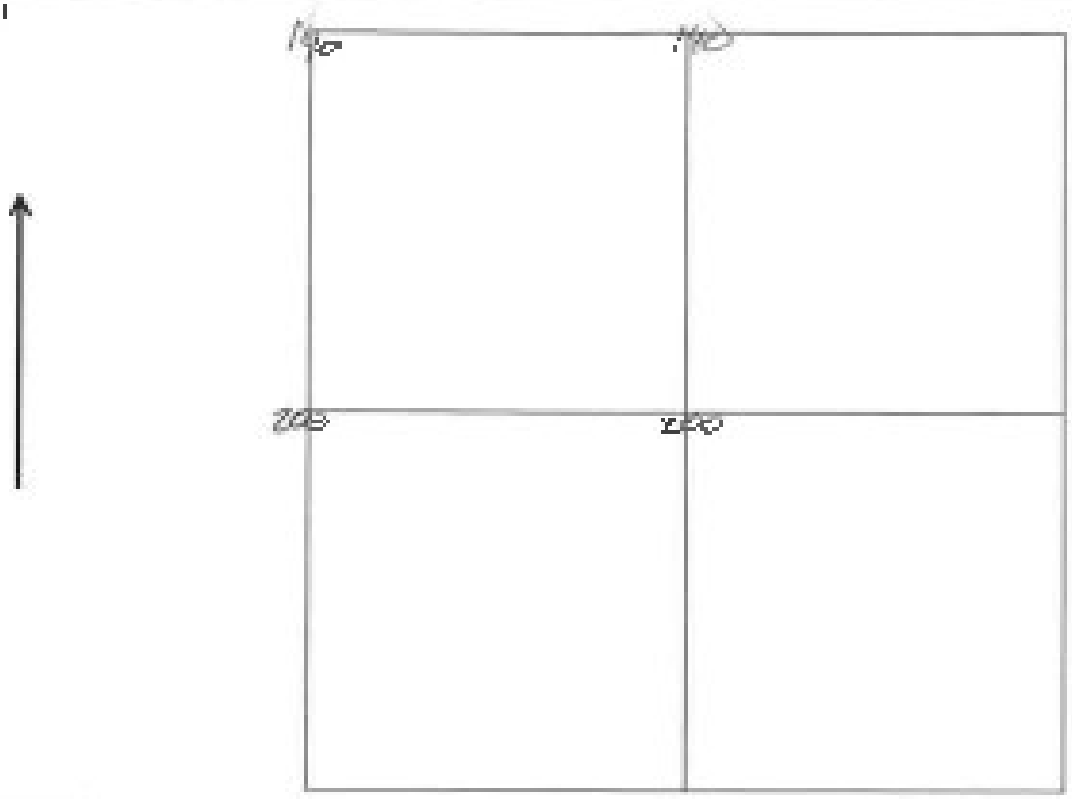
Signs of burning/heating

TU expansion?

Base: Very compact dark brown clay with few inclusions

Very disturbed [illegible]

Plan



Split shown:

Section Plan

Floor:
Scale:

Revision number TLI

ANAMBAH TEST EXCAVATION 124227		TEST UNIT # PLAN #	142
Excavators	LAPESCA - LUKE	Date 30/1/19	

SUMMARY OF EXCAVATION

Cores/Aboriginal Objects	
Other evidence?	
Worthy of expansion? Flow?	
Photographed	
Samples (description & number)	

LOCATION

GPS (Reduced Datum)	Easting		Northing	
Soil landscape	Rothbury	Branston	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope % 10%
					Munsell

EXCAVATION wet sieved dry sieved

Soil #	Depth mm	Soil Horizon	Soil Pit sens.	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		burnt clay charcoal	roots, insect, [illegible]	
2	100	A1 A2 B				
3	2.40	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and organics for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TU expansion?

Heavily compacted, very dense & hard clay in large pockets characterise this test pit. Minimal evidence of burning of burnt clay and fragments of charcoal that appear mottled within the clay horizon. Clay is dry and forms clumps at the surface up to a depth of 60-70mm, but then becomes slightly more moist and sticky at lower depth.

Soil horizon is continuous from the surface to a depth of at least 240mm. No change, abandoned.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	143
Excavation	[illegible]	Date 30/[illegible]/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Location Zone)	Easting				Northing		
Soil Landscape	Rathbury		Branxton		Hunter		
Landform	Creek bank	Flat	Lower	Mid	Upper slope	Ridge/Line	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope % 10%		
					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dry Code	Colour/Boring/Testing	Disturbance/Disturbation	Aboriginal Objects
1	100	A1 A2 B		burnt clay	Rarely, [illegible]	0
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil (composition, consistence, particle size, inclusions, thickness and extent, moisture, mobilization and [illegible] in each stratigraphic unit)

Condition and integrity

Signs of homogeneity

TU exposure?

Beneath grass, soil is characterised by very dense, very compacted and sticky clay with no discernable silt. Clay forms in large, homogeneous pockets with channels of finer, [illegible]-like clay particles approx 3-4mm in size. Clay is relatively moist and does not quickly after exposure. Rare, isolated inclusions of burnt clay are visible.

ARISA K

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	
Excavators	[illegible]	Date 29/1/[illegible]	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Worthy of expansion? Why?	
Photographed	
Samples (description & numbers)	

LOCATION

GPS/Processing Notes	Easting		Northing	
Fit Landscape	Rockbury	Branston	Hunter	
Condition	Creek bank	Flat	Lower/Mid/Upper slope	Raised Flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
					Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Lab Code	Cultural/Burning/Grating	Disturbance/Hazards, etc.	Aboriginal Objects
1	10	A1 A2 B			[illegible]	3
2	200	A1 A2 B			[illegible]	2
3	300	A1 A2 B				1
4	520	A1 A2 B				0
5	[illegible]	A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						6

FURTHER DESCRIPTIONS

Soil Composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and depletion in [illegible] (ectigraphic units)

Condition and integrity Spit 1: A1 soft silt with grass root

Signs of burning/heating inclusions to a depth of 70 [illegible]

TU expansion?

Spit 2-4: A2: V'Compact silty loam [illegible] gravels [illegible] bleached clay [illegible] clay content with [illegible]. Slightly deeper in W [illegible] to creek bank.

Bags: Very hard brown clay with [illegible] clay inclusions [illegible] gravels

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	145
Excavators	LARESSA , [illegible]	Date 30/10/[illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	3
Other evidence?	
Worth re-expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS [illegible] Thirty	Easting	Northing	
Soil landscape	Kalabury	Branden	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope	Raised flat	Ridgeline Hilltop
Aspect	N E S W	Slope 5 15%	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Type	Accumulation/Reaction	Disturbance/Recordation	Number of Objects
1	100	A1 A2 B		Burnt clay charcoal	[illegible]	3
2	200	A1 A2 B		Burnt clay charcoal		0
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
						3

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for soil/stratigraphic unit)

Condition and integrity

Signs of burning/heating

Re-expansion?

Topsoil up to depth of 50-60mm is characterised by dry fine powdery [illegible] by with few particles of silt present. Burnt clay and charcoal are frequent and are visible as mottled clay with coloured streaks. Silcrete artefact found at depth of 90mm in SW quadrant of spit.

Spit 2 was dug to ensure that clay lense was not just an overlay. At depth of 250mm clay is still densely compacted, moist and difficult to penetrate with few fine clumps of crumbly clay. Clay more homogeneous.

ANAMBAH TEST EXCAVATION 124227		TEST UNIT # PLAN #	Area N 146
Excavators	Joey [illegible]	Date 20/10/17	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Why is it expansion? Close?	
Photograph #	
Samples (description & number)	

LOCATION

GPS reference (Lat/Lon)	Easting				Northing		
Site Landscape	Soil Body		Brainstorm		Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hillside	
Aspect	N	E	S	W	Slope %		
					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Disturbance/Disturbation	Aboriginal Objects #
1	[illegible]	A1 A2 B			[illegible]	[illegible]
2	120	A1 A2 B			[illegible]	[illegible]
3	[illegible]	A1 A2 B				[illegible]
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						[illegible]

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit:

Condition and integrity: Surface Find - Approx 60 - [illegible] from 144

Signs of burning/heating: Leading to 146

TU expansion? Mudstone Clasts 60 7m S E of 146

Very exposed mudstone pieces → multiple Photo + collection

Spit 1: light brown silt with loam + clay inclusions + grass roots. A1 0-40 A2: dark brown loam very compact with brown + orange clay + with ↓

Spit 2: A2

Spit 3: A2 + clay in bottom 20.

Base: Compact + cracked dark brown clay

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	147
Excavators	[illegible]	Date	6/12/12

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Weathy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Reference Tracks)	Easting	Northing	
Soil landscape	Rothbury	Beaumont	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope	Raised flat	Ridge line Hill top
Aspect	N E S W	Slope % 5°	
		Marine 1	

EXCAVATION wet sieved dry sieved

Sample	Depth (cm)	Soil Horizon	Soil Vis. code	Carbon/Burning/Heating	Disturbance/Disturbance	Abs. Cons. Object #
1	80 mm	A1 A2 B			roots	
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each photograph, unit)

Condition and Integrity

Signs of burning/heating

Tell expansion?

A1-A2: Characterised by predominantly clay with fine inclusions of silt. Clay is extremely dense and especially compacted, almost impenetrable and with a ~~[illegible]~~ [illegible] pliable consistency until it dries, rock hard. Some pockets of less dense but equally wet and sticky clay were encountered. The clay is heavily cracked, where roots and more crumbly particles of clayey loam(?) can be seen. Evidently compacted over many years.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area. P 1 of 8
Excavator	[illegible]	Date 6/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Cell - residence?	
Why by at expansion? Flow?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Northing Zone)	Easting		Northing	
Soil landscape	Kalabury	Ecumdon	Hunter	
Landform	Creek bank	Flat	Lower Mid, Upper slope	Raised Flat	Ridgeline	Hill top
Aspect	N E S W	Slope %		
		Mounted		

EXCAVATION wet sieved dry sieved

Seite	Depth (cm)	Soil Horizon	Soil Texture	Colour/Burning/Heating	Disturbance/Disturbance	Aboriginal Objects
1	120	A1 A2 B			[illegible]	
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Size (compaction, compaction, pavement, inclusions, thickness and extent, moisture, inclusions and vegetation) for each stratigraphic unit?

Condition and integrity: A1 + A2 [illegible] 0-20 mm [illegible] grass roots

Signs of burning/heating: Mix silty loam of light grey brown

TU expansion? [illegible] with brown clay [illegible] both ploughing + the contraction of the horizon due to the lack of moisture

ANAMBAH TEST EXCAVATION 12-0727		TEST UNIT # PLAN #	149
Excavators	[illegible]	Date	6/12/12

SUMMARY OF EXCAVATION

Count Assignment/Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (cross/road/stony)	Easting				Northing		
Soil landscape	Rothbury			Branches		Hunter	
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat	Ridge line	Hilltop	
Aspect	N	E	S	W	Slope % 5°		
					Moist		

EXCAVATION wet-sieved dry-sieved

Unit #	Depth from	Soil Horizon	Soil to scale	Colour/Mottling/Boating	Disturbance/Remediation	Abrupt/Obscure
1	100	A1 A2 B			Roots	Z
2	150	A1 A2 B			Roots	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8		A1 A2 B				
Scale						Z

FURTHER DESCRIPTIONS

Soil (compaction, composition, porosity, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of cutting/fanning

Tell expansion?

A1: Thin sense of predominantly silt, which has slightly clay and commonly particles. It is no more than 20-30mm deep.

A2: Soil is characterised by a mix of silty loam and larger pockets of clay, and the stratigraphic layer contains more silt than clay up to a depth of 120mm.

B: At 120mm and lower, dense, compact + sticky homogeneous dark brown clay is encountered, and few silty channels are hinted

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 150
Excavators	Josh + Tod	Date 6/12/12	

SUMMARY OF EXCAVATION

Canal Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS reference (Easting)	Easting	Northing	
Soil landscape	Rothbury	Branston	Hunter
Landform	Creek bank Flat Lower Mid Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope %	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Top (cm)	Soil Horizon	Soil Vis rate	Earthen/Burning/Ceiling	Disturbance/Bioturbation	Abnormal Objects
1	110	A1 A2 B			Grass Rich Plastic	~~[illegible]~~
2	160	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity Spit 1 A1 & A2 mixed in through the clay

Signs of burning/heating clay coming through

TU expansion?

Base. Very compact cracked clay with silt in the cracked clay. Artefact found onto of the central cracking. Did not proceed with digging further down due to likelyhood of unintentionally expanding beyond the 50 x 50 limits.

6/12/12 SM TM

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN A	AREA F TSI
Excavators	P. WOODLEY / S. CAMPBELL	Date 06/02/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph A	
Samples (description & number)	

LOCATION

GPS (as accurate as possible)	Easting		Northing	
S. Handscape	Rafabury	Iverston	Hunter	
Landform	Creek bank	Flat	Lower/Mid/Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
			Slope %	5%
			Manual	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Dry Code	Colour/Boring/Tracking	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B	Silty clay + clay		Moderate possibly plough zone	
2	150	A1 A2 B	Clay			
3	Undercarved	A1 A2 B	Clay			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and expansion for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TSI excavation?

0 - 50mm: Dark greyish brown silty clay topsoil. Loose. Few inclusions. 0% surface visibility.

50 - 120mm: Dark brown clay. Compact. Clumpy. Few inclusions. Little flecking.

120 - 150mm: Dark brown clay. Compact. More consistent and less clumpy than stratum above. Few inclusions and little flecking.

(Off-site excavation)

150 - A1/A2 horizons probably truncated and B clay horizon probably ploughed to about 120mm below the current surface level.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA P 152
Excavators	L. PATTERSON / S. CAMPBELL	Date 06/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence ?	
Worthy of expansion? How?	
Photograph ?	
Samples (description & number)	

LOCATION

GPS [illegible]	Easting	Northing	
Site landscape	Rafabury	Branston	Hunter
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N E S W	Slope %	<5%
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth from	Soil horizon	Soil in code	Carbon/Burning/Heating	Underbrush/Ploughed	Aboriginal Objects
1	150	A1 A2 B	[illegible]		[illegible]	0
2	[illegible]	A1 A2 B	[illegible]		[illegible]	
3	[illegible]	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						0

FURTHER DESCRIPTIONS

Soil [illegible] composition, particle size, inclusions, [illegible] and [illegible] and [illegible] for each stratigraphic unit

Condition and integrity

Signs of [illegible]

Transmission

0 – 40mm: Dark greyish brown silty clay. Loose. Few inclusions. 0% surface visibility

40 – 130mm: Dark brown clay. Compact. Clumpy. Few inclusions. Little fleching.

130 – 150mm (end of excavation): Dark brown clay. Compact. Few inclusions. Little fleching. More consistent texture and less clumpy compared to stratum above.

NOTE: A1/A2 horizons probably truncated and 3 horizon clay probably ploughed to a depth of about 130mm below the current surface.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	153
Excavator	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS or square (cm)	Easting		Northing	
Soil Hand-texture	Kalibrary	Brandon	Fronter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised [illegible] Ridgeline Hill top
Aspect	N E S W	Slope %		
		Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Colour/Mottling/Heating	Disturbance/Disturbation	Aboriginal Objects #
1	[illegible]	[illegible]		–	[illegible]	1 scraper
2	150	A1 [illegible] B		–	–	[illegible]
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						1

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, structure, bioturbation and vegetation for each *stratigraphic* unit) heavy compact loamy clay overlying [illegible]

Condition and *integrity* brown clay.

Signs of burning/heating Large cracks in clay.

TLI *expansion?*

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	Area P 54
Excavation: P. WOODLEY / J. GRIFFITHS	Date: 06/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Easting & Northing)	Easting		Northing	
Soil landscape	Rodwell	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N / E / S / W		Slope %	<5%
			Munsell	

EXCAVATION wet sieved / dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil by code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B	Clay		[illegible]	
2	200	A1 A2 B ?	Clay		[illegible]	
3	[illegible]	A1 A2 B	Clay			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (compaction, composition, aggregate size, inclusions, thickness and colour), moisture, bioturbation and organisation for each stratigraphic unit:

Continuity and integrity

Signs of burning/heating

PID expansion?

0 – 50mm: Shallow, loose, dark greyish brown topsoil. Few inclusions. 6% surface visibility

50 – 120/180mm: Very dark brown clay. Moderately compact to compact. Clumpy. Few inclusions and little flecking.

120/180 – 200mm (end of excavation): Very dark brown clay. Compact. Few inclusions and little flecking. Texture is more consistent than stratum above.

NOTE: A1/A2 horizons appear to have been truncated and the underlying B horizon ~~[illegible]~~ ploughed over to a depth of ~~[illegible]~~ 120 to 180mm below the surface.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	155
Excavators	[illegible]	Date 6 / 2 / 12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Work by of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Northing Easting)	Easting		Northing	
Soil landscape	Rathbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	~~Raised flat~~ Ridgeline Hilltop
Aspect	N E S W	Slope % 5°		
[illegible]		Munsell		

EXCAVATION wet sieved dry sieved

Split #	Depth (cm)	Soil Horizon	Soil Hardness	Colour/Humus/Sheeting	Disturbance/Intrusion	Abundance/Stratigraphy
1	100	A1 A2 B			Roots	
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil nomenclature, composition, particle size, inclusions, thickness and extent, modulus of thickness from and aggregation for each stratigraphic unit

Continuous and integrity

Signs of mounting/heating

Tilt expansion?

A1: Thin lense of fine + crumbly silty loam topsoil, to a depth of no more than 20mm

A2: Mix of silty loam + larger clay pockets, and clay dominates the soil matrix. It is dense, recompacted and sticky, and has evidently been disturbed thanks to the presence of root matrices and [illegible]

Large clay pockets that are homogeneous are encountered at a depth of approx 80 - 100mm. Silt channels are less prevalent

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 156
Excavators	[illegible]	Date 6/12/12	

SUMMARY OF EXCAVATION

Could Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS recorded Zone	Easting	Northing	
Soil Landscape	Kalabaty	Branches	Fraction
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope %	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil by code	Carbon/Burning/Stones	Disturbance/Evaluation	Aboriginal Objects
1	[illegible]	A1 A2 B			[illegible]	
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation (in each stratigraphic unit)

Condition and integrity Spit 1 No A1 or A2 horizon due

Signs of burning/heating to ploughing

Soil expansion:

Clay throughout excavated [illegible]

[illegible]

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA B 157
Excavators	P. WOODLEY / J. GRIFFITHS	Date 06/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Excavation Area)	Easting	Northing	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Crest Bank Flat Lower Mid Upper Slope Rolled Lo. Ridgeline Hilltop		
Aspect	N E S W	Slope % <5%	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Dist. Inds	Carbon/Sorption/Heating	Disturbance/Intrusion	Abnormal Objects #
1	100	A1 A2 B	Clay		[illegible]	
2	150	A1 A2 B	Clay		[illegible]	
3	[illegible]	A1 A2 B	Clay			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, mottles, [illegible] and [illegible] [illegible])

Cement [illegible]

Signs [illegible]

Till expansion?

0 – 40mm: Shallow clayey topsoil. Very dark brown, loose. Few inclusions. 0% surface visibility.

40 – 150mm: Very dark brown clay. Moderately compact and clumpy. Few inclusions. Little orange and buff flecking.

150 – 180mm: Very dark brown clay. Compact. Few inclusions and little flecking. More consistent texture compared to stratum above.

(end of excavation)

NOTE: A1/A2 horizons appear to have been truncated, having a disturbed B horizon, possibly ploughed over, down to 150mm

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavators	LP, Steve	Date	6-2-[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Sea Wave TM)	Easting	Northing	
Soil Landscape	Rothbury	Branction	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope %	
		Moved	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	90	A1 A2 B				
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil composition, compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit	heavy compact coarse clay overlying clay
Condition and integrity	very shallow soils, may have been
Signs of burning/heating	impacted by ploughing
TU expansion?	large cracks in clay

ANAMBAR TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	157
Excavators	LP , Steve	Date	2-12-19

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description or number)	

LOCATION

GPS (Location Name)	Easting				Northing		
Soil landscape	Rothbury		Branstone		Thunder		
Landscape	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %		
					Munsell		

EXCAVATION wet sieved dry sieved

Unit #	Depth (cm)	Soil Horizon	Soil Texture	Carbon/Burning/Heating	Disturbance/Retrieval	Abnormal Objects #
1	50	A1 A2 B			grass root	
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit: heavy compact brown clay overlying clay

Conditions and integrity: Very Charcoal [illegible]

Signs of burning/heating: Large cracks [illegible] clay

Expansion?

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 160
Excavators	Jose Tod	Date 6/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Priority of expansion, Lots?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Standard Datum)	Easting		Northing	
Soil landscape	Kathbury	Branxton	Hunter	
Landscape	Creek bank	Flat	Lower, Mid, Upper slope	Ridgeline
Aspect	N E S W		Slope %	
			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dry Code	Colour/Boring/Heating	Disturbance/Formulation	Aboriginal Objects #
1	100	A1 A2 B			G'Rush Mangle	
2	190	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, Dimensions and colour, structure, bioturbation and expansion for each stratigraphic unit)

Condition and integrity: A1 + A2 · truncated + ploughed off the surface

Signs of burning/heating

TU expansion?

Spit 1 + 2 Clay content ↑ in density + consistency with ↓ stopped @ 190 due to hard compactness of clay

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	161
Excavation	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence	
Why/by or Recession/ How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (or sound/ study)	Easting		Northing	
Landscape	Rotabury	Transition	Hunter	
Landform	Crest/ Flat	Lower, Mid, Upper Slope	Raised flat	Ridgeline	Hilltop
Aspect	N E S W	Slope %	5	
		Moisture		

EXCAVATION wet sieved dry sieved

Sp. #	Depth (mm)	Soil Colour	Soil Type code	Cultural/Geology/Heritage	Disturbance/Foundation	Aboriginal Objects
1	100	A1 A2 B			Roots	
2		A1 A2 B				
3		A1 A2 B				
		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation (in each stratigraphic unit)

Condition and integrity

Signs of mixing/cleaning

TD expansion?

A1: Thin lense (20-30mm) of loose, fine & crumbly silt topsoil.

A2/B: Mixed layer of silt & clay loam, predominantly clay that is sticky, dense and compacted in large pockets. The silt [illegible] channels and cracks along clay pockets.

A/B: Dense, homogeneous clay dominates the spit, 90% clay at a depth of 90-150mm

ANAMBAH TEST EXCAVATION 12-0222		TEST UNIT # PLAN #	162-
Excavators	[illegible]	Date 6/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Lowest Easty)	Easting		Northing	
Soil landscape	Sublimity	Transition	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Rolled Flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope % 5%
Soil			Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Ht (mm)	Colour/Boning/Heating	Disturbance/Inundation	Additional Observations
1	100	A1 A2 B			roots	
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and colour, moisture, bioturbation and expansion for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Tot expansion?

A1: Thin lense, 20mm deep, of fine silt and crumbly ~ by 10mm. Relatively moist

A2: Mix of silty loam and large pockets of homogeneous, dense & compacted clay. Channels of loam that have formed cracks in the clay.

B: At depth of 80-100mm, - dense, homogeneous clay is encountered

ANAMBAH TEST EXCAVATION 18-0227		TEST UNIT # PLAN #	[illegible] A3
Excavators	[illegible]	Date [illegible]	

SUMMARY OF EXCAVATION

Cat of Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (to [illegible])	Easting	Northing	
[illegible] Landscape	Rothbury	Branxton	Hunter
Landform	Creek bank	Flat, Lower, Mid, Upper slope	Raised flat, Ridgeline, Hillrap
Aspect	N E S W	Slope % 45%	
[illegible]		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Carbon/Burning/Stains	Disturbance/Disturbation	Aboriginal Objects
[illegible]	100	A1 A2 B ?	Clay		[illegible]	
[illegible]	150	A1 A2 [illegible] ?	Clay		[illegible]	
[illegible]	[illegible]	A1 A2 B	Clay			
[illegible]		A1 A2 [illegible]				
[illegible]		A1 A2 [illegible]				
[illegible]		A1 A2 [illegible]				
[illegible]		A1 A2 [illegible]				
[illegible]						

FURTHER DESCRIPTIONS

Soil [illegible] and stratigraphic [illegible]

Condition and integrity

Signs of [illegible]

[illegible]

0 - 30mm: Shallow, loose clay topsoil. Dark grayish brown. Few inclusions. 0% surface visibility

30 - 130mm: Dark brown clay (slight yellowish tint). Compact. Few inclusions and little flecking. Clumpy.

130 - 150mm (end of excavation). Similar to stratum above but texture is more consistent.

NOTE: A1/A2 horizons appear to have been truncated and the B horizon possibly ploughed over to about 130mm below the surface.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P Pit 164
Excavation	[illegible]	Date	6/12/12

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Work of expansion/ cause?	
Photograph #	
Samples (description & number)	

LOCATION

Gulf (Provincial Survey)	Easting	Northing	
Soil landscape	Kalabury	Branden	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Ridge, flat [illegible] Hilltop		
Aspect	N E S W	Slope % 2	
[illegible]		Mounted	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Hv. Code	Cultivation/Boundary/Grading	Disturbance/Bioturbation	Aboriginal Objects
1	16(5)	A1 A2 B			(grass, Roots, Plough)	
2	16(5)	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, cultivation, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity Spit 1 & 2: loam ↑ in clay content

Signs of burning/heating with ↓ into a more consistent clay

TL expansion? base.

A1 + A2 = truncated & ploughed off with a clay consistency throughout with ~5% gravel light brown silt in the clay cracking.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	165
Excavators	[illegible]	Date	6/12/12

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence ?	
Worthy of expansion? How?	
Pre-sampling ?	
Sources (description & number)	

LOCATION

GPS (Grid Ref) Tracks	Easting		Northing	
Soil Landscape	Rothbury	Branston	Thrater	
Landform	Crest/Bank	Flat	Lower/Mid/Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
Slope %	5%			
Munsell				

EXCAVATION wet sieved dry sieved

Sector	Depth (mm)	Soil Horizon	Soil Ht. code	Carbon/Bioturbation/Coating	Disturbance/Disturbance	Aboriginal Object
1	100	A1 A2 B			Roots	
2	200	A1 A2 B			Roots	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil Composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and regulation for each stratigraphic unit)

Condition and integrity

Signs of Earthquake

Disturbance?

A1: A very fine (loam) layer of predominantly silty loam, particles tend to be fine to medium sized. This stratigraphic unit extends for approx 20-40mm.

A2: Below the silt unit, a mix of silt and clay is present. It is predominantly a moist, sticky and compact clay with pockets & channels of softer, less dense silty clay that forms in [illegible] 5-8 mm thick.

B: Base consists of dense and compacted especially sticky dark brown, [illegible] clay. Roots do not appear to penetrate these large pockets of clay

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	166
Excavation	LARUSSA, [illegible]	Date	6/12/14

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Sensitive Wave)	Easting		Northing	
Soil landscape	Rotabury	Brandon	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hill top
Aspect	N / E / S / W	Slope S: 5°		
		Moisture		

EXCAVATION wet sieved dry sieved

Suite	Depth (cm)	Soil Horizon	Soil Bounds	Colour/Boundary/Heating	Disturbance/Disturbation	Aboriginal Objects
1	100	A1 A2 B				
2	120	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
1 [illegible]						

FURTHER DESCRIPTIONS

Soil (inorganic & organic), particle size, mottling, abundance, distinctness and colour, structure, [illegible] and [illegible] of each stratigraphic unit.

Condition and integrity

Signs of burning/heating

TU expansion?

A1. Thin lense of silt with particles 2-3mm in thickness that extends for approx 20-30mm below surface. Relatively moist and powdery, and contains roots larger than 2mm and smaller roots 1mm.

A2: Lense of silty loam which crumbles, intermixed with large pockets of very dense and compacted, homogeneous clay. The silt forms in channels within pockets of clay.

B: Unmodified, homogeneous clay horizon. Sticky, dense & compacted dark brown clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA P 167
Excavators	P. WOODLEY / T. GRIFFITHS	Date 06/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Eastern Mode)	East 19	Northing	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Ka and Hal Ridgeline Hillop		
Aspect	N E S W	Slope % 0%	
Soil		Munsel	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon			Soil Type	Cultural Features/Heating	Disturbance/Intrusion	Aboriginal Objects #
1	100	A1	A2 ?	B	[illegible]		[illegible]	
2	170	A1	A2 ?	B	[illegible]			
3	[illegible]	A1	A2	B	[illegible]			
4		A1	A2	B				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
8								

FURTHER DESCRIPTIONS

Soil Compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and migration for rock stratigraphic units

Condition and integrity

Signs of burning/heating

TM expansion?

0 – 40mm: Shallow topsoil. Very dark brown clay. Loose. 0% surface visibility.

40 – 130mm: Very dark brown clay. Compact. Few inclusions. Little orange and manganese flecking. Clumpy.

130 – 170mm: Very dark brown clay. Moderately compact. Few inclusions. Little flecking. More consistent texture compared to stratum above. Moister.

NOTE: It appears the A1 and A2 horizons have been truncated. The strata from 0 – 130mm appears to be B horizon clay which has been ploughed over.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 168
Excavators	[illegible]	Date 6/12/12	

SUMMARY OF EXCAVATION

Ground Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS/Weakness (Class)	Easting	Northing	
Soil Landscape	Rothbury	Branston	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ploughed Hilltop		
Aspect	N E S W	Slope % 1% [illegible]	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pit Code	Carbon/Burning/Heating	Disturbance/Disturbance	Aboriginal Objects
1	100	A1 A2 B			Gravel Ploughed	
2	180	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each distinguishable soil)

Cohesion and integrity
Signs of burning/heating
(1) expansion?

Spit 1: A1 [illegible] light brown slightly humic grainy silt. Has quartz and inclusions & is mixed with A2 - dark brown loam ↑ in clay content with ↓ with ploughed cracking evident.

Spit 2: A2 with @ approx 160 clay base evident

Base: dark brown compact clay with cracking due to moisture [illegible] [illegible] [illegible]

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT ✦ PLAN ✦	[illegible]
Excavation	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Cores/Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph ✦	
Sampler (description & number)	

LOCATION

GPS (Accuracy)	Easting		Northing	
Soil landscape	Kalimna	Bonavista	Hunter	
Landform	Creek bank	Flat	Lower MSL Upper slope	Raised [illegible]
Aspect	N	E	S	W
			Slope %	[illegible]
			Mounted	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Vis. Index	Cultural Heating/Burning	Disturbances/Disturbance	Abundance Objects ✦
1	[illegible]	[illegible]		[illegible]	[illegible]	
2		[illegible]				
3		[illegible]				
4		[illegible]				
5		[illegible]				
6		[illegible]				
7		[illegible]				
[illegible]						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and colour, moisture, breakdown of vegetation) [illegible] stratigraphic units: heavy compact, clayey, [illegible] sandy [illegible] overlaying

Condition and integrity: dark red brown clay. Clay has [illegible]

Signs of burning/heating: a waxy lustre

TU expansion? ✓

ANAMBAH TEST EXCAVATION 13-0227		TEST UNIT 4 PLAN 4	170
Excavators	LP	Date	5 12 . 12

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Geocentric Datum)	Easting		Northing	
Soil landscape	Kolliberry	Branstone	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope % 2
LN			Mansell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pit code	Colour/Boring/Flaring	Distribution/Disturbance	Aboriginal Objects
1	100	A1 A2 B		—	[illegible]	
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

(1) expansion?

1 spit only. Dark brown very sandy loam.
reached dark brown red clay @ 100cm.
clay has large cracks and waxy
in appearance.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT ✦ PLAN ✦	[illegible]
Excavators	LP	Date	5-12-11

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (Northing & Easting)	Easting			Northing			
Soil Landscape	Rathbury		Brandon		Hunter		
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	1	
					Munsell		

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Sediment code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	[illegible]	A1 A2 B		[illegible]	[illegible]	
2	150	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, [illegible] and [illegible], moisture, [illegible] and vegetation for each stratigraphic unit)

Condition and integrity

Signs of [illegible]

Other [illegible]

Spit 1 = dark brown sandy loam very compact and dry

Spit 2 = dark brown sandy loam, tending to mid brown clay base.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 172
Excavators	Josh & Ted	Date 5/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Northing Easting)	Easting	Northing	
Soil landscape	Rubbury	Burrison	Hunter
Landform	Creek bank Flat Lower/Mid/Upper slope	Raised flat Ridgeline	Hilltop
Aspect	N / E / S / W	Slope % 2	
Mtl		Mudsed	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Vis code	Carbon/Burning/Heating	Disturbance/Disturbation	Aboriginal Objects
1	[illegible]	A1 A2 B			[illegible]	
2	[illegible]	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil transmission, composition, particle size, inclusions, thickness and extent, moisture, water volume and vegetation, for ex. heating/graphite etc?

Condition and integrity
Signs of burning/heating
Tel expansion?

Spit 1 A1 0-50mm light brown quarry silt with grass root [illegible] mixed with an A2 of dark brown loam ↑ in clay content with ↓

Spit 2 A2 still very disturbed

Base very compact dark brown clay

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area D 173
Excavators	Dos & Ted	Date 5/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (no sites or TU's)	Easting	Northing	
Soil landscape	Refinery	Branches	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope	Raised flat Ridge	Hilltop
Aspect	N E S W	Slope %	
PH		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil % rate	Cultural/Boring/Heating	Disturbance/Disturbation	Aboriginal Objects
1	100	A1 A2 B			ploughed & dry	
2	170	A1 A2 B				
3	Dark	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity: 5 pits 1 + 2: A1 + A2 mixed. A1 a light brown gravel silt. A2: dark brown lower clay ↑ in clay with ↓ Grass roots throughout

Signs of burning/heating

TU expansion?

Base: Mid brown compact clay with inclusions of occasional bleached clay.

ploughed + disturbed.

ANAMBAH TEST EXCAVATION 12 11227		TEST UNIT # PLAN #	174
Excavators	UGRESSO + CEDRIC	Date	5/12/12

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photograph #	
Samples (description & number)	

LOCATION

Utilities assessed before	Easting		Northing	
Soil Hardness	Soil Hardness	Transition	Homer	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
			Slope %	3°
			Mussell	

EXCAVATION wet sieved dry sieved

Sp. #	Depth (mm)	Soil Horizon	Soil Tv code	Carbon/Burning/Hearth	Disturbance/Disturbation	Abundant Objects #
1	100	A1 A2 A			ants nest, roots	
2	160	A1 A2 B				
3		A1 A2 B				
4		A1 A2 A				
5		A1 A2 B				
6		A1 A2 A				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, [illegible] and [illegible] for each stratigraphic unit

Condition and integrity

Signs of [illegible]

[illegible]

[illegible]

Dry, silty, ~~[illegible]~~ clayey soil of medium-particle size that contains a high frequency of siltstone - other stone inclusions. It transitions toward a predominantly clay matrix, whereas still contains root matter as does the soil towards the surface. An ants nest is visible in the SW quadrant of the pit.

[illegible] a depth of 120-160mm, the mixed silt-clay has been replaced by a dense + compacted, homogeneous clay that exhibits a waxy-texture, and is easily dried out.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	125
Excavators	[illegible]	Date	5/12/11

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (see Wave Study)	Easting	Northing	
Landscape	Rotabury	Branden	Hunter
Landform	Crest/ridge Flat Lower Mid Upper slope	Raised flat	Ridgeline Hilltop
Aspect	N E S W	Slope % 5	
		Marked	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil as rate	Carbonaceous/Sealing	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B			[illegible]	
2	200	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and Integrity

Signs of Intensity/Sealing

Expansion?

A1: Up to a depth of approx 20mm, soil is characterised by predominantly silty loam, where particles are medium-small sized and wisy-moist.

A2: Below 20mm, the soil is a mix of silt and clay, but is transitioning to predominantly clay. The clay is moist and compacted and at times sticky, but still contains small channels of silt. Small roots [illegible] are present.

B: At a depth of approx 200mm, a homogeneous, compact, moist & sticky clay is [illegible].

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	1716
Excavators	[illegible]	Date 6-12-12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (Continued Work)	Easting		Northing	
Soil landscape	Bathurst	Brandon	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeway	Hilltop
Aspect	N	E	S	W	Slope % 4	
pH			Munsell			

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type	Colour/Bonding/Heating	Disturbance/Bioturbation	Abnormal Objects
1	[illegible]	A1 A2 B		—	[illegible]	○
2	[illegible]	A1 A2 B		—	—	○
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						○

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, [illegible] and vegetation for each stratigraphic unit) [illegible] compact black [illegible] [illegible] [illegible] black

Condition and integrity red [illegible] clay. Clay has cracks [illegible]

Signs of burning/heating [illegible] [illegible]

Other [illegible]

ANAMBAH TEST EXCAVATION 1240227		TEST UNIT ✦ PLAN ✦	177
Excavators	[illegible] - [illegible]	Date	5/12/12

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Orbs Residence?	
Why Fly at Expansion? Have?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (previous Study)	Easting ☐☐☐☐☐☐	Northing ☐☐☐☐☐☐☐	
Soil landscape	Rafabury	Brandon	Hunter
Landform	Creek bank Flat	Lower Wide Upper Slope	Raised flat Ridgeline Hilltop
Aspect	N E S W	Slope S	
		Munsell	

EXCAVATION [illegible] dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Lab Code	Carbon/Burning/Hearing	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B				
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness of strata, mottling, bioturbation and regression for each stratigraphic unit)

Condition and Integrity

Signs of Earthmoving

Tile expansion?

A dry, fine + powdery silty-clay is encountered. Roots 1mm thick are common, as are siltstone and other stone nodules. At a depth of 90 to 100mm below the surface, as dense, compacted, almost wavy-textured clay is encountered. It is quickly dried out and cracks slowly after exposure. It is homogeneous in nature + a light brown [illegible] colour.

ANAMBAH TEST EXCAVATION 12 11227		TEST UNIT # PLAN #	178
Excavators	LARESSA + CEDRIC	Date 5/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (reference)	Easting			Northing			
Soil landscape	Rothbury		Branston		Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	~~Raised flat~~	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	5°	
					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pit code	Potential Significance	Disturbance/Interpretation	Aboriginal Objects #
1	150	A1 A2 B				4
2	200	A1 A2 B				1
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						3

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, mottling, inclusions and extent, moisture, bioturbation and regularity of contact/stratigraphic unit)

Condition and integrity

Signs of homogeneity

Unexpensive?

A1-A2: Dry, silty, clayey soil with frequent inclusions of siltstone, Transtone + other rocks. At depth of Approx 180mm, the Dry, powdery silt begins to transition to drier, cut, dense - almost, wavy clay which is homogeneous + contains fewer rocky inclusions + transtone powder.

B: Clay reached at approx 180-200mm depth.

+ Stone artefact (scale) found @ depth of 130mm in SW quadrant of sp + 2.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT ✦ PLAN ✦	Area P 179
Excavators	[illegible] + [illegible]	Date 5/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Accuracy) (Cross)	Easting ☐☐☐☐☐☐	Northing ☐☐☐☐☐☐☐	
Soil landscape	Rothbury	Ecotone	Hunter
Land Form	Crest bank Flat	Lower AFM, Upper slope	Raised flat [illegible] Hilltop
Aspect	[illegible]	Slope %	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dry Sieve	Carbon/Burning/Heating	Disturbance/Vacuolation	Aboriginal Objects
1	100	(A1) A2 B			[illegible]	0
2	200	A1 (A2) (B)			gravels	1 [quartz core]
3		A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Depth						1 [quartz core]

FURTHER DESCRIPTIONS

Soil temperature, compaction, particle size, inclusions, thickness and extent, moisture, bulk relation and vegetation for each stratigraphic unit

Condition and integrity — Spit 1 A1 0-100 light brown soft

Signs of burning/heating — silt with grass root inclusions &

TU expansion? — occasional gravels

Spit 2 A2 - light grey fine silt with bedrock gravel inclusions & bleached clay

Base sediments is bedrock gravels while [illegible] end is red clay while E end is slightly more brown in colour

ANAMBAH TEST EXCAVATION T2 0227		TEST UNIT # PLAN #	Area P 180
Excavator	Josh Too	Date 5/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Work in excavation? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Geocentric Datum)	Easting	Northing	
Site landscape	Rothbury	Branch	Hunter
Landform	Crest/Ridge Flat Lower Mid Upper slope Raised Flat Ridgeline Hilltop		
Aspect	N E S W	Slope S Z	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Unit Code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B			Grass roots	
2	180	A1 A2 B			Gravels	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Other						

FURTHER DESCRIPTIONS

Soil (comparison, composition, particle size, inclusions, thickness and extent, [illegible] and [illegible] to [illegible] stratigraphic [illegible])

Condition and integrity Spit 1 A1 0-100 light brown/grey

Signs of burning/heating Grey silt with grass roots & occasional

TU expansion? bedrock gravels

Spit 2 light grey alluvial silt with 30% bedrock gravels

Bottom [illegible] is average clay [illegible] is average bedrock

Mildly disturbed

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 181
Excavators	[illegible]	Date 5/12/12	

SUMMARY OF EXCAVATION

Grain Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS Readings (Easting)	Easting	Northing	
Soil landscape	Residuary	Transition	Hunter
Landform	Creek bank flat	Lower, Mid, Upper slope	Raised flat (Ridgeline) Hilltop
Aspect	(N) (E) (S) (W)	Slope %	
		Mantell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (cm)	Soil Horizon	Soil % cons	Carbon/Burnt/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	100	(A1) (A2) B			[illegible]	1
2	190	A1 (A2) B				0
3	0.44	A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						1

FURTHER DESCRIPTIONS

Soil (construction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity: Spit 1: A1 light brown grainy silt with grass root inclusions @ 50 mm

Signs of burning/heating: onto an A2 of Mid brown loam with decaying rock, clay lumps + bleached clay inclusions. Very mixed & compact

TS expansion? Spit 2: A2

Base: A mixture of mid brown compact clay [illegible] decaying rock & bleached clay

Very disturbed context

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 182
Excavation	[illegible]	Date 15/[illegible]/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Zone 56 in Map)	Easting	Northing	
Site landscape	Bathbury	Brewster	Hunter
Landform	Creek bank Dune Lower, Mid, Upper slope	Raised flat Ridge Hilltop	
Aspect	A, B, C, D	Slope 5	
		Munsell	

EXCAVATION wet-sieved dry-sieved

Spit #	Depth (cm)	Soil Horizon	Soil Sample	Contamination/Heating	Disturbance/Tree Cavities	Aboriginal Objects
1	150	A1 A2 B			6 roots dry plugged	0
2	180	A1 A2 B			" "	1
3	done	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil formation, composition, particle size, Estimations, Thickness and extent, moisture, bioturbation and sequence for each stratigraphic unit?

Condition and Integrity: Spit 1: A1 0-40 light grey fine silt with grass roots onto an A2 of

Signs of burning/heating: Mid brown loam with bleached clay inclusions

Tree expansion? Very compact with an ↑ in clay & inclusions with ↓

Spit: A2 (as above)

Base: compact yet wavy in places. brown/greeny yellow clay. Cracked & very dry in most places

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 183
Excavators	[illegible] + [illegible]	Date 5/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Working of expansion/ Flow:	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Southern Area)	Easting	Northing	
Soil landscape	Bathbury	Boonstone	Hunter
Landform	Creek bank Flat Lower Mid Upper slope Raised Ld Ridge Top Hilltop		
Aspect	(N) (E) (S) (W)	Slope %	
Site		Mapped	

EXCAVATION [illegible] [illegible]

Spit #	Depth (cm)	Soil Horizon	Soil % Code	Colour/Boundary/Heating	Disturbance/Excavation	Aboriginal Objects
1	100	(A1) (A2) 1			Grass roots bleached clay	○
2	200	A1 (A2) 2			bleached clay	○
3	Unc.	A1 A2 (3)				
4		A1 A2 3				
5		A1 A2 3				
6		A1 A2 3				
7		A1 A2 3				
Depth						○

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation, for each stratigraphic level)

Condition and integrity — Spit 1: A1 0-40 a fine brown gravelly

Signs of burning/heating — silt holding grass roots with an A2

TU expansion? — of light brown compact loam ↑ in clay

content with ↓ with bleached clay & gravel!

inclusions

Spit 2: A2

Base: a hard compact undulating clay surface

Mildly disturbed

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible]	Date 5/[illegible]/12	

SUMMARY OF EXCAVATION

Cultural Anthropologic Objects	
Other evidence?	
Worthy of expansion? Why?	
Photographs?	
Sample descriptions & numbers	

LOCATION

GPS location (easting)	Easting	Northing	
Soil landscape	Richmond	Riverview	Chinbee
Landform	Creekbank Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N E S W	Slope %	
Soil		Munsell	

EXCAVATION Wet sieved Dry sieved

Spit #	Depth level	Soil Horizon	Soil color code	Carbon/Burning/Heating	Textural variation/Inclusions	Artefacts Obtained
1	[illegible]	A1 A2 B		[illegible]	[illegible]	[illegible]
2	[illegible]	A1 A2 B		[illegible]	[illegible]	[illegible]
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						[illegible]

FURTHER DESCRIPTIONS

Soil composition, compaction, particle size, inclusions, thickness and colour, variation, boundaries and expansion for each stratigraphic unit?

Condition and integrity

Signs of burning/heating

Excavation?

[illegible] quantity of [illegible] produce [illegible] clay [illegible] a relatively compacted [illegible] stone & other stones are present

[illegible] depth of [illegible] per [illegible] layers [illegible] encountered - probably a deciduous [illegible] deposit

[illegible] depth of [illegible] below [illegible] a relatively dense, compacted [illegible] yellowish clay is encountered.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	1965
Excavators	Larsen + Cottrell	Date 3/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Off-Providence?	
Worthy of expansion? Plan?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (or stated) Waste	Easting		Northing	
Soil landscape	Rathbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower Mid-upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
Slope %	5%			
Soil			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil % code	Colour/Hardness/Heating	Disturbance/Disturbation	Aboriginal Objects #
1	100	A1 A2 B				
2	200	A1 A2 B				
3	240	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (preparation, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and Integrity

Signs of Burning/Heating

Tick expansion?

A1: A dry, powdery and fine silty, clayey soil that contains frequent inclusions of siltstone, ironstone + other rocks. At a depth of

A2: 100mm, the soil begins to transition to a dry and almost wavy, dense clay, but that is predominantly consistent of siltstone + other rocks.

B: At 240mm, a homogeneous dense clay is encountered.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	18[illegible]
Excavator#	[illegible]	Date 5/12/[illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (as saved) Zone	Easting		Northing	
Soil landscape	Kathbury	Transition	Hunter	
Landform	Creek bank	Flat	Lower/Mid/Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
			Slope % 52	
			Munsell	

EXCAVATION wet sieved dry sieved

Scale	Depth from	Soil Horizon	Soil in code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B				3
2	200	A1 A2 B				0
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						3

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and density, moisture, stratification and regulation for each stratigraphic unit

Condition and integrity

Signs of bioturbation

Tidal exposure

A1 - A2: Dry, fine, powdery silty, clayey soil containing frequent inclusions of ~~[illegible]~~ limestone siltstone & other rocks. At a depth of approx 90-100mm, the soil is [illegible] lighter grey and contains more clay and limestone deposits, as well as a greater abundance of siltstone & other rock nodules.

B: A hard, compacted and fairly dense but dry, almost wavy clay is encountered at approx 180mm below surface.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	187
Excavators	[illegible] + [illegible]	Date 5/12/[illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence	
Weather of excavation/ [illegible]	
Photograph #	
Samples (description & number)	

LOCATION

Grid [illegible]	Easting		Northing	
Soil landscape	Kafabury	Branxton	Hunter	
Landform	Creek bank	[illegible]	Mid slope	Raised flat / Ridgeline / Hilltop
Aspect	N / E / S / W	Slope 5%		
[illegible]		Mud soil		

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Hz code	Colour/Boundary/Texture	Disturbance/Excavation	Aboriginal Objects
1	100	A2 / B			Roots	1
2		A2 / B				
3		A2 / B				
4		A2 / B				
5		A2 / B				
6		A2 / B				
7		A2 / B				
Totals						1

FURTHER DESCRIPTIONS

Size (composition, composition, [illegible] size, inclusions, thickness and extent, moisture, [illegible] and vegetation for each photographic unit)

Condition and integrity

Signs of burning/heating

TU expansion?

A: A [illegible] of silty clay with inclusions of [illegible] limestone. Other stones is encountered to a depth of between [illegible] below the surface. Roots are present.

B: A dense compact clay with very few channels of silt is encountered just below the surface. It is homogeneous and contains few roots. [illegible]

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 188
Excavators	Dash Tied	Date 5/8/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Pick up plan #	
Sample (Accumulation & number)	

LOCATION

GPS (Address Sheet)	Easting	Northing	
Soil Landscape	Rathbury	Branston	Hunter
Landform	Creek bank Flat Lower Mid Upper slope Raised flat Ridge		
Aspect	N E S W	Slope %	
		Vernall	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Direction	Soil Ex code	Caution/Burning/Heating	Disturbance/Disturbation	Aboriginal Objects #
1	110	A1 A2 B			[illegible]	1
2	210	A1 A2 B			[illegible]	0
3		A1 A2 B				
4		A2 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A2 A2 B				
Depth						1

FURTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, thickness and colour, mottling, [illegible] and segregation, for each stratigraphic unit)

Convolution and Integrity Spit 1: A1 0-40mm light brown granulated

Signs of burning/heating silt with Grass root inclusions and an

TU expansion: A2: of Mid brown loam with bleached clay + gravel inclusions with lumps of clay throughout

Spit 2: A2 with an 9... clay + clay lumps

Sag: undulating compact dark brown clay with occasional volcanics

Very disturbed due to possible ploughing

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 189
Excavators	Jost + Tod	Date 15/12/12	

SUMMARY OF EXCAVATION

Cause Aboriginal Object -	
Other evidence?	
Worthy of expansion? Low?	
Photograph #	
Samples (description & number)	

LOCATION

GPS Precision (Hand)	Easting			Northing			
Soil landscape	Residuary		Burnston		Dunter		
Landform	Creek bank	Flat	Lower Mid Upper slope	Rainfall	Ridgeline	Hill top	
Aspect	N	E	S	W	Slope %	--	
TD					Munsell		

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Nodes	Colour/Burning/Heating	Disturbance/Disturbation	Abundance Objects*
1	100	A1 A2 B			Grass roots	5
2	200	A1 A2 B			Gravels	0
3	300	A1 A2 B			"	1
4	400	A1 A2 B			"	0
5	560	A1 A2 B			"	0
6		A1 A2 B				
7		A1 A2 B				
Total						6

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and colour, moisture, hydrochloric acid, segment, pyrite, stratigraphic unit)

Condition and integrity: Spit 1: an A1 + A2 present. A1

Signs of burning/heating: 0-40mm light brown/grey silt holding Q'Rods

TD expansion?

Spits 2-5: A2 light grey fine silt very uniform throughout. ↑ in gravels with ↓

↓ A2 [illegible] clay + bedrock reached. Silt soil likely to be an alluvial deposit

Rock: N^th end of pit: bedrock is a shale like flat bars

Clay: an orange/brown clay with inclusions

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	190
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other Evidence?	
Working in expansion/ How?	
Photographic	
Samples (description & number)	

LOCATION

GPS Precision (Cross)	Easting	Northing	
Soil Landscape	Rotabury	Branxton	Hunter
Landform	Creek bank Flat Lower/Mid/Upper slope	Raised flat	Ridgeline Hill top
Aspect	N E S W	Slope % 5%	
Soil		Munsell	

EXCAVATION wet sieved dry sieved

Spec#	Depth from	Soil Horizon	Soil Lab code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		Charcoal	Roots	
2	200	A1 A2 B		Charcoal	Charcoal [illegible]	
3	300	A1 A2 B		Charcoal	Charcoal [illegible]	
4	400	A1 A2 B				
5	500	A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and volume, moisture, bioturbation, and vegetation for each stratigraphic unit)

Cultural and Integrity

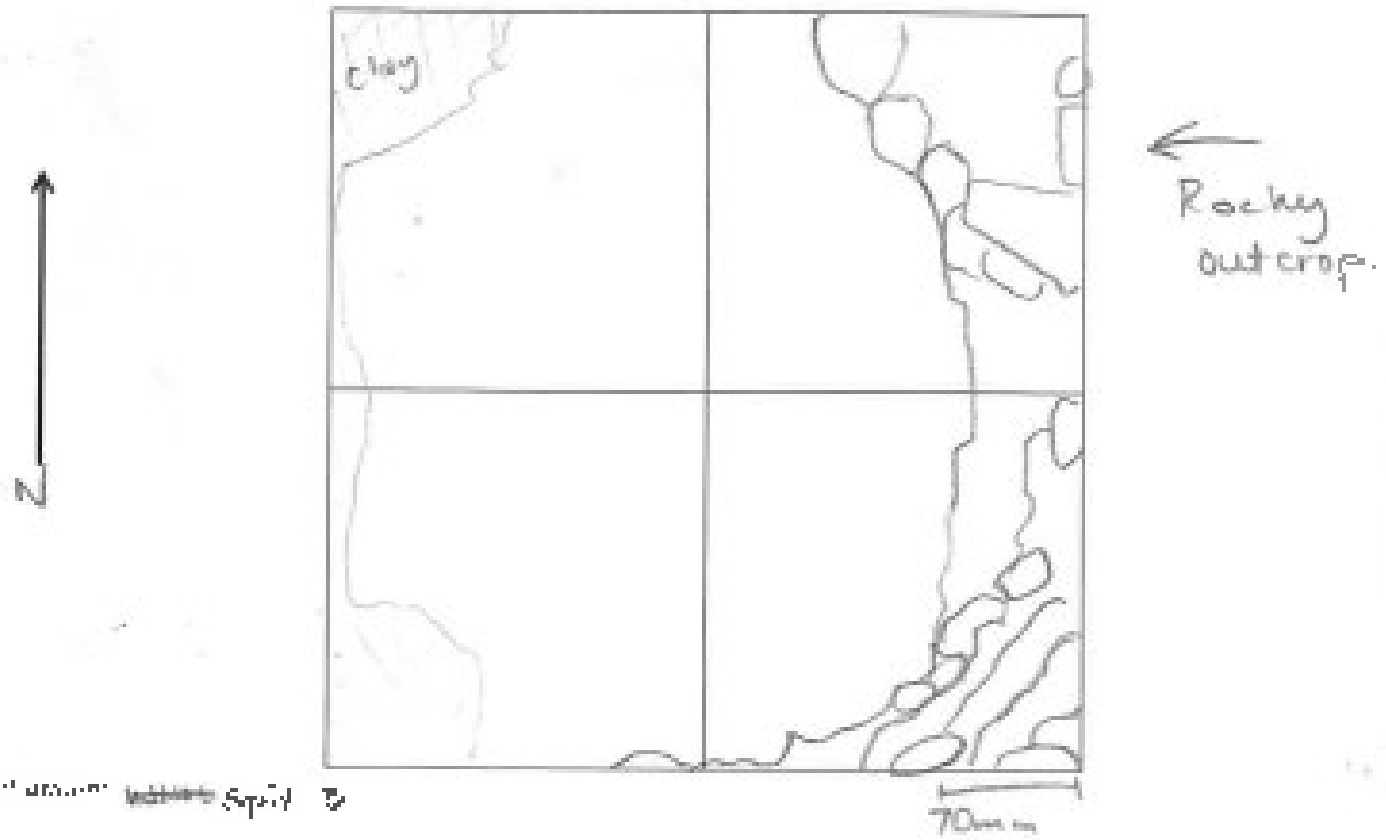
Significance/Ranking

Till expansion?

A2: Dry, fine powdered soil (clay?) characterised by frequent deposits of shale-like, limestone + ironstone. This rocky deposit extends to a depth of about 480-500mm below the surface, where a light brown clay and the natural bedrock [illegible] encountered.

B: Characterised by [illegible] clay and large outcrops of a shale-like (banded, crumbling into slivers?) rock.

Plan



Sketch Plan

Date:
Scale:

Relation to other TU

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible]	Date 4/12/12	

SUMMARY OF EXCAVATION

Found Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

Collaboration (Grid)	Easting	Northing	
Soil/substrate	Kathleen	Branston	Hunter
Landform	Creek bank / Flat / Lower, Mid, Upper slope / Raised flat / (Ridgeline) / Hilltop		
Aspect	(N) (E) (S) (W)	Slope % 2	
Soil		Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Pocket	Carbon/Burnt/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	40	(A1) (A2) B			Grass mats	0
2	700	A1 (A2) B			[illegible]	6
3	500	A1 (A2) B			"	7 [illegible]
4	400	A1 (A2) B			"	0
5	Unit	A1 A2 (B)				
6		A1 A2 B				
7		A1 A2 B				
Totals						13 [1 core]

FURTHER DESCRIPTIONS

Soil (compaction, composition, [illegible], inclusions, thickness and extent, moisture, bioturbation and [illegible]) in each stratigraphic unit:

Condition and integrity Spit 1: A1 0-40mm light brown silt

Signs of burning/heating holding the grass root inclusions

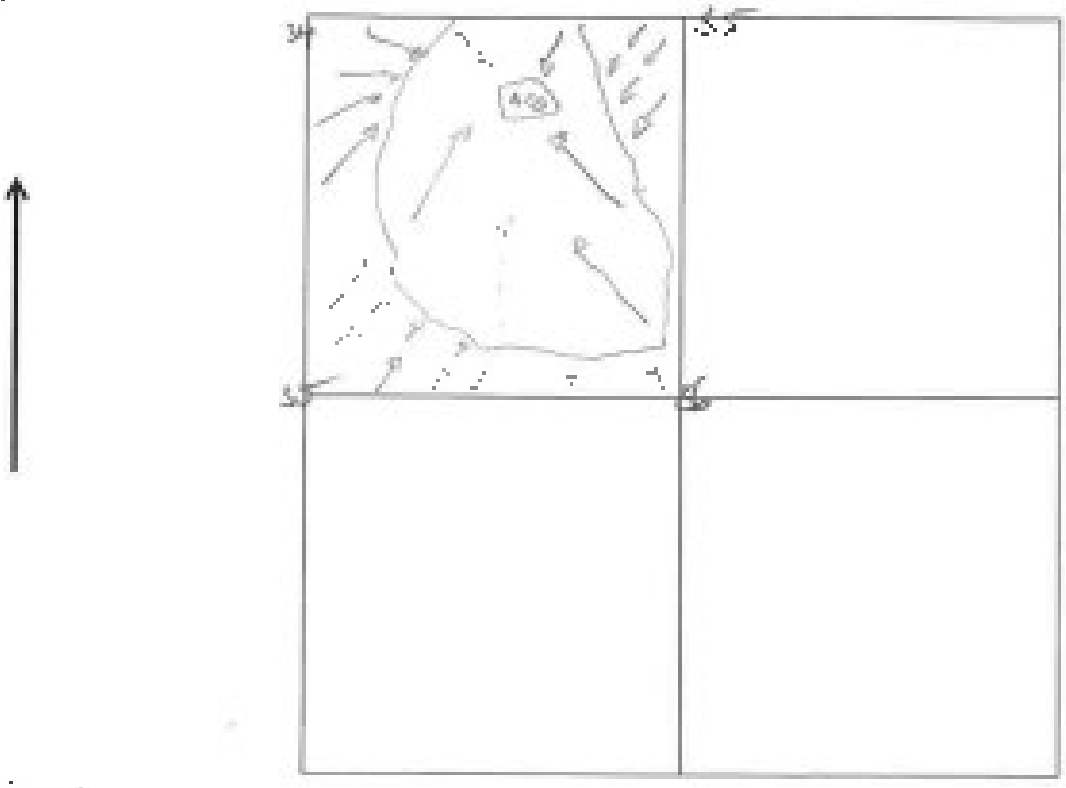
TU excavation? A2: light very [illegible] alluvial silt with ~15% gravel material [illegible] other evidence of disturbance

Spits 2-4: A2 (as above)

spit 4: [illegible] a dark yellow/brown hard compact alluvial clay. Very undulated but not ploughed.

Base: yellow/brown compact hard alluvial undulating clay

Plan



Split drawing

Section Plan

Form

Scale

Relation to other TU

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 192
Excavators	[illegible]	Date 4/12/12	

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (provided nearby)	Easting	Northing	
Soil landscape	Rothbury	Branxton	Dunbar
Landform	Creek bank Flat Lower, Mid, Upper slope Raised Flat Ridgeline Hilltop		
Aspect	N E S W	Slope S 2	
[illegible]		Mud well	

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil in bags	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects#
1	110	A1 A2 B			G Roots Ploughing	
2	200	A1 A2 B			"	
3	250	A1 A2 B			"	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Depth						

FURTHER DESCRIPTIONS

Soil [illegible] composition, particle size, [illegible] and [illegible] for each stratigraphic unit:

Condition and integrity Spit 1 A1 – light grey granulated silt [illegible]

Signs of burning/heating into an A2 – dark brown compacted loam

Pit expansion? Grass root inclusions throughout

Spit 2 & 3: dark brown loam ↑ in clay with a few inclusions of gravel

Base – cracked hard & dry dark brown clay with few inclusions

ANAMBAH TEST EXCAVATION 12-027		TEST UNIT # PLAN #	Area P 193
Excavators	Cook Tod	Date 4/12/12	

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (standard datum)	Easting		Northing	
Soil landscape	Rotatory	Branches	Frontier	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N E S W	Slope %		
		Munsell		

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Pit code	Carbon/Furnace/Hearth	Sample no./Description	Accidental Objects #
1	90	A1 A2 B			Clots [illegible]	1
2	120	A1 A2 B			"	0
3	Unex	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						1

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and segregation for soils/stratigraphic units)

Condition soil integrity: Spit 1: Mixed fine grained silt & dark brown [illegible] loam. Grass

Signs of burning/heating

Other [illegible]: [illegible] top [illegible]

Spit 2: Very loamy dark brown soil with clay @ approx 100 in [illegible]

Base: Dark brown very compact cracked clay with occasional [illegible]

Very disturbed throughout

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT 4 PLAN 4	AREA O 34
Excavators	P Goodley / C Wright	Date 04/12/12	

SUMMARY OF EXCAVATION

Total Aboriginal Objects	
Other evidence?	
Nearby or associated sites?	
Photographs?	
Samples (description & number)	

LOCATION

GPS co-ordinates (Easting)	Easting	Northing	
Soil landscape	Rockbury	Branxton	Hunter
Landform	Creek bank / Flat / Lower, Mid, Upper slope	Raised flat	Ridgeline / Hilltop
Aspect	N / NE / E / SE / S / SW / W	Slope % 15%	(Indicate as either or raised mound within)
		Munsell	Colour / Spectra

EXCAVATION was sieved / dry sieved

Unit #	Depth (cm)	Soil Horizon	Soil Colour	Inclusions/Comments/Features	Disturbance/Condition	Artefact Objects
1	100	A1 A2 B	[illegible]		[illegible]	
2	200	A1 A2 B	Dark		Possible	10
3	300	A1 A2 B	Dark		[illegible]	0
4	350 – 400	A1 A2 B	Dark		[illegible]	2
5	400 – 450	A1 A2 B	Dark		[illegible]	0
6	UNCHANGED	A1 A2 B?	Dark		[illegible]	
7		A1 A2 B			[illegible]	
8						

FURTHER DESCRIPTIONS

Soil composition, compaction, colour, texture, inclusions (charcoal, artefacts, fauna, bones etc), stratigraphic units

Landform and topography

Spatial distribution/relationship

Comments

0 – 70mm: Greyish brown silty clay topsoil, loose, 10% surface visibility. Few inclusions.

70 – 350/380mm: Dark brown clay. Moderately compact. High proportion of orange, black and white flecking, especially the lower (decomposed) boundary.

350/380 – 400/450mm (end of excavation): Dark brown clay matrix, compact, with a high proportion of decomposed stone (orange, white and some black), ~~50%~~ ~~[illegible]~~ about 50%.

NOTE: Due to compactness of soil, difficult to excavate beyond this depth. Not certain that the natural horizon has been reached. The raised mound on which the test unit is located could be [illegible]

ANAMBAU TEST EXCAVATION T2-0227		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count & Artifacts/Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Sample (description or number)	

LOCATION

GPS (excavation)	Rest up	Northing	
Soil landscape	Rotlibury	Frankton	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hill up		
Aspect	N E S W	Slope %	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Description	Soil Horizon	Soil to mds	Carbon/Burning/Eating	Disturbance/Bioturbation	Average Glycerol
1	[illegible]	A1 A2 B		[illegible]	[illegible]	7
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						7

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation per dark strata/grain/sands) dark brown sand and red brown compact [illegible]

Condition and integrity ✓

Signs of burning/eating

Thin expansion

2 [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA J 196
Excavation	[illegible]	Date 29/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Whereby observation?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Location Plan)	Easting	Northing	
Soil landscape	Rothbury	Branston	Hunter
Landform	Creek bank	Lower, Mid, Upper slope	Raised flat
Aspect	N E S W	Slope % 10%	
Soil		Munsell	

EDGE OF RAISED FLAT ABOVE CREEK BANK

EXCAVATION wet sieved / dry sieved

Sample	Depth (mm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Disturbance/Mineralisation	Aboriginal Objects #
1	100	A1 A2 B	[illegible]		Root Sets	3
2	200	A1 A2 B	CLAY			0
3	280	A1 A2 B	CLAY			0
4	UNDAMAGED	A1 A2 B	CLAY			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, compression, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Fill expansion?

0 – 50mm: Greyish brown silty clay topsoil. Loose. 0% surface visibility.

50 – 200mm: Brown to greyish brown clay. Very compact. Some orange, white and black flecking. Few inclusions.

200 – 280mm: Transition to a softer, moderately compact to moderately soft clay. Brown. A much higher proportion of inclusions (orange, black and white) including fine and coarse sub-angular inclusions (up to about 20%). The clay is much more moist.

NB: Possible heat affected mudstone recovered at the interface between the compact clay and the underlying moist clay with inclusions.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA J 197
Excavators	P. WOODLEY / D. SWAN	Date 29/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Work by at expansion/ close?	
Photograph #	
Samples (description & number)	

LOCATION

GPS recorders (Name)	Easting	Northing	
Soil landscape	Rubbery	Branxton	On slope of flat Hunter
Landform	Creek bank Flat	Lower/Mid/Upper slope	Raised flat Ridgeline Hollow
Aspect	N E S W	Slope % 5-10%	
		Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Type	Colour/Boring/Flecking	Disturbance/Disturbance	Aboriginal Objects #
1	100	A1 A2 B	Fully clay + clay	[illegible]	Roots	1
2	200	A1 A2 B	Clay	[illegible]	[illegible]	0
[illegible]	[illegible]	A1 A2 B	Clay			
[illegible]		A1 A2 B				
[illegible]		A1 A2 B				
[illegible]		A1 A2 B				
[illegible]		A1 A2 B				
[illegible]						1

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, [illegible] and [illegible] for each [illegible])

Landform and integrity

Signs of burning/heating

TU expansion?

0 - 40mm: Greyish brown silty clay. Loose. 0% surface visibility. Few inclusions.

40 - 180mm: Brown clay. Moderately compact. Orange and black flecking. Few inclusions.

180 - 200mm (end of excavation): Yellowish brown compact clay. Orange buff and black flecking. Few inclusions.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	198
Excavators	[illegible]	Date [illegible]	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Grid) Easting		Northing		
Soil landscape	Bathurst	Branch	Lucatel	
Landform	Creek Bank	Flat	Lower, Mid, Upper slope	Raised Fat	Ridgeline	Hilltop
Aspect	N	E	S	W	Phase 3	65%
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pit Code	Carbon/Burning/Heating	Disturbance/Bioturbation	Average Intensity
	100	A1 A2 B		Silty clay	Roots	0
2	100	A1 A2 B		Silty clay	Roots	0
3	200	A1 A2 B		Silty clay	Roots	0
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Stress of burning/heating

TU expansion

M.A2 Soil is characterised by fine + crumbly silt with clay inclusions and frequent root material, some as thick as 8mm but generally 1mm in thickness. Silty clay is moist & generally olivine up to depth of 200-260mm.

B: At 260mm a [illegible] dense and [illegible] compacted clay is [illegible] 90% of the soil [illegible] clay [illegible] plastic and [illegible] [illegible] has been disturbed by ploughing [illegible].

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavation	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	1
Other evidence?	
Worthy of expansion? Issue?	
Photographs?	
Samples (description & number)	

LOCATION

Grid (precision stamp)	Easting		Northing	
Soil landscape	Kalimnary	Branston	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Rolled Hill / Ridgeline / Hilltop
Aspect	N E S W	Slope % 5%		
pH		Munsell		

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Type	Colour/Burn Oxidation	Disturbance/Disturbation	Aboriginal Objects#
1	100	A1 A2 B		Clay	Roots	1
2	200	A1 A2 B		Clay		0
3	2200	A1 A2 B				0
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						1

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, moisturation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

Ill expressed

N-D2 Dense, compacted layer of moist, sticky & compacted clay with very little silt topsoil, probably due to erosion of the slope. Clay is largely homogeneous in large pockets with few pockets of loose, crumbly clay that holds its shape when pressed. At a depth of approximately 200mm, the spit is almost exclusively a uniform, moist & densely compacted clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA 1 200
Excavators	F. WOODLEY / D. SAVAN	Date 29/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Location Survey)	Easting	Northing	
Soil landscape	Rothbury	Bonnet	Rotated above creek [illegible]
Landform	Creek bank Flat Lower MSL Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope % 0%	
Soil	VAGUE IX	Munsell	

EXCAVATION wet sieved dry sieved

Split #	Depth (mm)	Soil Horizon	Soil Hardness	Carbon/Burning/Heating	Disturbance/Intensity	Aboriginal Objects #
1	100	A1 A2 B			SEE TEST 2	0
2	180	A1 A2 B		FRAGMENTS OF [illegible] CARBONISED WOOD		1
	[illegible]	A1 A2 B				
		A1 A2 B				
		A1 A2 B				
		A1 A2 B				
		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Sig. [illegible]

Expansion?

0-50mm: Grayish brown silty clay. Moderately soft to moderately compact. Topsoil layer. Loose. 0% surface visibility.

50-150mm: Brown to grayish brown clay. Compact. High proportion of orange and black flecking but few inclusions. Carbonised wood fragments.

150-180mm: Brown clay. Moderately softer ~~[illegible]~~ and moister in patches compared to layer above. Orange and black flecking. Few intrusions.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	201
Excavators	AS + NP	Date 29/3/12	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other Evidence?	
Why Try at expansion? Cause?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (to closest 50 m)	Easting		Northing	
Soil landscape	Bodhaury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised Bed	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
					Munsell	

EXCAVATION wet sieved dry sieved

Split #	Depth (cm)	Soil Structure	Soil Texture code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B				○
2	200	A1 A2 B				✗
3	—	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, porosity, size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Conditions and Integrity

Signs of Burning/Heating

Test Expansion?

0-30 - LIGHT BROWN GRASSY TOPSOIL

30-170 - LIGHT BROWN LOAMY (?) CLAY - V. COMPACTED

ORANGE STONE FLECKING THROUGHOUT

170-200 LIGHT BROWN, COMPACTED CLAY

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible]	Date 29/3/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS no. [illegible]	Easting ☐☐☐☐☐☐	Northing ☐☐☐☐☐☐☐	
Sub landscape	Rothbury	Branxton	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Eased flat Ridgeline Hilltop		
Aspect	N E S W	Slope % 2	
		Munsell	

EXCAVATION wet sieved dry sieved

Spec#	Depth (cm)	Soil Horizon	Soil Pit code	Cultural/Burning/Heating	Disturbance/Disturbance	Aboriginal Objects
1	[illegible]	A1 A2 B			GRASS ROOT	1
2	>30	A1 A2 B			— B —	5
3		A1 A2 B			— B —	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						6

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and depletion for each stratigraphic unit?

Condition and integrity

Signs of burning/heating

TU expansion?

0 – 30 LIGHT BROWN GRAVEL [illegible]

30 – 200 COMPACTED LIGHT BROWN LOAM WITH SOFT ORANGE [illegible] (DON'T KNOW WHAT SORT) THROUGHOUT IV DRY & CRACKING

200 – 230 LIGHT ORANGEY BROWN CLAY

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	203
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Way by of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS [illegible]	Easting	Northing	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creek bank	Flat, Lower, Mid, Upper slope, Rolled flat, Ridgeline, Hilltop	
Aspect	N E S W	Slope % 5%	
[illegible]		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth Scale	Soil Horizon	Soil Type	Cultural Density/Heat Ratio	Disturbance/Disturbance	Aboriginal Objects
1	100	A1 A2 [illegible]		[illegible]	[illegible]	0
2		A1 A2 [illegible]				
3		A1 A2 [illegible]				
4		A1 A2 [illegible]				
5		A1 A2 [illegible]				
6		A1 A2 [illegible]				
7		A1 A2 [illegible]				
Total						0

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and extent, [illegible] stratigraphic unit)

Contents and integrity

Signs of burning/[illegible]

Tell expansion?

A1-D2: Dense, compacted layer of predominantly clay which is moist and sticky. Large homogeneous patches of clay are contracted with loose, medium sized clumps (approx 3-4mm [illegible]) of clay that fall away from the larger clumps, creating channels & gullies. Small and larger inclusions of burnt orange-red, yet powdery (upon inspection) clay, as well as isolated particles of charcoal, are present within the soil horizon.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	204-
Excavation	CARESSA / JEFFRY	Date	2/3/14

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS Variations (Lines)	Easting		Northing	
Soil landscape	Kalimaty	Beaumont	Fountain	
Landform	Creek bank	Flat	Low Mid Upper slope	Raised Flat Ridgeline Hilltop
Aspect	N E S W	Slope % 15%		
pH		Munsell		

EXCAVATION sea-sieved dry-sieved

Spits	Depth (cm)	Soil Horizon	Soil Type code	Colour/Mottling/Fixing	Tissue/Sand/Inclusion	Stringer/Stretch
1	100	A1 A2 B		Clay	Rock, [illegible]	0
2	[illegible]	A1 A2 B		Clay		1
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil / compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

TU expansion?

Pit 12. Soil has predominantly clay that is compacted + dense + has evidently been suppressed and not recently ploughed. Soil is moist + typically ~~clay~~ large pockets of clay with finer, crumbling clay that clumps together + holds its shape when pressed together. An ants nest is obviously nearby given presence of ants in SW corner of pit, and ants 2m – are common.

At depth of between 150 and 200 cm below the surface, clay is more compacted + dense + forms in larger homogeneous pockets than before (eg. as opposed – higher in the pit. Clay is dark, rich in colour.

AREA I
20[illegible]

ANAMBAH TEST EXCAVATION 12-[illegible]		TEST UNIT # PLAN #	
Excavators	[illegible]	Date 29 [illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photographs?	
Sources (description & number)	

LOCATION

GPS location/ Transp.	Easting		Northing	
Soil landscape	Rothbury	Branden	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %
					Munsell

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil by sole	Carbon/Burning/Holding	Distribution/Stratification	Aboriginal Objects
1	[illegible]	[illegible]				[illegible]
2		A1 A2 [illegible]				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						[illegible]

FURTHER DESCRIPTIONS

Soil (compaction, stratification, particle size, inclusions, diagnostic and other structure, bioturbation and vegetation for each stratigraphic unit)

Continuous and integrity

Signs of burning/heating

Expansion?

0 [illegible] SHALLOW TOP SOIL DARK BROWN
[illegible] CLAY COMING DOWN [illegible] TO DARK
BROWN CLAY V COMPACTED WITH SOME
CRACKS ON THE BASE

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	
Excavators	[illegible]	Date [illegible]	

SUMMARY OF EXCAVATION

Cultural Assemblage/Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Sea Level Datum)	Easting	Northing	
Soil landscape	Richbury	Branston	Homer
Land form	Creek bank Flat Lower. Mid. Upper slope	Raised flat	Ridgeline Hollow
Aspect	N E S W	Slope % 5	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit#	Depth level	Soil Horizon	Soil Tx code	Cultural/Bearing/Dating	Disturbance/Perturbation	Analysis of Objects#
1	40	A1 A2 B				
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Depth						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and organism for undisturbed/disturbed)

Continuous and integrity

Signs of burning/heating

TU expansion

G – 40 – DARK BROWN GRASSY TOPSOIL ON TOP DARK BROWN CLAY

– LARGE CRACK ON BASE OF TEST PIT HOWEVER CONSIDERING HOW SHALLOW TOP SOIL IS & SURFACE IS NOT PLOUGHED, IT APPEARS UNLIKELY TO HAVE REMENANT ORIGINAL SOIL HORIZONS

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible] 207
Excavators	P. WOODLEY / D. [illegible]	Date [illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (position & body)	Easting					Northing		
Soil landscape	Rothbury			Branxton			Hunter	
Landform	Creek bank	Flat	Lower	Mid	Upper slope	Rolled flat	Ridgeline	Outlook
Aspect	N	E	S	W	Slope %			
					Mid-soil			

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pit code	Cultural/Heating/Hearing	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B	[illegible]			
2	200	A1 A2 B	[illegible]			
3	[illegible]	A1 A2 B	[illegible]			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Compact and integrity

Signs of meaningful activity

Will expansion?

0 – 60/80mm: Greyish brown silty clay topsoil. Dense root system. Moderately soft. Few inclusions.

60/80 – 120/180mm: Greyish brown silty clay. Moderately compact. Few inclusions. Orange and buff flecking.

120/180 – 200mm (end of excavation): Dark brown clay. Compact. Few inclusions. Orange, buff and black flecking.

ANAMBAH TEST EXCAVATION 12-0827		TEST UNIT # PLAN #	2 08
Excavators	LARISSA & [illegible]	Date 29/[illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other Objects?	
Work by a responsible [illegible]	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Southeast Corner)	Easting	Northing	
Soil landscape	Refilbury	Branshier	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope 5%	
		Munsell	

EXCAVATION Wet sieved Dry sieved

Spike	Depth (mm)	Soil Horizon	Soil Texture	Colour/Boring/Boating	Disturbance/Foundation	Aboriginal Objects
1	100	A1 A2 B		Silty soil, (limestone) rocky outcrop	Root present	○
2	200	A1 A2 B		Rocky (limestone) outcrop		○
3	270	A1 A2 B		limestone deposit		○
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Sp						○

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Coordinates and integrity

Signs of burning/heating

Ethnographic

A- A thin lense of silty, fine topsoil extends to a depth of 90mm below the surface.

A2- An undisturbed, limestone deposit is encountered at 90-180mm and continues for the next ~200mm. It is characterised by dry, crumbly, powdery limestone particles and larger rocky outcrop with root material at a depth of 270mm

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT 4 PLAN 4	[illegible] 209
Excavators	Sash - Troy	Date 28/1/17	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Grid Zone)	Easting		Northing	
Soil Landscape	Boundary	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
					Mensell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pit code	Cultural/Remains/Feature	Disturbance/Translation	Abundance of Objects
1	[illegible]	A1 A2 B		background organics	[illegible]	
2	[illegible]	A1 A2 B		"	ploughed	
3	280	A1 A2 B		"	ploughed	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				

FURTHER DESCRIPTIONS

Soil recognition, composition, [illegible] and [illegible] for each stratigraphic unit

Condition and integrity: Spit 1 & 2: Dark black background organic matter & silt. Grass roots (red) ploughed throughout. Clay ↑ with ↓ clay nodules evident throughout.

Signs of burning/heating

Disturbance

Spit 3: Brown very clay with organic background throughout. Plough marks evident in clay surface.

T.O.

Plan:

Symbol Key:

Section Plan:

Date:
Scale:

Relation to other TU:

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	2 10 [illegible]
Excavators	[illegible]	Date 28/1/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion/ How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (or stored in 50 m)	Easting						Northing							
Soil landscape	Kalabury				Brandon					Hunter				
Landform	Creek bank	Flat	Lower Mid Upper Slope				Raised flat		Ridgeline		Hilltop			
Aspect	N	E	S	W	Slope %									
Flood					Manned									

EXCAVATION wet sieved dry sieved

Spit #	Top/Bottom	Soil Horizon	Soil Lab code	Carbon/Burnt/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	1000	A1 A2 B			GRASS ROOTS/ [illegible]	0
2	1000	A1 A2 B				0
3	—	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil Compaction, composition, particle size, inclusions, thickness and extent, moisture, disturbance and separation for each stratigraphic unit?

Condition and integrity

Signs of homogenizing

TU experience?

0-20 DARK BROWN GRAVELLY TOP SOIL

20-160 DARK BROWN SILTY CLAY, V. COMPACTED, DISTURBED

DRY BLOUGHING - DRY

160-110 - DRY DARK BROWN CLAY

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	2.11
Excavation	CRESSA, JEFF + [illegible]	Date 29/11/16	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS or sources used	Easting	Northing	
Soil landscape	Rotatory	Boundary	Lunatic
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope % 5%	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Sample	Carbonation/Heating	Distribution/Intensity	Aboriginal Objects
	100	A1 A2 B		Silty soil, sticky clay	[illegible]	
2	100	A1 A2 B		Silty clay, dense clay		
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness of organic moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

Thermoluminescence

A1-A2: A dry, percolating silty soil with [illegible] up to a depth of 80mm. The soil below 80mm is moist and crumbly and contains few pockets of moist, sticky and pliable clay that is the same [illegible] as the silt and shows evidence of mixing.

B. At a depth of approx 140mm larger patches of homogenous, dense and heavily compacted clay is encountered.

ANAMBAH TEST EXCAVATION [illegible]	TEST UNIT # / PLAN #	[illegible]
Excavators: P. WOODLEY / [illegible]	Date: 23/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Variety of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS [illegible]	Easting	Northing	
Site landscape	Refabury	Branches	Lambs
Landform	Creek bank / Flat / Lower / Mid / Upper slope / Raised flat / Ridgeline / Hilltop		
Aspect	N / E / S / W	Slope % 5 - 10%	
		Mass	

EXCAVATION wet sieved / dry sieved

Spit	Depth (cm)	Sc. Reason	Soil Type	Carbon/Burning/Lithology	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B	CLAY		[illegible]	1
2	200	A1 A2 B	CLAY	[illegible]	[illegible]	0
3	300	A1 A2 B	CLAY			0
4	[illegible]	A1 A2 B	CLAY			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						0

FURTHER DESCRIPTIONS

Soil composition, description, particle size, inclusions, hardness and extent, moisture, bioturbation and vegetation (for soil stratigraphic units)

Condition and integrity

Signs of burning/heating

Thermoscaling

0 - 40/50mm: Sandy topsoil. 5% surface [illegible]

40/50 - 250mm: Dark brown, compact clay. Few inclusions (angular gravel). Orange and black flecking.

250 - 300mm (end of excavation): Brown clay, slight yellowish tint. Orange and black flecking. Compact. More homogenous than the clay above. Decomposing. Soft coloured [illegible] stone fragments appearing.

ANAMBAH TEST EXCAVATION 12-2027		TEST UNIT # PLAN #	2015
Excavators	[illegible]	Date	23/11/17

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Priority of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Location + Body)	Easting	Northing	
Soil landscape	Rathbury	Branxton	Hunter
Landform	Creek bank Flat Lower/Mid/Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope S 12 (2)	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dn code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects #
	150	A1 A2 B			Grass roots	0
2	200	A1 A2 B				0
3	250	A1 A2 B				0
4	350	A1 A2 B				0
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
						0

FURTHER DESCRIPTIONS

Soil (compaction, inclusions, particle size, inclusions, thickness and contact, moisture, bioturbation and vegetation for each stratigraphic unit)

Conditions and integrity: Spit 1 - Spit 3 = turned over A2 horizon with very few inclusions.

Signs of burning/heating

TU expansion? A1 eighted changed into the A2 within the first 40mm where grass roots were [illegible]

Spit 4 from 300 [illegible] the [illegible] [illegible] [illegible] At the base of Spit [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] throughout

ANAMBAH TEST EXCAVATION 12-0217		TEST UNIT # PLAN #	214
Excavators	SM + DS	Date 22/6/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (to ~50 m) Tracks	Easting	Northing	
Soil landscape	Rotbury	Frenchman	Lunan
Landform	Creek bank Flat Lower, Mid, Upper slope Raised Flat Ridgeline Hilltop		
Aspect	N E S W	Slope % —	
		Moved	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Colour/Boring/Flaking	Disturbance/Disturbation	Aboriginal Objects #
1	[illegible]	A1 A2 B	[illegible]		[illegible]	0
2	[illegible]	A1 A2 B	[illegible]			1
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7						
Total						1

FURTHER DESCRIPTIONS

Soil (compaction, compaction, particle size, inclusions, thickness and extent, structure, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity Spit 2 : dark brown loam with

Signs of burning/heating grass root inclusions occasional gravels

TU expansion?

Spit 2: ↑ in clay with ↓ crushed clay

brown very large with

- brown dark with ↑ clay occasional gravels throughout

very disturbed contact

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	205
Excavator:	[illegible]	Date: 25/6/12	

SUMMARY OF EXCAVATION

Cont. Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed?	
Sample (description & number)	

LOCATION

GPS coordinates (if any)	Eastings		Northings	
Soil landscape	Tomiago	Bowraville	Hunter	
Landform	Creekbank Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline Other
Aspect	N E S W	Slope %		
		Microrelief		

EXCAVATION wet sieved dry sieved

Spit #	Description	Soil Horizon	Sample code	Cultural material/artefacts	Disturbance/Disturbance	Aboriginal Objects
1	[illegible]	A1 A2 B			Coarse roots	○
2	[illegible]	A1 A2 B		4 x [illegible]	Grass roots + [illegible] roots	○
3	[illegible]	A1 A2 B		"		○
4	[illegible]	A1 A2 B		" "	[illegible]	○
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						○

OTHER DESCRIPTIONS

Soil composition, compaction, particle size, inclusions, thickness and extent, moisture, distribution and organisation (including soil stratigraphic units)

Condition and integrity: No clear horizon of A1 & A2 - very disturbed and the surface of pit.

Signs of burning/heating: Spit 1 - bags, nails

Potential expansion? Coarse & gross roots in Spit 2

Spit 3: [illegible] in clay compact

Spit 4: [illegible] some - patches of burnt clay

clay compact very high - 70%

disturbed pit with clay 1 above - 60% approx

[illegible]

[illegible]

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	216
Excavators	SM CW [illegible]	Date 25/[illegible]/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (as closed / [illegible])	Easting	Northing	
Soil landscape	Rothbury	Tenneton	Hunter
Landscape	Crest/ Ridge Flat Lower, Mid, Upper slope Raised Flat Ridgeline Hilltop		
Aspect	N (E) (S) (W)	Slope %	
		Mapped	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pit code	Ease of Burning/Heating	Disturbance/Pedestrian	Aboriginal Objects
1	110	(A1) (A2) B		Very Compact	Grass Roots	0
2	200	A1 (A2) B		"	occasional gravels	0
3	300	A1 (A2) B		"	"	0
4	375	A1 (A2) (B)		"		0
5		A1 A2 (B)				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, [illegible], thickness and extent, moisture, [illegible] and regularity for [illegible])

Condition and Integrity Spit 1: No clear A1, very disturbed surface

Signs of burning/heating inclusive of A2

Y/N expansion?

Spit 2-4 : 4 in clay content with ↓ very compact → dry loam with cracked soil profiles. Grass roots → occasional gravels in spits 2 & 3. Clay nodules found throughout

Spit 4 : 25cm digging into clay base

Base: dark wavy brown natural clay with occasional [illegible] of red gravel from context above

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	2-17
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Found Aboriginal Objects	
Other evidence?	
Would you expand on? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Sensitive Theory)	Easting				Northing		
Soil landscape	Rathbury		Bowstrip		Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hillslope	
Aspect	N	E	S	W	Slope % 4%		
[illegible]					Munsell		

EXCAVATION wet sieved dry sieved

Split #	Depth (cm)	Soil Horizon	Soil by code	Carbon/Burnt/Bedrock	Disturbance/Disturbance	Aboriginal Objects #
1	100	A1 A2 B		[illegible]	[illegible]	
2	200	A1 A2 B		[illegible]	[illegible]	
3	300	A1 A2 B		Rich burnt compact silty clay	[illegible]	
4	400	A1 A2 B		silty clay		
5	260-480	A1 A2 B		silty clay		
6		A1 A2 B				
7		A1 A2 B				
[illegible]						

FURTHER DESCRIPTIONS

Soil homogeneity, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation (for each stratigraphic unit)

Condition and integrity

Sign of burning/heating

TU expansion?

A1-A2: Land has been extensively ploughed as evidenced by the mixing of Rich, dark, moist, compact clay, and silt. The clay is sticky and roots are common for the first 150mm below the surface. Disturbance is highly probable from both ploughing & [illegible] activity at a depth of approx 280mm. At about 290mm depth a powdery, crumbling clay is encountered in small pockets (eg 10%). It has been burnt.

A2 & B: [illegible] clay [illegible] [illegible] [illegible] [illegible] [illegible] crumbled clay. Chalk line [illegible] are also present (5% of [illegible])

powdery → [illegible] probably [illegible] [illegible] [illegible]

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	2.8
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other Objects ?	
Worthy of expansion? How ?	
Photograph #	
Samples (description & number)	

LOCATION

GPS [illegible]	Easting				Northing		
Soil landscape	Kafabury			Branxton		Hunter	
Landform	Creek bank	Flat	Lower Mid Hope Escape	Raised flat	Ridgeline	Hill up	
Aspect	N	E	S	W	Slope %	5 %	
					Munsell		

EXCAVATION wet sieved dry sieved

Sample	Depth (mm)	Soil Horizon	Soil Ex code	Carbon/Sorting/Bioturbation	Disturbance/Disturbation	Aboriginal Objects
1	100	A1 A2 B		Dark silty clay, dense	Roots common	○
2	200	A1 A2 B		Dark silty clay	ploughed	○
3	300	A1 A2 B		Dark silty clay	ploughed	○
4	400 (+ 80)	A1 A2 B		Dark silty clay/clay		○
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Other						○

FURTHER DESCRIPTIONS

Soil [illegible], [illegible], particle size, inclusions, [illegible], [illegible] to [illegible] and [illegible] for [illegible]

Location and [illegible]

Signs of [illegible]

Description?

A1/2 Rich, dark silty clay [illegible] silt and mostly compacted clay. Clay varies in consistency between compact, dense clay and finer particles of silty clay (Roughly 70 clay 30% silt) Heavily disturbed by ploughing, no clear differentiation of surface soil and subsurface horizon. This extends down to approx 250-380mm below surface. Especially moist clay.

B- Homogeneous, dense & compacted moist clay encountered at between 350-380mm below surface.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible]	Date 22/[illegible]/12	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (Southern Alpine)	Easting			Northing			
Soil landscape	Rothbury		Branxton		Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	(Raised flat)	Ridgeline	Hillcrest	
Aspect	N	(E)	(S)	(W)	Slope % 3		
					Munsell		

EXCAVATION (wet sieved) dry sieved

Spit #	Depth from	Soil Horizon			Soil % Mole	Cultural Heating/Floating	Ash/Charcoal/Distribution	Aboriginal Objects #
1	100mm	(A1)	A2	B				0
2	200mm	A1	A2	B				0
3	300mm	A1	A2	B				0
4		A1	A2	B	Excavation 22/11/12 Recovered at 35[illegible]mm			0
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
8								0

FURTHER DESCRIPTIONS

Soil Compaction, compaction, parent soil, inclusions, thickness and extent, moisture, bioturbation and vegetation (or rock stratigraphic layer)

Condition and Integrity OK

Signs of burning/heating

Tile segments?

Compact brown sticky loam (high clay content)

Spit 2 + 3 lots of yellow crushed rock mixed with brown clay

Cuttle down into brown clay mixed with shale (natural)

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	270
Excavators	SM + DS	Date	28/6/12

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Reference Tissue)	Easting	Northing	
Soil Landscape	Bathtub	Branston	Hunter
Landform	Creek bank, Flat, Lower, Mid, Upper slope, Ketted flat, Ridgeline, Hillside		
Aspect	N, E, S, W	Slope %	
		Moisture	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pattern	Carbon/Burning/Heating	Disturbance/Bioturbation	Abnormal Objects #
1	0-100	AC AB B	[illegible]		Grass Roots	O
2	100-200	A AB B	[illegible]	1% charcoal flecking	Grass roots	O
3	200-300	A AB B	[illegible]			O
4	300-350	AC AB B	[illegible]			O
5		AC AB B				
6		AC AB B				
7		AC AB B				
8						O

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Conservation integrity: Spit 1: Grey silty loam with clay content ~5%

Signs of burning/heating: Grass root melograms

TU expansion?

Spit 2-4 A2 [illegible] (dark brown / black) with 9 clay with ↓ very compact soil with few melograms. B: [illegible] charcoal flecking associated with thick grass root clumps. Clay lumps found throughout + associated with disturbance likely due to ploughing.

B: dark brown wavy clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT + PLAN #	A2
Excavators	Vanessa + Celine	Date 30/01/12	

SUMMARY OF EXCAVATION

Cultural/Archaeological Objects	
Other evidence?	
Working or preservation issues?	
Photographs?	
Samples: description & number	

LOCATION

GPS (to nearest 10m)	Easting	Northing	
Soil landscape	Kanahooka	Bombaderry	Lake Illa
Landform	Creek bank / Flat / Lower, Mid, Upper slope / Raised flat / Ridgeline / Hilltop		
Aspect	N E S W	Slope % 2%	
pH		Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (cm)	Soil Horizon	Soil Type code	Carbon/Charcoal/Ash/Burning	Texture/Inclusions	Artefactual Objects #
1	100	A1 A2 B		stone	roots present	2
2	200	A1 A2 B		charcoal		2
3	300	A1 A2 B		charcoal		5 4
4	400	A1 A2 B		charcoal		4
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						13 12

FURTHER DESCRIPTIONS

Soil formation, composition, particle size, inclusions, thickness and extent, evidence, bioturbation and vegetation for each stratigraphic unit:

Conditions and integrity

Signs of mixing/disturbance

Tile association?

A1: Heavily compacted, dense, dry soil. No evidence of manipulation. Soil (dry, clay) transitioning to clay within 100mm spit, but still has clay/silt content. Roots present within first 100-200mm. ~~[illegible]~~ 50mm mark. Dry, crumbly, medium-sized grains, powdery.

A2: Dense, heavily compacted clay loam with few roots + inclusions of charcoal (<0.5%). Stone flake in SE quadrant of trench at approx 300mm deep. Layering dense, compact large clay [illegible] with few silty loam present (sand)

B: Compacted clay silty loam transitioning to clay. No visible charcoal

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	222
Excavators	[illegible] + [illegible]	Date 22/10/[illegible]	

SUMMARY OF EXCAVATION

Count & Original Objects	1
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (if assessed)	East Ag		North Ag	
Soil landscape	Rothbury	Boonstone	Hunter	
Landform	Creek bank	Flat	Lower Slab, Upper slope	Raised flat / Tudgeline / Hilltop
Aspect	N E S W		Slope % 2%	
pH			Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (cm)	Soil Horizon	Soil Ox code	Carbon/Burning/Heating	Cultural Ox/Bioturbation	Assessment Objects
1	100	A1 A2 B		Charcoal fragments	Roots present 2mm thick	1
2	200	A1 A2 B		Charcoal fragments, loam	Roots less present	0
3	300	A1 A2 B		Dense compact clay		0
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						1

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each drainage/spoil unit)

Location and integrity

Signs of burning/heating

TU expansion?

3: Topsoil is fairly loose, dry, powdery loam transitioning into pockets of denser, compacted clay and loam - evidence of disturbance. Roots 2mm in diameter are common.

A2: Silty loam transitioning to pockets of compacted silty clay ~~[illegible]~~ in spits 2 and 3. ~~[illegible]~~ Roots and charcoal 1% present

B: Dense, compact clay with few loam pockets in homogenous clay.

ANAMBAH TEST EXCAVATION (2-022)		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible] / [illegible]	Date [illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Working of excavation? Flow?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Excavated Block)	Easting		Northing	
Soil landscape	Bulbidary	Brandon	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat	Ridgeline	Hillcap
Aspect	A	E	S	W	Slope % 5%
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spot #	Depth (mm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Instruments/Incinerator	Aboriginal Objects
1	100	A1 A2 B	CLAY		[illegible]	3
2	200	A1 A2 B	CLAY		[illegible]	1
3	250 – 300	A1 A2 B	CLAY		[illegible]	0
4	[illegible]	A1 A2 B	CLAY		[illegible]	
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						4

FURTHER DESCRIPTIONS

Soil compaction, compression, particle size, inclusions, thickness and extent, moisture, bioturbation and expansion for [illegible]

Conductor and integrity

Signs of burning/heating

TCI expansion?

0 – 50mm: Shallow topsoil. Loose. 0% surface visibility.

50 – 150 mm: Compact brown clay with orange and black flecking. Few inclusions (rounded).

[illegible] end of excavation: yellowish brown, compact clay. Orange flecking and inclusions (few, sub-angular).

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	22.4
Excavators	[illegible] / J [illegible]	Date 22/11/12	

SUMMARY OF EXCAVATION

Canal Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (or screen tracks)	Easting	Northing	
Landscape	Rothbury	Branxton	Lunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope % <15%	
pH		Munsell	

EXCAVATION wet sieved, dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pockets	Carbon/Burning/Ocean	Disturbance/Foundation	Aboriginal Objects
1	100	A1 A2 B	CLAY		ROOTLETS	0
2	200	A1 A2 B	CLAY		[illegible]	0
3	300	A1 A2 B	CLAY		" "	✓ 5
4	400	A1 A2 B	CLAY		" "	✓ 1
5	UNEXCAVATED	A1 A2 B	CLAY			
6		A1 A2 B				
7		A1 A2 B				
Totals						6

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation) in each stratigraphic unit:

Condition and integrity

Signs of burning/ocean

Soil expansion

0 – 70mm: Sheet topsoil to varying depths. Loose. 0% surface visibility. Greyish brown.

70 – 200/250mm: Clay subsoil. Compact. Dark brown with orange and black flecking. Few inclusions (rounded).

200/250mm – 400mm (end of excavation): Yellowish brown clay. Compact. Few inclusions (rounded). Orange flecking.

No artefacts scored to appear at interface between the A2 and [illegible] horizons.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavator	JM [illegible]	Date [illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS recorded	Easting		Northing	
Soil landscape	Richmond	Bronston	Thomas	
Land form	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
Soil			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Unit Code	Cultural/Burning Location	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B			Grass roots	1
2	200	A1 A2 B		dry + charcoal		[illegible]
3	270	A1 A2 B		clay		[illegible]
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						1

FURTHER DESCRIPTIONS

Soil (connection, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation) for each stratigraphic unit:

Condition and integrity
Signs of burning/heating
Tin expansion?

A1: Thin plasterbed horizon of granulated light grey silt/loam with grass roots throughout [illegible]

A2: dark brown loam with ~ 15% charcoal [illegible] clay content with [illegible]

Bag: Wavy brown clay slightly overlapping surfaces

Plasterbed content: heavily ploughed area causing large degree of soil & clay mingling

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	226
Excavators	SM + DS	Date 22/6/12	

SUMMARY OF EXCAVATION

Total Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (or Zone)	Easting		Northing	
Soil landscape	Rathbury	Blanzian	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope % 1-3 %
Soil					Munsell

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Vs. code	Colour/Texture/Boring	Disturbance/Distribution	Aboriginal Objects
1	0-100	A1 A2 B		brown clay	✓	1
2	100-160	A1 A2 B				0
3	160-220	A1 A2 B				0
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Sub-Tot						1

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation (in root stratigraphic unit)

Condition and integrity A1 : 0-100 granulated silty loamy

Signs of burning/heating with grass root inclusions with burnt

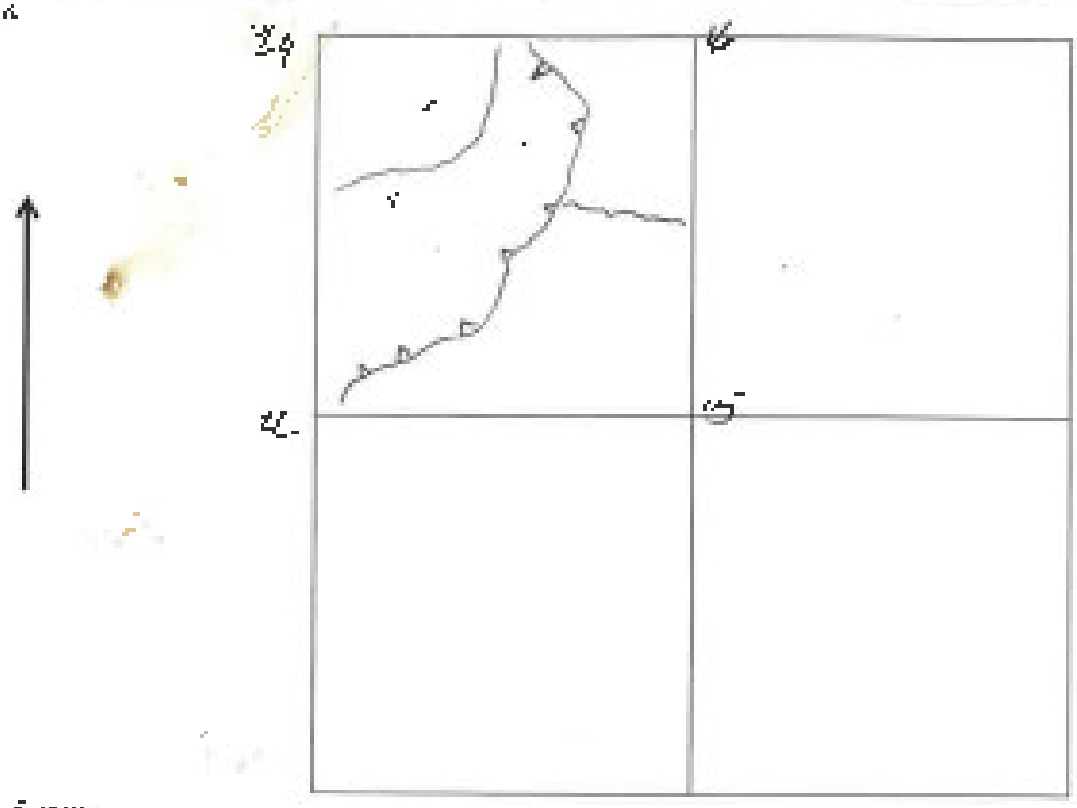
Thermoscan? clay in the Eastern wall (~ 5%)

A2 : Granulated loamy with ? Clay with

Spt 23: Orange/brown clay along the eastern wall is sloping down of the Western. Clay Orange/brown clay very sandy is crushed throughout

Heavily disturbed

Plan



Sun direction:

Section Plan

Form:
Scale:

Relation to other TU

ANAMBAH TEST EXCAVATION 124227		TEST UNIT # PLAN #	227
Excavators	[illegible]	Date 22/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Q1 - evidence	
Worthy of excavation? Yes?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Easting and Northing)	Easting		Northing	
Soil landscape	Bothbury	Beaumont	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope	[illegible]
pH			Munsell	

EXCAVATION Wet sieved dry sieved

Spike	Depth (mm)	Soil Horizon	Soil Dry Code	Carbon/Burning/Bearing	Disturbance/Bioturbation	Aboriginal Objects
1	[illegible]	A1 A2 B				2 [illegible]
2	210 mm	A1 A2 B				19
3	[illegible]	A1 A2 B				15
4	[illegible]	A1 A2 B			[illegible]	2
5	150 mm	A1 A2 B	[illegible]		[illegible]	
6		A1 A2 B				
7		A1 A2 B				
Total						[illegible]

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of Burning/Heating

Old expansion?

→ Diagram

Compact dark brown gritty loam – some included brick.

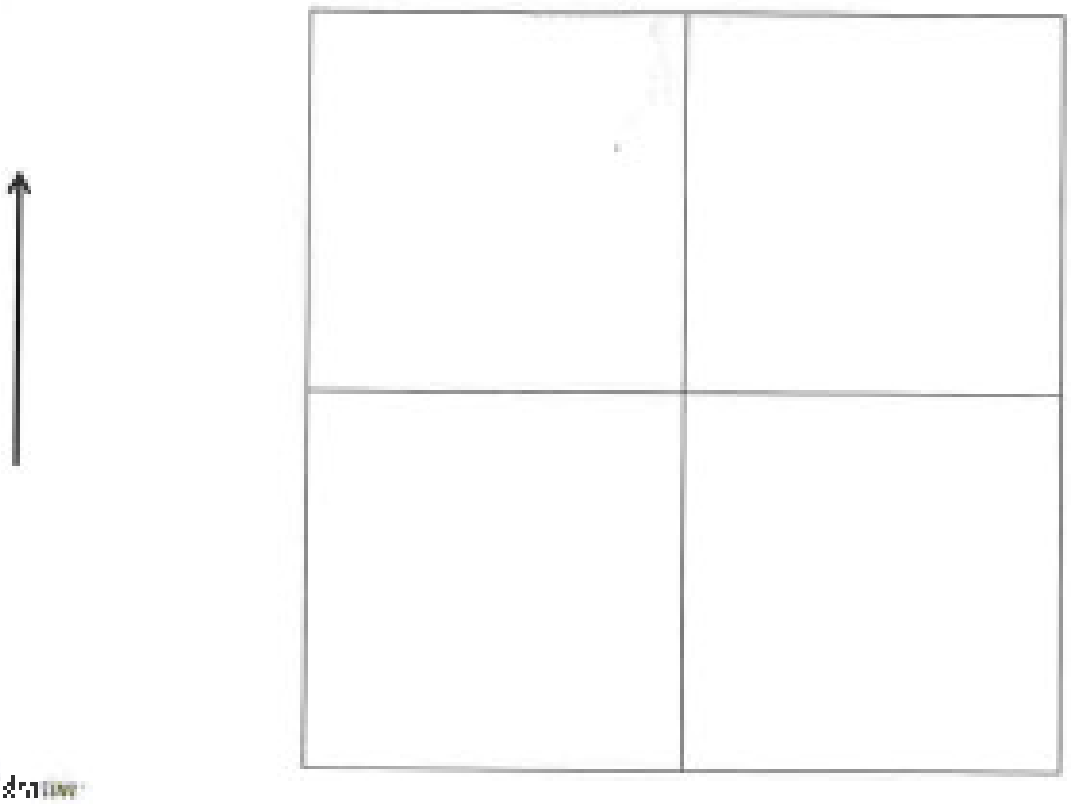
clay mixed with loam – dark brown] beneath topsoil but is clay redeposited from ploughing.

crushed sandy stone, from 210mm – mixed into clay – redeposited.

with some dark

→ sandy increases with depth.

Plan



Split drawer

Section Plan

Issue

Scale

Solution to other TU

very different from other test units surrounding this one. No clear distinct natural clay layer - pit is very disturbed & mixed

Steve Hickey agrees it is mixed and states that the crushed shale / sandy stone like material is imported - not local to the hill. He has suggested if the pit becomes too accordingly deep, we should return to it at salvage stage and expand, or if we have crowbars excavation could continue effectively. Above was agreed to. SH believes this has potential.

Diana Klemic S Hitz [illegible]

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	228
Excavators	[illegible]	Date 27/10/17	

SUMMARY OF EXCAVATION

Local Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS/Ex shows [illegible]	Easting				Northing		
Soil Landscape	Rothbury			Branxton		Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %		
[illegible]					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Disturbance/Disturbation	Aboriginal Objects
1	[illegible]	A1 A2 B				
2	[illegible]	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and colour, moisture, inclusions, and regression for each stratigraphic unit)

Ceramics and integrity

Signs of burning/heating

TU expansion?

A1 compact sticky brown loam with high clay content.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	27(?)
Excavators: [illegible] / T. [illegible]	Date 22/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS coordinates / Datum	Easting		Northing	
Soil Landscape	Rothbury	Branxton	[illegible]	
Landform	Creek bank · Flat · Lower/Mid/Upper slope · (Raised flat) · Ridgeline · Hilltop			
Aspect	(N E S) W		Slope % <2%	
pH			Munsell	

EXCAVATION (wet sieved) dry sieved

Spits	Depth (mm)	Soil Horizon	Soil [illegible] code	Carbon/[illegible]	Disturbance/Bioturbation	Aboriginal Objects
1	100	(A1 A2 B)	[illegible]		CRACKING	2 x [illegible] Z
2	200	A1 A2 (B)	[illegible]		" "	[illegible]
3	[illegible]	A1 A2 (B)	[illegible]		" "	
~~4~~		A1 A2 B				
~~5~~		A1 A2 B				
~~6~~		A1 A2 B				
~~7~~		A1 A2 B				
Totals						2

FURTHER DESCRIPTIONS

Soil formation, consistency, texture, colour, inclusions, thickness and extent, moisture, bioturbation and reasons for non-stratigraphic unit?

Cultural and Integrity

Signs of burning/mottling

Interpretation?

0 – 60/200mm: Greyish to yellowish brown clay, compact. Few inclusions. Some orange flecking. Varying depth.

60/200mm +: Yellowish brown compact clay. Natural. Few inclusions. Some orange flecking.

– Soil deeply cracked.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	230
Excavator	[illegible]	Date 22/10/12	

SUMMARY OF EXCAVATION

Found Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Lat and Long)	Easting ☐☐☐☐☐☐	Northing ☐☐☐☐☐☐☐	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope (Raised flat) Ridgeline Hilltop		
Aspect	N (E) (S) W	Slope 8-13	
pH		Munsell	

EXCAVATION (wet sieved) dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Carbon/Bioturbation/Heating	Thermoluminescence	Aboriginal Objects #
1	[illegible]	(A) A1 B				[illegible]
2	[illegible]	(A1) A2 B				[illegible]
3		A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						[illegible]

FURTHER DESCRIPTIONS

Soil (integration, composition, particle size, inclusions, thickness and depth, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and Integrity

Signs of burning/heating

Full expansion?

Brown

[illegible]

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	221
Excavators	P WOODLEY / T. SWAN	Date 22/11/12	

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS [illegible]	Easting	Northing	
Soil landscape	Redbury	Branston	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope (Raised flat) Ridgetop Hilltop		
Aspect	(N) E (S) W	Slope % 0%	
[illegible]		Mounsel	

EXCAVATION (Wet sieved) dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Type code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	(A1) A2 B	[illegible]		[illegible]	0
2	200	A1 (A2) B	Clay			1
3	250	A1 A2 (B)	Clay		[illegible]	0
✓	[illegible]	A1 A2 (B)	Clay		[illegible]	
✓		A1 A2 B				
✓		A1 A2 B				
✓		A1 A2 B				
[illegible]						1

FURTHER DESCRIPTIONS

Soil composition, compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

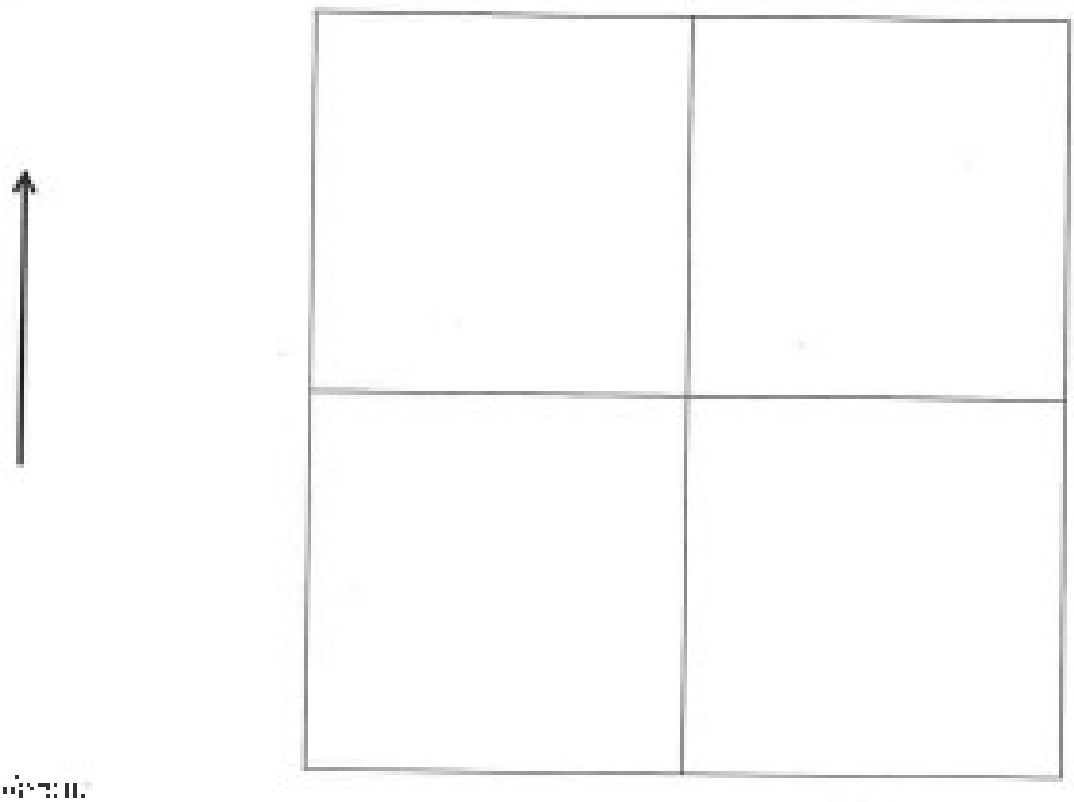
To expansion?

0 - 50mm: Very shallow topsoil. Silty clay. Loose. 0% surface visibility.

50 - 120/200mm: Clay subsoil. Compact. Dark brown. Occasional orange flecking. Few inclusions. Possibly ploughed.

120/200mm - 250mm (end of excavation): Yellowish brown, compact clay. Few inclusions. Some orange flecking. Disturbed and discoloured in part by an ants nest.

Plan



Section Plan

Date:
Scale:

Spit 2

2 lumps of burnt clay
1 artefact
1 possible.

Relative Number TM

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	252 Area C
Excavators	SM - BS	Date 23/11/12	

SUMMARY OF EXCAVATION

Cultural Anthropogenic Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (grass and trees)	Easting	Northing	
Soil landscape	Rothbury	Branston	Hunter
Land form	Creek bank (Flat)	Lower Mid Upper slope	Sand flat Ridgeline Hillline
Aspect	(N) (E) (S) W	Slope %	
Soil		Munsell	

EXCAVATION wet sieved dry sieved

Spot #	Depth (cm)	Soil Horizon	Soil Sample	Culture/Burning/Heating	Disturbance/Disturbance	Moving to Objects
1	120	(A1) (A2) B		Grassed	Grass roots	○
2	1250	A1 (A2) (B)				○
3		A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						○

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for individual graphic unit)

Condition and integrity: Spit 1: A1 + A2: mixed + not a clear distinction. Wag on A1 in patches. Gravel

Signs of burning/heating: no ready inclusions. dark brown loam

Spit 2: dark brown loam mixed with yellow/brown clay. Clay reached at 150mm. No inclusions

B: undisturbed, dry + wooded clay bags

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area C 255
Excavation	SH / RS	Date 23/1/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Workay of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Ex. 1995) Zone	Easting		Northing	
Landscape	Rothbury	Branston	Hunter	
Landform	CTS Coast	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
pH					Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Texture	Colour/Tuning/Heating	Disturbance/Bioturbation	Abnormal Objects #
1	100	A1 A2 B				
2	190	A1 A2 B				
3	220	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and colour, moisture, bioturbation and expansion, for each stratigraphic zone)

Condition and integrity: Spit 1: Granulated light grey silt with A2 from 70mm

Sound burning/heating

TU expansion?

Spit 2: dark brown loam with ↑ in clay & flecking of gravels + clumps of clay throughout

Spit 3: loam + clay @ approx 210mm

Bag: Dusty brown/yellow clay very granulated + mottled throughout

disturbed contacts

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area C 234
Excavators	R.S. J.W.	Date 26/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs #	
Samples (description or number)	

LOCATION

GPS (Southern Cross)	Easting					Northing		
Soil landscape	Rothbury		Branxton			Hunter		
Landform	Creek bank	Flat	Lower Mid	Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope % 2			
					Mouse 1			

EXCAVATION wet sieved dry sieved

Scale	Depth (mm)	Soil Horizon	Soil Lab Code	Carbon/Burning/Heating	Tree Roots/Tree Mottling	Aboriginal Objects #
1	90	A1 A2 B			[illegible]	
2	190	A1 A2 B			[illegible]	
3	300	A1 A2 B				
4	320	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size and colour, thickness and colour, moisture, bioturbation and vegetation in each stratigraphic unit)

Condition and integrity Spit 1 compact loam loudy ploughed

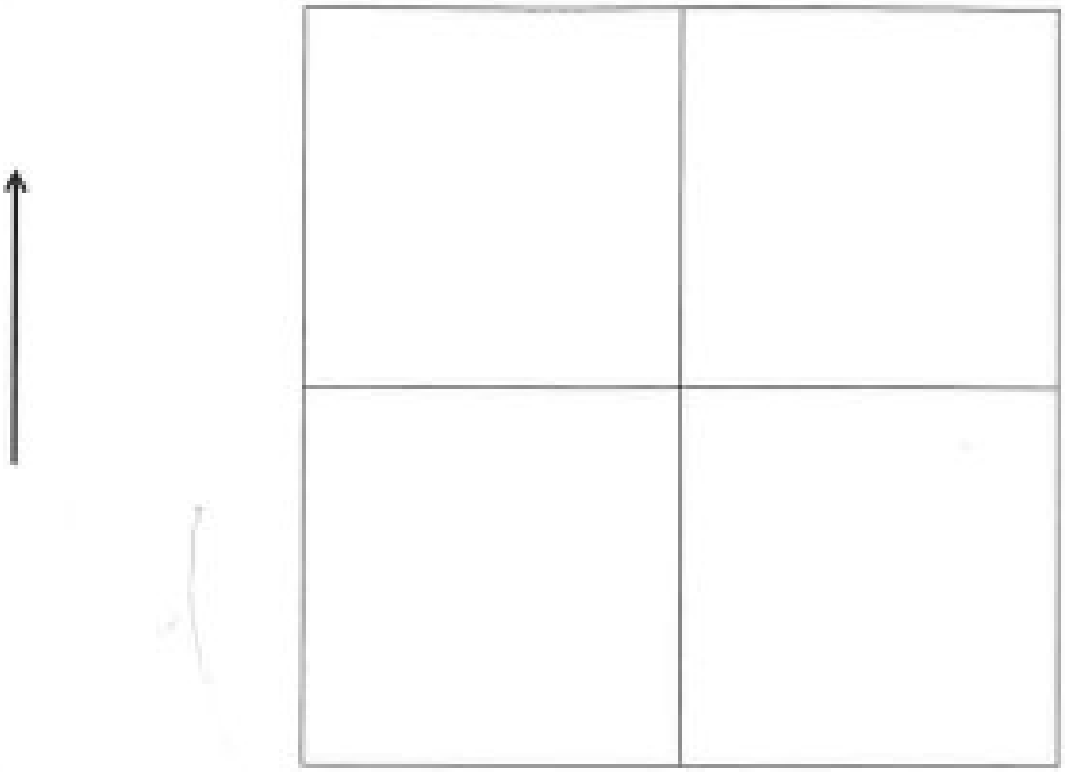
Signs of burning/heating with grass root & gravel inclusions

TCI expansion?

Spit 2 - 3 - dark brown loam & clay with 6 occasional charcoal flecking & orange clay flecking onto a dark brown sandy clay

Spit 4 - Dark brown sandy clay with flecking of orange clay - 22

Plan



Split Stream

Section Plan

Fault
Scale

Relative Lenses Tilt

AREA 2.
28

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN 3	
Excavators	[illegible]	Date 28/[illegible]/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Reduced Mode)	Easting	Northing	
Soil landscape	Bathbury	Branxton	Hunter
Landform	Creek bank Flat Lower VB, Upper slope	Raised flat	Ridge line Hilltop
Aspect	N E S W	Slope % 25	
		Munsell	

EXCAVATION wet sieved dry sieved

Spike	Depth (cm)	Soil Horizon	Section code	Carbon/Burnt/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B			4 - [illegible]	1
2	125	A1 A2 B	[illegible]			0
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						0

FURTHER DESCRIPTIONS

Soil (consistency, composition, particle size, inclusions, thickness and extent, roughness, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Till expansion?

SPIT 1 — VERY CLAYEY/POSSIBLE [illegible] - SAMPLE [illegible] OF BURNT CLAY - BROWN SILT.

SPIT 2 — [illegible] CLAY [illegible] 20mm - [illegible]

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA C 7.56
Excavators	P. WOODLEY / K. VALE / P. PORTER	Date 26/10/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS as second check	Easting	Northing	
Soil landscape	Rothbury	Branch	Hunter
Landscape	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope %	<1%
		Munsel	

EXCAVATION wet sieved dry sieved

Split #	Depth (mm)	Soil Horizon	Soil Type code	Carbon/Burnt/Roasting	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B	CLAY		[illegible]	0
2	200 - 250	A1 A2 B	CLAY		[illegible]	0
3	[illegible]	A1 A2 B	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
						0

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and Integrity

Signs of Working/Ending

All expressed

0 - 40: Shallow topsoil. 0% surface visibility. Loose dark brown clay

40 - 100/150: Dark brown compact clay. Orange and black flecking. Few inclusions.

100/150 - 200/250 (end of excavation): Natural, dark yellowish brown clay. Compact. Orange and black flecking. Few inclusions.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	237 [illegible]
Excavators	P. WOODNEY / J. [illegible]	Date 23/11/12	

SUMMARY OF EXCAVATION

Grand Aboriginal Objects	
Other Objects?	
Worthy of Excavation? How?	
Photograph?	
Samples (description & number)	

LOCATION

GPS (Sensitive Mode)	Easting	Northing	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creek bank Flat Lower Mid Upper Cape Raised flat Ridge line Fill up		
Aspect	N E S W	Slope % < 5%	
pH		Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Texture	Carbon/Burnt/Sealing	Disturbance/Rewatter	Abrupt/Obscure
1	100	A1 A2 B	Clay		[illegible]	0
2	200	A1 A2 B	Clay		[illegible]	2
3	250	A1 A2 B	Clay			0
4	[illegible]	A1 A2 B	Clay			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						2

FURTHER DESCRIPTIONS

Soil interpretation, comments, particle size, inclusions, thickness and extent, moisture, high elevation and vegetation for each stratigraphic unit)

Condition and Integrity

Signs of burning/sealing

Its existence?

0 - 60mm: Shallow topsoil, 0% surface visibility.

60 - 150/200mm: Dark brown clay. Orange and black flecking. Few inclusions. Compact.

150/200 - 250mm (end of excavation): Yellowish brown, compact clay. Orange flecking. Few inclusions.

ANAMBAH TEST EXCAVATION 1240227		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS/Increased Accuracy	Easting		Northing	
Soil landscape	Soil Entry	Brookton	Homer	
Landform	Creek bank	Flat	Lower Mid. Upper slope	Raised flat	Ridgeline	Hillside
Aspect	N	E	S	W	Slope % 5%
Soil					Mussell

EXCAVATION wet sieved dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Tx	Carbon/Bioturbation/Sealing	Disturbance/Reconstruction	Aboriginal Objects
1	100 mm	A1 A2 B		[illegible]	[illegible]	○
2	140 mm	A1 A2 B		[illegible]	[illegible]	○
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						○

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and regulation to each stratigraphic unit

Condition and integrity

Signs of burning/heating

TU expansion?

A) Loosely compacted, dry silty clay with fine crumbly texture and roots common, 22mm in diameter. Multiple patches of darker clay & burnt, powery clay suggests burning might have occurred? More moist & crumbly as depth increases

B- The soil horizon transitions to homogeneous moist and compact clay with root material & clean still present throughout a great portion of the layer (30% contains root shoots).

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	2 3[illegible]
Excavators	Lucasia + Norma	Date 23/11/12	

SUMMARY OF EXCAVATION

Count/Description of Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs #	
Samples (description & number)	

LOCATION

GPS (Southern Hemisphere)	Easting	Northing	
Soil landscape	Rockbury	Branston	Hunter
Landform	Creek bank (circled)	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hillcrop
Aspect	N	E (circled)	S	W	Slope % 10%
pH			Munsell

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil/Sediment code	Carbon/Burnt/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100-120	A1 (circled) A2 B (circled)		Silty clay	[illegible]	1
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						1

FURTHER DESCRIPTIONS

Soil consumption, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for rock stratigraphic unit?

Condition and integrity

Signs of burning/heating

All expansion?

A1 - Rich, dark layer dry loosely packed silty clay [illegible] of finer silt (more crumbly) and roots [illegible] thickness [illegible]. Most of the silt has eroded away to the [illegible] the soil [illegible] is [illegible] 100-120 [illegible] in depth.

B - [illegible]

ANAMBAH TEST EXCAVATION (2-0229)		TEST UNIT # PLAN #	240 Anambah
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Set Wide & Deep)	Easting	Northing	
Soil landscape	Rathbury	Branxton	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised, Low Ridgeline Hilltop		
Aspect	N E S W	Slope %	
Site		Munsell	

EXCAVATION wet sieved dry sieved

Spot #	Depth (cm)	Soil Horizon	Soil Type	Ocean/Burning/Heating	Tests/Cores/Bioturbation	Aboriginal Objects
1	110	A1 A2 B		Gravelly	Grass [illegible]	
2	200	A1 A2 B		Gravels + bleached clay		
3	250	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B			1 x Tooth	
6		A1 A2 B			Fragment	
7		A1 A2 B				
Scale						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation, for each stratigraphic unit)

Condition and Integrity: Spt 1 : clearly defined A1 disturbed to mingled into A2 horizon. Grass

Signs of burning/heating: Root inclusions to gravels

Tests/Expansion?

Spt 2 : dark brown loam with gravel to orange clay to brown waxy clay inclusions. NW corner : bleached clay horizon from approx 120 – 240

Spt 3 : hard waxy dry cracked clay with clay inclusions

Disturbed throughout by ploughing to gravels

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area D Z41
Excavators	J.M. J.W. R.S	Date 26/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Accurate to 10 m)	Easting						Northing							
Soil landscape	Rothbury				Branxton				Hunter					
Landform	Creek bank	Flat	Lower/Mid/Upper slope				Raised Lot		Ridgeline		Hilltop			
Aspect	N	E	S	W	Slope % 2									
pH					Munsell									

EXCAVATION wet sieved dry sieved

Scale	Depth (cm)	Soil Horizon	Soil Dry Scale	Colour/Boundary/Contact	Disturbance/Distribution	Aboriginal Objects
1	100	A1 A2 B			Highly Disturbed	
2	200	A1 A2 B				
3	240	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and sequence for each stratigraphic unit)

Condition and integrity: Spit 1: dark brown silty loam very large

Signal/Burning/Bearing: grain with grass roots & gravel inclusions

TU expansion? A1 & A2: very ploughed & mixed through

Spit 2: dark brown very compact loam with gravel & orange clay inclusions @ approx 180

Spit 3 Base: very brown clay orange clay inclusions very dry & cracked

Very disturbed

AREA D

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	242
Excavation	A 5 [illegible]	Date 26/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (location, Waves)	Easting	Northing	
Soil landscape	Rothbury	Branden	Dunter
Landform	Creek bank, Flat, Lower, Mid, Upper slope, Raised flat, Ridgeline, Hilltop		
Aspect	N E S W	Slope % 2	
		Mud soil	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Carbon/Burning/Dating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		N	Y	0
2	100	A1 A2 B		N	Y	1
3	[illegible]	A1 A2 B	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						1

FURTHER DESCRIPTIONS

Soil (composition, connection, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/dating

Test expansion?

SPIT 1 - V CLAYEY / DARK BROWN - LUMPY

- SOME V DRIED SILT MIXED THROUGH -

SPIT 2 - DARK BROWN CLAY - PLOUGHED

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area D 243
Excavators	SM + RS	Date 26/..12	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (reading)	Easting	Northing	
Soil landscape	Rothbury	Branston	Hunter
Landform	Creek bar & Flat	Lower, Mid, Upper slope	Raised flat Ridgeline Hillcrest
Aspect	N E S W	Slope %	
pH		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Vis. code	Colour/Boring/Heating	Distribution/Distribution	Aboriginal Object
1	10	A1 A2 B			Grass [illegible]	○
2	1[illegible]	A1 A2 B				○
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						○

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, moisture, sediment, sea level, ...), soil, vegetation and vegetation for each stratigraphic unit:

Condition and integrity

Signs of burning/heating

TU expansion?

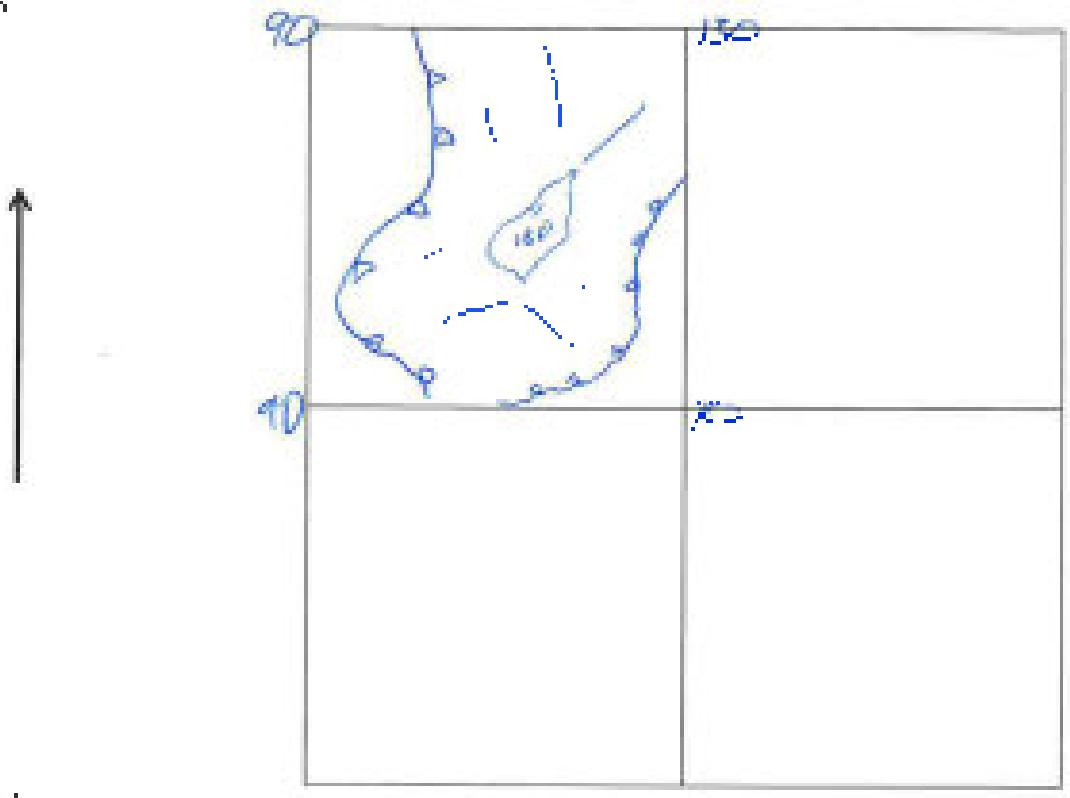
Spit 1: A1: 0-20mm grey light brown silt with mixed with light brown loam A2 context. Clay (orange) on Northern side

Spit 2: Southern & central area of P.t is light brown loam onto a dark brown/orange dusky clay

Disturbed & crushed throughout

T.O

Plan



Soil drawer

Section Plan

Paper

Scale

Relative Profile: TU

ANAMBAH TEST EXCAVATION 12-0027		TEST UNIT # PLAN #	[illegible]
Excavators	SM CS	Date 27/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Seamless)	Easting		Northing	
Soil backdrop	Kurtosis	Rainfall	Climate	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N / E / S / W	Slope % 2		
		Munsell		

EXCAVATION [illegible] - [illegible] [illegible] - [illegible]

Spit #	Depth (cm)	Soil Horizon	Soil Pedals	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		Ploughed	Grass Roots	
2	200	A1 A2 B				
3	300	A1 A2 B			GRS Gravel / Charcoal flecking	
4	330	A1 A2 B				
5	Gravel	A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (compaction, [illegible], particle size, inclusions, [illegible], [illegible], [illegible] and [illegible] for each stratigraphic unit)

Condition and Integrity — Spit 1: light grey fine grained silt (A1) mingled with A2 [illegible]

Signs of burning/heating

Tell expansion?

Spit 2: A1 to 100-120 then A2: light brown soft to lightly compacted silt ↑ an clay with ↓ to an ↑ in orange clay flecking charcoal flecking with ↓

Spit 3 & 4: same as Spit 2

Base: Orange/brown soft [illegible] wet clay

ANAMBAH TEST EXCAVATION T2 0227		TEST UNIT # PLAN #	246
Excavators	Lorena	Date 27/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of separation? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Zone and Easting)	Easting ☐☐☐☐☐☐	Northing ☐☐☐☐☐☐☐	
Soil landscape	Rothbury	Branstone	Thurlow
Landform	Creek bank (Flat)	Lower, Mid, Upper slope	Raised flat Ridgeline Hilltop
Aspect	N (E) (S) W	Slope % 5%	
[illegible]		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Carbon/Bioturbation/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	150	(A1) (A2) B		Predominantly silt/clay 50/50	Roots present	○
2	200	(A1) (A2) B		Silty clay 50/50	Recent used activity	○
3	200	(A1) (A2) B		Silty clay		○
4	360	A1 (A2) (B)		Silty clay		○
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						○

FURTHER DESCRIPTIONS

Soil formation, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and Integrity

Signs of burning/heating

Will expansion?

Topsoil is dry but consists of crumbly silt with few pockets of sticky, compacted clay, recent activity (ants)

The material has been ploughed as evidenced by the mixing of fertile silt and compacted clay.

At a depth of approximately 360mm the soil horizon transitions to homogeneous dense, compacted and moist clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	247
Excavators	AS + DS + RS	Date 26/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS as above/ attach	Easting		Northing	
Soil landscape	Bethbury	Branxton	Hunter	
Landform	Creek bank	(Flat)	Lower Mid Upper slope	Raised flat Ridgeline Hilltop
Aspect	N E S W		Slope %	
pH			Munsell	

EXCAVATION wet sieved dry sieved

Sp. #	Depth (cm)	Soil Horizon	Soil Fe code	Cultural/Housing/Hearing	Disturbance/Bioturbation	Aboriginal Objects
1	100	(A1) (A2) B			GRASS ROOTS	
2	200	A1 (A2) (B)			INSECT BURROWS	
3	—	A1 A2 (B)	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TU expansion?

0-20 LIGHT BROWN SILT GRASSY TOPSOIL

20-180 COMPACTED / V DRY & FRYABLE LIGHT BROWN SILTY CLAY

180-200 ORANGEY BROWN CLAY WITH SMALL IRONSTONE INCLUSIONS

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	248
Excavator	AS + DK + [illegible]	Date 26/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS coordinates (Long)	Easting				Northing		
Soil landscape	Rothbury		Branxton		Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	0	
Soil					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil as code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	[illegible]		BURNT CLAY FLEMING	GRASS ROOTS	0
2	150	A1 [illegible] B			ANTS	0
3	—	A1 A2 B	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						0

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and Integrity

Signs of burning/heating

TD expansion?

0-20 - SHALLOW GRASSY TOP SOIL

20-100 - SILTY CLAY - LIGHT BROWN SOIL - V-DRY

COMPACTED

100-150 - COMPACTED LIGHT BROWN CLAY WITH YELLOW SANDY/IRON STONE INCLUSIONS THROUGHOUT

- NO CHANGES

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	2-[illegible]
Excavators	AS + DS	Date 26/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence	
Whereby of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (predicted)	Easting							Northing							
Soil landscape	Rothbury					Branxton					Hunter				
Land Form	Creek bank		Flat		Lower, Mid, Upper slope			Raised flat		Ridgeline		Hollow			
Aspect	N	E	S	W	Slope %										
pH					Munsell										

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Quality code	Lab Ref/Burning/Disease	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B			PLOUGHED	0
2	160	A1 A2 B				0
3	---	A1 A2 B	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil (compaction, compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation, for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Other comments?

0-30 - GREASY TOP SOIL

30-100 COMPACTED DARK BROWN - MAINLY CLAY WITH SILT MIXED THROUGH

100-160 SLOWLY BECOMING MORE CLAY - V DIFFICULT TO EXCAVATE

ANAMBAH TEST EXCAVATION 12 11227		TEST UNIT # PLAN #	AREA D 250
Excavators	P. WOODLEY / K. VALE / N. PORTER	Date 26 / 1 / 12	

SUMMARY OF EXCAVATION

Count Anticipated Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS as stated above	Easting		Northing	
Soil landscape	Anthony	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Dune
Aspect	N / E	S / W	Slope % 0%	
pH			Munsell	

EXCAVATION wet sieved / dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Cultural/Burning/Dusting	Disturbance/Disturbation	Abundant Objects #
1	100	A1 A2 B	Sand / Clay		Rootlets, Possible	1
2	200	A1 A2 B	Sand / Clay		Ploughed	0
3	300	A1 A2 B	Sand / Clay			1
4	350	A1 A2 B	Clay			2
	Approximately	A1 A2 B	Clay			
		A1 A2 B				
		A1 A2 B				
Totals						4

FURTHER DESCRIPTIONS

Soil (compaction, compaction, particle size, inclusions, inclusions and colour, moisture, bioturbation and precaution for each stratigraphic unit)

Condition and integrity

Signs of burning/dusting

Tel expansion?

0 – 50mm: Shallow topsoil. loose silty clay. 0% surface visibility

50 – 200/300: Greyish brown silty clay. Moderately compact. Orange and buff, soft stone inclusions (<10%). 1x little [illegible] than excavating.

200/300 – 350: Brown clay with orange and black flecking. Compact. Few inclusions.

(end of excavation)

ANAMBAH TEST EXCAVATION T2-0227	TEST UNIT # PLAN #	[illegible] 250
Excavators: R. WOODLEY / S. VALE / N. PORTER	Date: [illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS excavation (Tray)	Easting	Northing	
Sub Landscape	Kothbury	Boundary	Hunter
Landform	Creek bank / Flat / Lower/MSL / Upper slope / Raised flat / Ridgeline / Hilltop		
Aspect	N E S W	Slope % 0%	
pH		Moisture	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dry Code	Carbonification/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	150	A1 A2 B	CLAY		[illegible]	0
2	200	A1 A2 B	CLAY		[illegible]	0
3	[illegible]	A1 A2 B	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TPI expansion?

0 – 50mm: Shallow clayey topsoil. Loose. 0% surface visibility.

50 – 100/150mm: Dark brown compact clay. Orange, black and ~~[illegible]~~ buff flecking. Few inclusions.

100/150mm – 200mm (end of excavation): Yellowish brown clay. Compact. Orange, black and buff flecking. Few inclusions. More homogenous than the clay above.

AREA D

ANAMBAH TEST EXCAVATION 124227		TEST UNIT # PLAN #	3/2
Excavators	AS + DS	Date 26/11/13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Northeast Board)	East up	Northing	
Soil landscape	Bathbury	Brandon	Hunter
Land form	Creek bank Flat Lower Mid Upper slope Raised flat Ridge line Fill rep		
Aspect	N E S W	Slope % 1	
		Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (cm)	Soil Horizon	Soil % code	Carbon/Burnt/Heating	Disturbance/Formulation	Aboriginal Objects #
1	140	A1 A2 B			PLOUGHING	○
2	140	A1 A2 B			GRASS/ANTS	○
3	---	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						○

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, [illegible] of [illegible] by each stratigraphic unit)

Contours and integrity

Signs of burning/heating

Oil expansion?

0 - 90mm - DARK BROWN SILTY CLAY WITH LOTS OF GRASS ROOTS - UNDERGONE TOP SOIL DISTURBANCE (PLOUGHING?)

90 - 140mm - CLAY, DARK BROWN - SILTY INTERFACE THEN CLAY BASE

- ALL OF THE SOIL HAS BEEN VERY COMPACTED & DRY - YEARS OF USE AS FARM & COW PADDOCK

ANAMBAH TEST EXCAVATION 124-027		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count & original Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS on external wall	Easting		Northing	
Soil landscape	Rothbury	Branston	Hunter	
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop			
Aspect	N E S W	Slope %	2	
pH		Munsell		

EXCAVATION wet sieved dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Type	Cultural/Sensory/Flaking	Disturbance/Disturbation	Aboriginal Objects
1	100	A1 A2 B			Grass roots	
2	180	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, pressure size, inclusions, thickness and colour), moisture, bioturbation and vegetation for each stratigraphic unit?

Condition and integrity
Signs of burning/heating
TU expansion?

Spt 1: A light grey silt (fine) mixed with brown loam A2 with clay inclusions throughout. Very compact & dist

Spt 2: dark brown loam with gravel & orange clay inclusions. Very compact

Base: washed, dry & compact brown waxy clay.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	AREA D 254
Excavators: P. WOODLEY / K. VALE / N. PORTER	Date: 26/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other Residence?	
Work by at expansion plans?	
Photograph #	
Samples (description & number)	

LOCATION

GPS Locations (Easy)	Easting	Northing	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creek bank	Flat	Lower, Mid, Upper slope (circled)	Raised flat	Ridgeline	Hilltop
Aspect	N E (circled) S W	Slope % <5%	
pH		Munsell	

EXCAVATION wet sieved (circled) dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Type	Cultural/Ironing/Loading	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B (circled)	Silty clay		Surface	0
2	[illegible]	A1 A2 B (circled)	Clay			
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						0

FURTHER DESCRIPTIONS

Soil (combination, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/bowing

TU expansion?

0 - 30mm: Shallow topsoil. Loose. 0% surface visibility
30 - 60/80mm: Brown clay. Compact. Orange flecking. Few inclusions.
60/80mm - 100mm (end of excavation): Yellowish brown clay. Orange and black flecking. Compact. Few inclusions.

Note: The natural clay approached at a very shallow depth, between 60 - 80mm below the surface. The test unit is located towards the edge of the raised flat and gently sloping. It appears the topsoil horizons have been largely eroded away.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA D 25b
Excavators	P. WOODLEY / R. VALE / N. PORTER	Date 26/1/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Weather of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Reference Name)	Easting	Northing	
Soil landscape	Rutherfurd	Brandon	Hunter
Landform	Creek Bank Flat Lower Mid Upper slope Raised flat Ridgeline Hill up		
Aspect	N E S W	Slope %	
pH		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type	Carbon/burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B	CLAY		EXCAVATED	
2	200	A1 A2 B	CLAY		PROBABLE PLOUGHING	
3	300	A1 A2 B	CLAY			
4	400	A1 A2 B	CLAY			
5	(Reference)	A1 A2 B	CLAY			
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil transitions, components, parent rock, inclusions, thickness and extent, moisture, land use, and vegetation for each stratigraphic unit:

Conditions and integrity

Signs of mixing/heating

Tile expansion?

0 - 50mm: Shallow clay topsoil. Loose. 0% surface visibility

50 - 250/350mm: Dark brown compact clay. Few inclusions. Clumpy. Possibly ploughed over.

250/350 - 400mm: Dark brown compact clay. Yellow/buff coloured soft stone inclusions. Probable natural soil horizon.

ANAMBAH TEST EXCAVATION 12 0227	TEST UNIT # PLAN #	AREA D 2256
Excavators: R. Woolley / K. [illegible] / N. Porter	Date 26/11/12	

SUMMARY OF EXCAVATION

Certain Aboriginal Object?	
Other evidence?	
Worthy of expansion? Why?	
Photograph #	
Samples (description & number)	

LOCATION

GPS coordinates (MGA)	Easting □□□□□□	Northing □□□□□□□
Soil landscape	Rothbury Branxton [illegible] Hunter	
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop	
Aspect	N E S W	Slope %
		Munsell

EXCAVATION   wet sieved   dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Tx code	Carbon/[illegible]	Disturbance/Bioturbation	Aboriginal objects
1	100	A1 A2 B	Clay		[illegible]	0
2	200	A1 A2 B	Clay			0
3	[illegible]	A1 A2 B	Clay			0
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil description, composition, [illegible] for each stratigraphic unit

Condition and integrity

Signs of [illegible]

[illegible]?

0 – 80mm: Shallow topsoil. Greyish brown. Loose clay. 0% surface visibility

80 – 150/200mm (out of excavation): Dark brown compact clay with orange and black flecking. Also, gravel and soft buff coloured stone inclusions. Gravel is angular. Dense concentration in SW corner of test unit.

150/200mm +: Probable natural clay. Brown with a yellowish tinge. Orange and black flecking. Few inclusions. Compact.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible] 2137
Excavators	[illegible] / [illegible]	Date 22/[illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Sample (description & number)	

LOCATION

GPS (location of [illegible])	Easting		Northing	
Soil Landscape	Kotchbury	Boundary	Hunter	
Land form	Creek bank	Flat	Lower Mid. Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S SW W	Slope % 45%
[illegible]			Munsell	

EXCAVATION wet sieved / dry sieved

Spot #	Depth from	Soil Horizon	Soil Pit code	Carbon/Burning/Bearing	Disturbance/Disturbance	Aboriginal Objects #
1	[illegible]	A1 A2 B	[illegible]		[illegible]	
2	[illegible]	A1 A2 B	GRAY			
3	[illegible]	A1 A2 B	[illegible]			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, contents, [illegible] and [illegible] for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

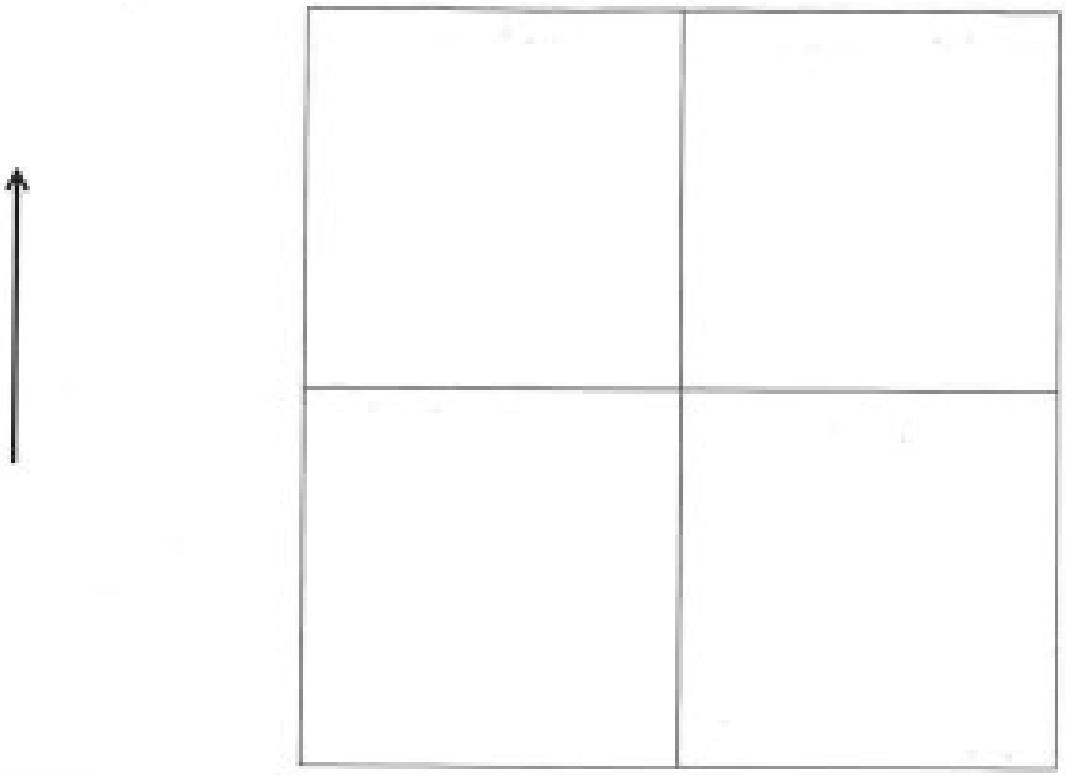
Tool expansion?

0 - 40mm: Shallow topsoil. Greyish brown. Loose. 0% [illegible] visibility.

40 - 120/150: Dark brown clay. Compact. Orange and black flecking. Few inclusions. Very clumpy.

120/150 - 200/250mm (end of excavation): Yellowish brown clay. Compact. Orange and black flecking. Few inclusions. Cracked.

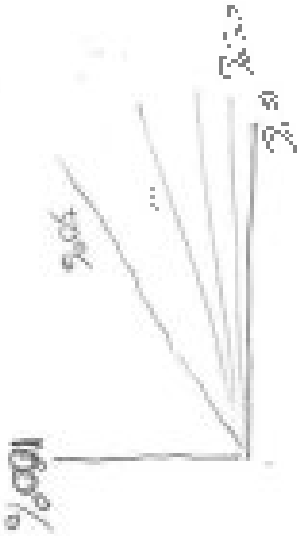
Plan



Spot stream:

Sydlam Dam

Case:
Scale:



Relation to other TU

AREA E

ANAMBAH TEST EXCAVATION 12 II 227		TEST UNIT # PLAN #	[illegible]
Excavators	A.S. + N.P.	Date 27/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (accuracy/datum)	Easting		Northing	
Soil landscape	Rutherfurd	Branxton	Hunter	
Landform	Creekbank Flat	Lower, Mid, Upper slope	Ridgeline	Hilltop
Aspect	N E S W	Slope %	<10 %	
pH		Munsell		

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Texture	Colour/Burning/Heating	Disturbance/Reburial	Aboriginal Objects
1	150	A1 A2 B			GRASS ROOTS	0
2	150	A1 A2 B				0
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						0

FURTHER DESCRIPTIONS

Soil description, composition, particle size, inclusions, [illegible] and [illegible] [illegible] and [illegible] for each stratigraphic unit

Condition and integrity

Signs of burning/heating

Worthy of expansion?

0-20 – [illegible] [illegible] [illegible] GRASS ROOTS

20-130 – BROWN SILTY CLAY. V. DRY & COMPACTED

130-150 – [illegible] BROWN CLAY

AREA E

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	2 57
Excavators	AS + NORM POBLER	Date 23/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS recorded Zone	Easting	Northing	
Site landscape	Bathbury	Blanston	Hunter
Landscape	Creek bank Flat Lower Mid Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope % 5	
Soil		Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil % rock	Colour/Texture/Thickness	Disturbance/Bioturbation	Abnormal Objects
1	100	A1 A2 B			GRASS ROOTS	1
2	140	A1 A2 B			"	0
3		A1 A2 B			"	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						1

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, disturbance and separation for each stratigraphic unit)

Condition and integrity

Significance/Rating

Photographs

0 - 10 CHAISON TOP SOIL GRASSY ROOTS GOING AT LEAST 100mm

10 - 100 - MIXED SILTY CLAY V DRY, QUITE COMPACTED LIGHT BROWN

100 - 140 - LIGHT ORANGEY BROWN CLAY

IRONSTONE FLECKING THROUGHOUT

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA E 260
Excavators	P. WOODLEY / R. CLATER	Date 27/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Priority of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (as above)	Easting		Northing	
Soil landscape	Rathbury	Brandon	Hunter	
Landform	Creek bank	Flat	Mid (Upper slope)	Ridgetop	Hilltop
Aspect	N (E) S W	Slope % 5 - 10%		
		Munsell		

EXCAVATION (wet sieved) dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pit code	Colour/Mottling/Tissues	Disturbance/Excavation	Aboriginal Objects
1	100	(A1) A2 B	[illegible]		ROOTLETS.	0
2	200	A1 (A2) B	[illegible]		A1/A2 POSSIBLY PLOUGHED.	0
3	250	A1 (A2) B	[illegible]		[illegible]	0
4	[illegible]	A1 A2 (B)	[illegible]			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and expulsion for each stratigraphic unit)

Condition and integrity

Natural Immunogenicity

TU Expansion?

0 - 50mm: Sheeted topsoil layer. Greyish brown silty clay. Loose. Few inclusions. 3% surface visibility.

50 - 200/220mm: Greyish brown silty clay. Orange flecking and black manganese pebbles (≤5mm). Moderately compact to moderately soft.

200/220 - 250mm (end of excavation): Yellowish brown clay. Orange flecking and soft stone inclusions. Also manganese pebbles, sub angular, >10mm length. Compact. More homogenous than the clay above.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area E 261
Excavators	SM : CS	Date 27/11/12	

SUMMARY OF EXCAVATION

Count Abnormal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Sample (description & number)	

LOCATION

GPS Recorded Area	Easting				Northing		
Soil Landscape	Kathleen		Bonnie		Lulalo		
Landform	Creek bank	Flat	Lower Mid	Upper slope	Raised Fan	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	2	
Pit					Munsell		

EXCAVATION Wet sieved Dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pit Code	Carbon/Burning/Heating	Disturbance/Disturbance	Average Objects
1	100	A1 A2 B			Grass roots ploughed	○
2	180	A1 A2 B			ploughed	○
3	Unknown	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						○

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, old layers and extent, structure, Natural horizon and vegetation for each stratigraphic unit)

Condition and integrity
Signs of burning/heating
Tell expansion?

Spit 1: light brown grey silt with A2 & clay clumps throughout

Spit 2: light brown loam no clear interface with the orange / brown clay which was wavy wet to rocked.
Clay @ ~ 150mm

disturbed shallow context.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	APCA E - 262
Excavator	P. WOODLEY / R. SLATER	Date 27/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Work to be expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Northing Easting)	Easting	Northing	
Soil Landscape	Rothbury	Branxton	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope % 15 - 16%	
		Mounted	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pit Code	Cultural Sorting/Flaking	Disturbance/Disturbance	Aboriginal Objects #
1	120	A1 A2 B	CLAY		[illegible]	0
2	120 - 150	A1 A2 B	CLAY		[illegible] CRACKED	0
3	[illegible]	A1 A2 B	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil information, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit?

Condition and integrity

Signs of mounting/bearing

Test expansion?

0 - 40mm: Shallow topsoil layer. Greyish brown, very clay like surface visibility.

40 - 120mm: Greyish brown clay. Moderately compact. Orange and black flecking. Few inclusions. Clumpy.

120 - 150mm (end of excavation): Yellowish brown, compact clay. Few inclusions. Orange and black flecking. Cracked.

ANAMBAH TEST EXCAVATION 124227		TEST UNIT # PLAN #	Area E 265
Excavators	SM CS	Date 27/1/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS/Grid/Land Tracks	Easting			Northing			
Soil landscape	Kotchbury		Reservoir		Tinder		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope % 3		
pH					Munsell		

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil % cont.	Carbon/burning/flooding	Disturbance/disturbance	Abnormal Objects #
1	100	A1 A2 B			Grass roots clay ploughed	↑
2	100-180	A1 A2 B				○
3	Unex.	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						● ↑

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit:

Condition and integrity: Spit 1: Grass root & clay melanoms throughout

Signs of burning/heating: A1 & A2. A1: light grey grainy silt mixed

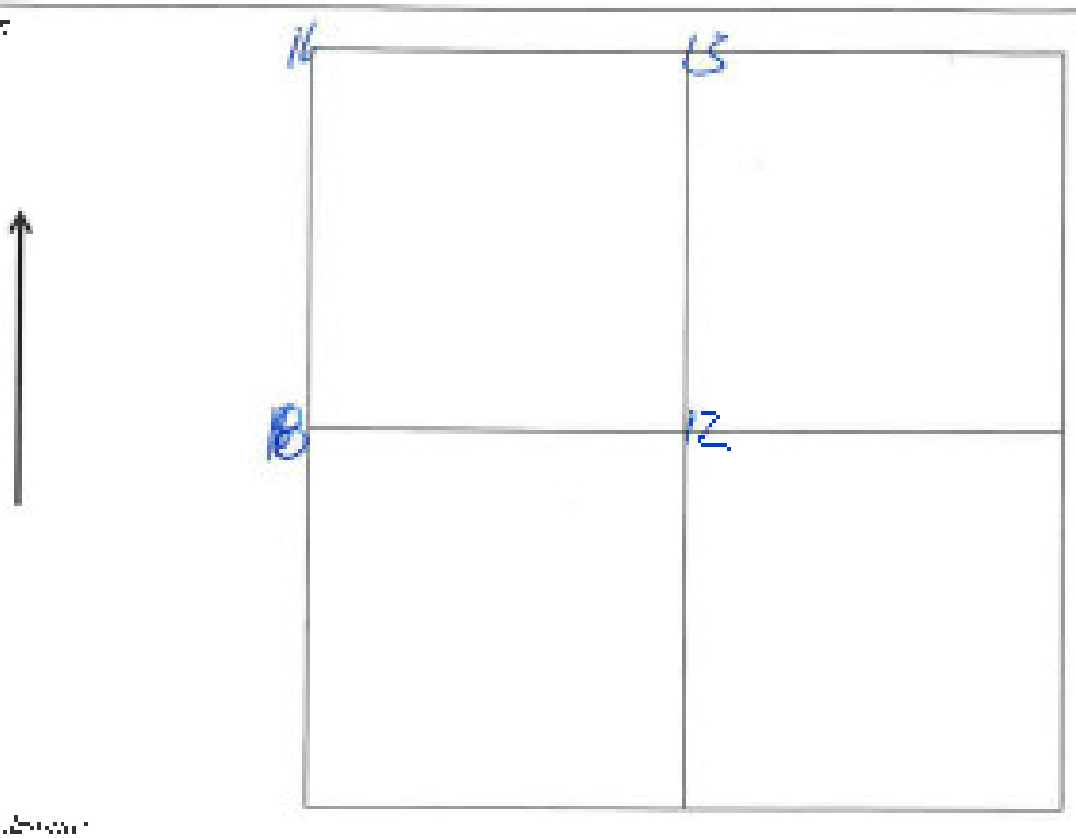
TU expansion? through an A2 horizon.

Spit 2: A2: dark brown silt ↑ in clay with orange clay & [illegible] throughout

Base: Brown waxy clay with orange clay flecking & fault cracks throughout

disturbed contexts — ploughed

Plan:



Spot Dimension:

Section Plan:

Level:
Scale:

Relation to other TLI

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	2-65
Excavators	LF ELSSA	Date 27/11/12	

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Reserve Tracer)	Easting				Northing		
Soil landscape	Rotfibury		Brandon		Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper Zone	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope % 5%		
					Mud soil		

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Type code	Colour/Gamma/Clearing	Disturbance/Relocation	Aboriginal Objects #
	100	A1 A2 B		Silty topsoil/clay	Roots present	
2	180	A1 A2 B		Silty clay		
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation, for own stratigraphic units)

Gamma and magnify

Signs of mixing/heating

Test expansion?

A1-A2 Dry a ~~topsoil~~ pudding up to depth of 10-80mm with roots present. Crumbly fine and medium sized granules of predominantly size with few rare patches of clay.

B At a depth of approximately 140-180mm below the surface, a dense, compacted, homogeneous 'sticky' moist clay is encountered.

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	AD47 F 266
Excavators	P. WOODLEY / R. SLATER	Date 12/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Quality of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

Coffee sound Body	Easting	Northing	
Soil landscape	Rotfibury	Beaucoup	Hunter
Landform	Crest/ridge Flat Lower, Mid, Upper slope Karted flat Adjacent Hilltop		
Aspect	N E S W	Slope % 5 - 10%	
		Moisture	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Dry Code	Carbon/Burning/Heating	Disturbance/Bioturbation	No. Aboriginal Objects #
1	100	A1 A2 B	CLAY	CHARCOAL FRAGMENTS	ROOTLETS CRACKED CHARCOAL	0
2	200	A1 A2 B	CLAY	" "		0
3	250	A1 A2 B	CLAY			0
4	UNEXCAVATED	A1 A2 B	CLAY			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						0

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, Naturalisation and regulation (or even stratigraphic units)

Cultural Integrity

Signs of burning/heating

TD exposed?

0 - 40mm: Shallow topsoil layer, loose, greyish brown clay. 0% surface visibility.

40 - 200/220mm: Dark brown to greyish brown clay. Moderately compact. Soft orange and buff stone inclusions (<10%) and charcoal fragments especially towards SW corner.

200/220mm - 250mm (end of excavation): Dark reddish brown clay. Moderately compact, homogenous and a little moist. Few inclusions.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA F 261
Excavators	P. WOODLEY / P. SLATER	Date 27/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Sample (description & number)	

LOCATION

GPS (reduced range)	Easting	Northing	
Soil landscape	Rothbury	Branston	Hunter
Landscape	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope % 5 – 18%	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (mm)	Soil Horizon	Soil % Code	Comments/Testing	Distance/Distribution	Aboriginal Objects
1	100	A1 A2 B	CLAY		[illegible]	0
2	200	A1 A2 B	CLAY		[illegible] EARTH AND [illegible]	0
3	[illegible]	A1 A2 B	CLAY		" "	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						0

FURTHER DESCRIPTIONS

Soil (compaction, compression, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Conductor and integrity

Signs of burning/heating

Tip expansion?

0 – 50mm: Shallow topsoil. Dark brown. Loose. 0% surface visibility.

50 – 150/180mm: Dark brown clay. Compact. Orange and buff flecking. Few inclusions.

150/180 – 200mm: Dark brown clay (slight reddish tinge). Compact. Homogenous and a little moist. Orange, ~~and~~ buff and black flecking.

AREA F

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	265
Excavators	AS + NF	Date 27/11/12	

SUMMARY OF EXCAVATION

Extent Aboriginal Objects	
Other evidence?	
Worthy of expansion? Why?	
Photographs?	
Samples (to scription & number)	

LOCATION

GPS or access Yards	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	2(?)/45
Pit			Munsell	

EXCAVATION wet sieved dry sieved

Spec #	Depth (mm)	Soil Horizon	Soil Ex Code	Carbon/Burning/Heating	Disturbance/Disturbation	Aboriginal Objects
1	100	A1 A2 B			GRASS ROOTS/PLOUGHING	0
2	150	A1 A2 B			INSECTS	0
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						0

FURTHER DESCRIPTIONS

Soil (compaction, consistence, particle size, inclusions, thickness and extent), deposition, bioturbation and vegetation (or with stratigraphic units)

Conserve soil integrity

Signify burning/heating

TD expansion?

0 – 30 – DARK BROWN ACID SOIL – V COMPACTED

30 – 140 – DARK BROWN SILTY CLAY – HEAVILY PLOUGHED GRASS ROOTS INTERMITTENT & INSECT BURROWS

140 – 150 – DARK BROWN CLAY

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	Area F 269
Excavators	SBH M CS	Date 27/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Sea Mass Mass)	Easting		Northing	
Soil landscape	Rathbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat? Ringline Hilltop
Aspect	N E S W	Slope %		
pH		Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Colour/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		bleached clay	Grass Roots ploughed	
2	210	A1 A2 B		"	"	
3	250	A1 A2 B		"	"	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FEATHER DESCRIPTIONS

Soil (compaction, composition, particle size, [illegible]) and [illegible] for soil stratigraphic units

Condition and integrity Spit 1: A1 to A2 horizons mixed through

Signs of burning/heating A1 0-20 Dark brown loam ↑ in clay

TU expansion? with ↓

Spits 2-5: Dark brown loam ↑ in clay with ↓ Spit 5 @ ~250 clay starts coming through @ 210-250 gravel stone to clay inclusions.

Base: Dark brown cracked wavy clay

NW corner: bleached orange hard brittle clay from Spit 1 to base.

turbed throughout

AREA F

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavation	[illegible]	Date 29/[illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (as defined 7 days)	Easting		Northing	
Soil landscape	Rockbury	Brandon	Hanlon	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Tailtop
Aspect	N / E / S / W		Slope %	1 – 2
pH			Waterfall	

EXCAVATION wet-sieved dry-sieved

Unit #	Depth (cm)	Soil Horizon	Soil Type code	Cultural/Burning/Heating	Disturbance/Disturbance	Aboriginal Objects #
1	[illegible]	A1 A2 B			GRASS ROOTS	0
2	[illegible]	A1 A2 B			GRASS ROOTS/T	0
3		A1 A2 B			[illegible]	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						0

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for cum stratigraphic unit)

Condition and integrity

Signs of burning/heating

Tile expansion?

[illegible] DARK BROWN [illegible] FINE GRAINED ROOTS

20 – 110 DARK BROWN SILTY CLAY – PLOUGHED

110 – 150 DARK BROWN CLAY WITH SOME SILT, BECOMING MORE CLAY. DISTURBANCE FROM VEGATION ROOTS.

SNAKE !!! FOUND COMING OUT OF NORTH SECTION

SMALL ~~BLACK~~ SNAKE

BROWN P.D. 29/1/12

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA 4F 27
Excavators	P. WOODLEY / R. SLATER	Date 27/11/12	

SUMMARY OF EXCAVATION

Found Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Northing & Easing)	Easting			Northing			
Soil Landscape	Rothbury		Branxton		Hunter		
Land form	Creek bank	Flat	Lower, Mid	Upper slope	Raised tier	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	0%	
Soil					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Texture	Colour/Mottling/Heating	Distribution/Distribution	Aboriginal Objects
1	100	A1 A2 B	CLAY	[illegible]	[illegible]	1
2	200	A1 A2 B	CLAY		[illegible]	0
3	250	A1 A2 B	CLAY			0
4		A1 A2 B	CLAY			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						1

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, [illegible] and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Tie expansion?

0 - 40mm: Grayish brown clay topsoil. Loose. No surface visibility.

40 - 180mm: Dark grayish brown clay. Moderately compact. Orange and black flecking. Few inclusions.

180 - 250mm (end of excavation): Brown clay, slight reddish tint. Moderately compact, homogenous, and a little moist. Few inclusions.

NB: 1x mudstone flake from Spit 1 during excavation.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT 4 PLAN 4	Area F 272
Excavators	JM CS	Date 27/1/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS Reading Thread	Easting		Northing	
Soil landscape	Bathtimer	Brainstorm	Hunter	
Landscape	Creek bank	Flat	Lower Mid/Upper slope	Raised flat / Adjacent / Hilltop
Aspect	N E S W		Slope Rt	
			Munsell	

EXCAVATION Wet sieved / Dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Tile advanced in metallic	Aboriginal Objects
1	100	A1 A2 B		burnt organics	Grass Root Ploughed	
2	180	A1 A2 B		"	"	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil inclusions, composition, particle size, inclusions, thickness and colour, moisture, mottlemen, and vegetation for each stratigraphic unit

Condition and integrity
Signs of burning/heating
TPJ expansion?

Spit 1: light grey silt with orange/brown clay inclusions. Grass roots & occasional burnt organics throughout.

Spit 2: identical to Spit 1 with gravels on the surface of the clay.

Base: Orange/brown hard clay slightly sloping down the slope to the east.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	4 on # 273
Excavators	[illegible] - ES	Date 27/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Weather of excavation? Flow?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Accuracy) Survey	Easting		Northing	
Soil landscape	Rothbury	Foreshore	Hunter	
Landform	Crest/bank Flat Lower/Mid Upper slope Raised flat Ridgeline Hilltop			
Aspect	N E S W	Slope S 2		
		Mulched		

EXCAVATION wet sieved dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Lab code	Carbon/Burning/Heating	Tile volume/Tile relation	Aboriginal Objects
1	110	A1 A2 B		Grass root	ploughed	
2	200	A1 A2 B			"	
3	290	A1 A2 B			"	
4	310	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil formation, composition, particle size, inclusions, thickness and extent, moisture, mottle & lime and segments of each stratigraphic unit)

Condition and integrity Spit 1: Dark brown loam very disturbed with Grass root inclusions. Compact throughout.

Signs of burning/heating

TU expansion?

Spits 2-3: Very dark compact loam ↑ with clay ↓. Very disturbed context.

Spit 4: Crumbled away dark brown clay

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	274
Excavation	LARISSA	Date 27/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Pooling of expansion How?	
Photographs #	
Samples (description & number)	

LOCATION

GPS (Location / Tracks)	Easting	Northing	
Soil landscape	Bethbury	Brenden	Homer
Landform	Creek bank Flat Lower Mid, upper slope Raised flat Ridgeline Lithop		
Aspect	N E S W	Slope % 10%	
Soil		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Sample	Colour/Hardening/Heating	Disturbance/Disturbation	Abo Zone Objects #
1	100	A1 A2 B		[illegible]	[illegible]	
2	100	A1 A2 B		[illegible]	[illegible]	
3	270 (300)	A1 A2 B		silt and dense moist clay 20/80		
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil compaction, connection, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Contains and integrity

Signs of mixing/heating

Tell expansion?

A1-A2: Topsoil (silt) is powdery, crumbly and dry + forms clumps around [illegible] in dimensions. Soil horizon has been heavily ploughed as evidenced by [illegible] with pockets of similarly moist, rich and dark clay which is dense, compacted and especially 'sticky'.

B: At approximately 190 - and continuing down to 270mm depth below the surface, dense, sticky compacted clay is encountered. At 240mm depth it [illegible] at least 70-80% of the soil matrix, and at 270mm almost 80%.

ANAMBAR TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area H1 275
Excavator:	Josh + Rob	Date 28/12	

SUMMARY OF EXCAVATION

Quant. Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS waypoint	Easting		Northing	
Site Landscape	Rockbury	Brandon	Hunter	
Landform	Creek bank	Flat	Lower Mid. Upper slope	Raised flat	Ridgeline	Hillrop
Aspect	N	E	S	W	Slope % 5
					Munsell

EXCAVATION Well-sorted Dry-sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type	Colour/Strong/Fixing	Disturbance/Translation	Abundance/Objects
1	110	A1 A2 B			Grass roots Natural gravels	
2	200	A1 A2 B			Gravels + stone	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil composition, composition, inclusions, thickness and extent, moisture, mechanisms and organisms for each stratigraphic zone)

Condition and integrity Spit 1: light brown silt with grass root & natural gravel inclusions

Signs of burning/heating

TU expansion? A1 0-50 A2 50-0 (slightly darker)

Spit 2 Mid brown silty loam with 8 in gravels with 6 Onto (@ ~170) an orange/brown wavy clay with many natural stone & gravel inclusions

Pit 275 much drier than other TUs in area H Maybe due to slope

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA H 2.7A
Excavators	S. WOODLEY / [illegible] WILSON	Date 3.8/11/12	

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other evidence?	
Worthy of expansion? Flow?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (location & area)	Easting		Northing	
Soil Landscape	Richmond	Branxton	Hunter	
Landform	Creek bank Flat Lower, Mid, Upper slope	Sand flat	Ridgeline	Hilltop
Aspect	N E S W	Slope %	5 - 10%	
Soil		Munsell		

EXCAVATION wet sieved dry sieved

Spike	Depth (mm)	Soil Horizon	Soil Type	Colour/Boundary/Reactivity	Disturbance/Disturbance	Abortional Objects #
1	100	A1 A2 B	[illegible]		[illegible]	0
2	200	A1 A2 B	[illegible]		CHARCOAL FRAGMENTS	0
3	250	A1 A2 B	[illegible]			0
4	[illegible]	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil Composition, composition, [illegible], Inclusions, thickness and extent, moisture, Nonarbation and vegetation for each stratigraphic unit:

Continuous and integrity

Significant burning/heating

Other comments:

0 - 80mm: Deeper than typical topsoil level. Greyish brown silty clay. Moderately soft to moderately compact. Angular and sub-angular gravel inclusions up to 50mm length (<10%).

80 - 200/250mm: Greyish brown silty clay. Moderately compact. High gravel proportion, also charcoal fragments. Orange, red and buff stone. Soft. Especially concentrated in SW corner. Up to 30%.

200/250 - 250mm: Yellowish brown clay. Orange and black flecking. Compact. Few inclusions.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	277
Excavators	[illegible]	Date 28/[illegible]/[illegible]	

SUMMARY OF EXCAVATION

Count Analysis/Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (or [illegible])	Easting		Northing	
Soil landscape	Rothbury	Branston	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	At sod flat / Margaline / Hollow
Aspect	N E S W	Slope %		
[illegible]		Mensell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Type (cm)	Soil Type	Carbon/Burning/Heating	Disturbance/Disturbation	Abundance Upper/Lower
1	[illegible]	A1 A2 B			[illegible]	[illegible]
2	[illegible]	A1 A2 B			[illegible]	[illegible]
3	—	A1 A2 B	—			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						[illegible]

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TU expansion?

0 - 10 - THIN GRASSY DARK BROWN TOP SOIL

[illegible] - 180 - PLOUGHED DARK BROWN SILTY CLAY - [illegible]

180-190 - DARK BROWN CLAY

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible] 278
Excavators	[illegible]	Date [illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS [illegible]	Easting		Northing	
Soil landscape	Rathbury	Branden	Hunter	
Landform	Crest/bank	Flat	Lower Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	<5%
					Munsell	

EXCAVATION wet-sieved dry-sieved

Spit #	Depth (cm)	Soil Horizon	Soil Unit code	Carbon/burning/rotation	Disturbance/Reconstruction	Aboriginal objects
[illegible]	120	A1 A2 B	[illegible]		[illegible]	0
[illegible]	200	A1 A2 B	[illegible]		[illegible]	0
[illegible]	300	A1 A2 B	[illegible]			0
[illegible]	[illegible]	A1 A2 B	[illegible]			
[illegible]		A1 A2 B				
[illegible]		A1 A2 B				
[illegible]		A1 A2 B				
Totals						0

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, [illegible] and [illegible] for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TU expansion?

0-50mm: Shallow topsoil, loose, clayey soil. 10% surface visibility

50 - 200/250mm: Brown clay. Moderately compact. Few inclusions. Buff flecking.

200/250 - 300mm (end of excavation): Clay, brown with a slight reddish tint. Orange flecking. Compact. Moist. Homogeneous.

AREA 4
279

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	
Excavators	[illegible]	Date [illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Priority of excavation? Why?	
Photograph #	
Samples (description and number)	

LOCATION

GPS (Easting/Northing)	Easting		Northing	
Soil landscape	Bathurst	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	2 /
					Moisture	

EXCAVATION wet sieved dry sieved

Spit #	Depth from	Soil Horizon	Soil Texture	Colour/Mottling/Heating	Disturbance/Water content	Artefact Observed
1	150	A1 A2 B			[illegible]	
2	200	A1 A2 B			"	
3	260	A1 A2 B				
4	—	A1 A2 B	CLAY			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, [illegible] per each stratigraphic zone):

Condition and integrity:

Signs of mixing/churning:

Other observations:

[illegible] BROWN [illegible]

31-200 [illegible] BROWN SILTY CLAY [illegible] COMPACTED PLOUGHED

200 - [illegible] DARK BROWN SILTY CLAY BECOMING MORE CLAY

* SOUTHERN HALF MIXED WITH LIMESTONE [illegible] FROM 100 [illegible] DOWNWARDS - BECOMIN MORE UNIFORM AS TEST PIT GETS DEEPER

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	7.80
Excavation #	A2 + NP	Date 28/1/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

Collection Location Density	Easting				Northing		
Soil landscape	Rotatory		Bankstown			Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %		
					Munsell		

EXCAVATION Wet sieved Dry sieved

Soil #	Depth (cm)	Soil Horizon	Soil Type code	Carbon/Burning/Heating	Ditch/Trench/Disturbance	Aboriginal Objects
1	100	A1 A2 B			[illegible]	
2		A1 A2 B			PLOUGHED	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, pressure size, inclusions, thickness and colour, variations, inclusions and segments, for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Will expansion?

0 - 20 [illegible]

20 - 100 [illegible]

AREA 4

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavator	[illegible]	Date [illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Working or expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Geoscience) Area	Easting	Northing	
Site landscape	Rothbury	Branxton	Jerrys
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope %	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth from	Soil Horizon	Soil Ex code	Carbon/Burning/Heating	Disturbance/Distribution	Aboriginal Objects #
1	[illegible]	A1 A2 B			GRASS/[illegible]	
2	[illegible]	A1 A2 B			[illegible]	
3	—	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, [illegible] and [illegible] and stratigraphic unit)

Condition and integrity

Signs of burning/heating

Other [illegible]

[illegible] - [illegible] - DARK BROWN [illegible]

[illegible] - [illegible] CLAY - [illegible]

[illegible] - [illegible] - [illegible]

[illegible] - CLAY

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area M 252
Excavators	[illegible]	Date 28/[illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (to closest 7 digits)	Easting		Northing	
Soil landscape	Bulbidary	Brassium	Hunter	
Landform	Creek bank Flat Lower Mid Upper slope Raised flat Ridgeline Hilltop			
Aspect	N E S W	Slope %		
pH		Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Tx code	Carbon/Burning/Heating	Disturbance/Contamination	Aboriginal Objects
1	10	A1 A2 B			Gra[illegible]	0
2	20	A1 A2 B		[illegible]		0
3	[illegible]	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and regression to [illegible])

Condition and integrity: Spit 1: [illegible]

Signs of burning/heating: [illegible] melgrong [illegible]

TU expansion? dark brown loam [illegible] clay content [illegible] ~5% gravel melgrong

Spit 2: dark brown loam [A2 above]

Base: dark brown [illegible] clay with [illegible] orange clay flecking

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	AREA G 29.4
Excavators: P. WOODBURY / T. WILSON	Date: 28/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Northing Easting)	Easting	Northing	
Soil landscape	Refibury	Branson	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N NE E S W	Slope %	
Ref		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Cultural Planning/Heating	Distribution/Recordation	Aboriginal Objects
1	100	A1 A2 B	[illegible]		[illegible]	0
2	200	A1 A2 B	[illegible]		ANT [illegible]	0
3	[illegible]	A1 A2 B	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						0

FURTHER DESCRIPTIONS

Soil transmission, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation (as well as stratigraphic units)

Condition and integrity

Signs of burning/heating

Pit expansion?

0-60 mm: Brown clay topsoil. Loose. 10% surface visibility.

60-130/150 mm: Dark brown clay. Buff coloured flecking. Moderately compact. Few inclusions.

130/150 - 200 mm: Reddish brown compact clay. Homogeneous. Dense. Few inclusions.

ANAMBAH TEST EXCAVATION T2 0227		TEST UNIT # PLAN #	[illegible]
Excavation	[illegible]	Date 28/[illegible]/13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description or number)	

LOCATION

GPS (location, zone)	Easting					Northing		
Soil landscape	Rockbury			Branxton			Hunter	
Landform	Creek bank	Flat	Lower/Mid	Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	2		
					Vanselt			

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Sample	Carbon/Bioturbation/Rooting	Disturbance/Recuperation	Aboriginal Objects
1	[illegible]	A1 A2 B			[illegible] ROOTS	[illegible]
2	2.0	A1 A2 B				[illegible]
3	[illegible]	A1 A2 B	[illegible]			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						[illegible]

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and contact, moisture, bioturbation and vegetation (or such stratigraphic unit)

Condition and integrity

Signs of bioturbation

TU expansion?

0-30 – [illegible]

30-150 – REDDY BROWN SILT, COMPACTED + FRIABLE

150-210 – GRADUAL CHANGE [illegible] CLAY TO CLAY

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	
Excavators	A-E – NIP	Date 27/11/12	286

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs #	
Samples (description & number)	

LOCATION

GPS Vertices (Stage)	Easting ☐☐☐☐☐☐	Northing ☐☐☐☐☐☐☐	
Soil Landscape	Rockbury	Brandon	Hunter
Land Form	Creekbank Flat Lower, Mid, Upper slope	Raised flat Ridgeline	Hilltop
Aspect	N E S W	Slope %	
		Mundell	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Lab Code	Carbon/Burnt/Residue	Disturbance/Disturbation	Aboriginal Objects
1	100	A1 A2 B			[illegible]	○
2	200	A1 A2 B			—	○
3	—	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						○

FURTHER DESCRIPTIONS

Soil Compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each strategy (plus map)

Condition and integrity

Signs of burning/heating

Tel expansion

5 – 20 – GRASS TOP SOIL,

5 – 120 – RED BROWN SILT, FRIABLE

120 – 180 – REDDY BROWN SILT BECOMING MORE CLAYEY

180 – 200 REDDY BROWN CLAY

ANAMBAH TEST EXCAVATION 32 0227		TEST UNIT # PLAN #	287
Excavators	Norm & Trevor	Date 15-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs #	
Samples (description & number)	

LOCATION

GPS (see Excavation Sheet)	Easting	Northing	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creek bank Flat Lower Mid Upper slope	Raised flat	Ridgeline Hilltop
Aspect	N E S W	Slope %	< 10 %
pH		Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (cm)	Soil Horizon	Soil Dry Code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		Some - very few disposed charcoal flecs.	Grass roots throughout.	
2	200	A1 A2 B				
3	270	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity: Transition moderately clear

Signs of burning/heating: yes - some charc./flecs.

Other evidence?

1 Brown loam topsoil (5-10cm thick)

2 Brown sandy clay loam

3 " "

B. Mottled g/brown/cream clay

increasing clay + moisture content with depth.

ANAMBAH TEST EXCAVATION 124227		TEST UNIT # PLAN #	288
Excavators	[illegible] + [illegible]	Date	

SUMMARY OF EXCAVATION

Count Anomalous Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (reviewed Tuesday)	Easting		Northing	
Soil landscape	Rotabury	* Branxton		Trunk
Landform	Creek bank	Fw	Lower/Mid/Upper slope	(Raised flat) Magpiline Hilltop
Aspect	N E (S) W		Slope %	0 (0%)
pH			Munsell	

EXCAVATION (wet sieved) dry sieved

Units	Depth (mm)	Soil Horizon	Soil by Code	Carbon/Burning/Heating	Disturbance/Intrusion	Abnormal Objects #
1	100	(A1) A2 B				
2	200	A1 (A2) B				
3	260	A1 (A2) (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil reconstruction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and expansion for each stratigraphic unit)

Condition and integrity

Signs of Burning/Heating

Other Excavation?

Room deep.

A1 – Sandy loosely compact dark brown soil. Transition clear.

A2. light brown sandy loosely compact soil

B – brown compact clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	289
Excavation #	DC + [illegible] + Tan	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (or sheet / 1 day)	Easting	Northing	
Soil landscape	Rotabury	* Branch	Frontier
Landform	Crest, Ridge, Flat, Lower, Mid, Upper, Lower	Rolled Hill	Ridgeline, Hilltop
Aspect	N E S (W)	Slope % 0 – 10	
pH		Moisture	

EXCAVATION (wet sieved) dry sieved

Sp. #	Depth (mm)	Soil Horizon	Soil Type	Carbon/Humus/Mixing	Disturbance/Relocation	Aeronautic Objects
1	400	(A1) A2 B				
2	200	A1 (A2) B				
3	300	A1 (A2) B				
4		A1 A2 (B)				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, mottlesses, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/bearing

TCI expansion?

A1 – Dark brown moderately compact sandy loam. 60mm.

A2 – Lighter brown (mid brown) moderately compact sandy loam with < 10% gravel inclusions.

B – brown clay compact clasty.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	290
Excavators		Date	

SUMMARY OF EXCAVATION

Cross-Mortgage Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Accuracy Yes/No)	Easting		Northing	
Soil landscape	Bulletin	* Branch	Hunter	
Landform	Creek bank	Flat	Lower, MID, Upper slope	Raised Ex. Ridge line Hilltop
Aspect	N E S W		Slope %	0 – 10%
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Dr. code	Carbon/Burning/Heating	Disturbance/Bioturbation	Nitrogen/Oxygen
1	100	A1 A2 B				
2	200	A1 A2 B				
3	300	A1 A2 B				
		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Units						

FURTHER DESCRIPTIONS

Soil transmission, compression, particle size, inclusions, thickness and extent, moisture, bulk relation and expansion for each stratigraphic unit)

Condition and integrity

Signs of overmagnetizing

TCI expansion?

A1 – very dark black / brown sandy loam to 150mm thick

A2 – lighter brown sandy loam with <40% charcoal. Broken size & spit is completely lowest clay & bulk, [illegible] in A2 soil horizon.

B. brown clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	291.
Excavators	SG + CS	Date	15-3-13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Pore sample #	
Sample description or number	

LOCATION

GPS (Sandbrook Wood)	Easting		Northing	
Soil landscape	Rothbury	Branxton ?	Human	
Land form	Creek bank Flat Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N E S W	Slope %		
Soil		Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aerogenic Objects
1	100	A1 A2 B		charcoal flecs	Grass roots	
2	200	A1 A2 B			~~[illegible]~~	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity *Transition between soil units not

Signs of burning/heating *Some flecs upper dist.

Soil expansion charcoal flecs

1. Brown loam topsoil
2. Brown sand clay loam.
3. Mottled brown/oj/cream clay

increasing clay & moisture content.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	292
Excavation	Sandra & Cory	Date 15.3.13	

SUMMARY OF EXCAVATION

Found Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

Cl Dimensions (Cm)	Easting	Northing	
Soil Landscape	Rotulary	Branxton ?	Inlets
Landform	Creek bank Flat Lower, Mid, Upper slope	Raised flat	Ridgeline Hilltop
Aspect	N E S W	Slope %	< 10 %
pH		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pedal	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B		Some few charcoal flecks	Grass roots throughout	
2	200	A1 A2 B				
3	300	A1 A2 B				
4	320	A1 A2 B			Small tree root	
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil Groups (Dry compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity	Transition from soil units mod. clear
Signs of burning/heating	Yes - some charcoal flecks dispersed throughout
TU expansion?	

1 Brown loam topsoil (c. 5-10cm)

2 Brown sandy clay loam

3 " "

4 " "

B Mottled ~~ty~~/brown/cream clay

Increasingly clayey & moist with depth

ANAMBAH TEST EXCAVATION 32 0227	TEST UNIT # PLAN #	2 9
Excavator: Carly + Sandra	Date: 15-3-12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Address Area)	Easting				Northing		
Soil Landscape	Rothbury		Brandon		Homer		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %		
pH					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon			Soil Lot code	Cultural/Heating/Heating	Disturbance/Disturbation	Aboriginal Objects
1	100	A1	A2	B				
2	200	A1	A2	B				
3	300	A1	A2	B				
4	350	A1	A2	B				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Total								

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Conservation/Integrity

Signs of burning/heating

TD (Exposure)

Spit 1 bucket 5

" 5

Spit 2 "

Spit 3 " 5

Spit 4 " 3 went down other 5 mm tree roots

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	293
Excavator	DC	Date 15.3.13.	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Grid Wind Time)	Easting		Northing	
Soil landscape	Rothbury	* Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	(Raised flat) Ridgeline Hilltop
Aspect	N E S W	Slope % 0 - 10		
pH		Munsell		

EXCAVATION (wet sieved) dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Type	Carbon/Burning/Bio Org	Ochre/Sand/Stratigraphy	Aboriginal Object
1	160	(A1) A2 B				
2	240	A1 A2 (B)				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and organism for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Is expansion?

A1 – Dark brown sandy loam. S – loam thick.

A2 – Dark brown black clayey loam. SW corner has pocket that dips down 160 – 240 and has charcoal within that pocket.

B – Compact black/brown clay.

Excavation to depth.

Loosen loam pack

ANAMBAR TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	294
Excavation	OS + CW	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Wall by of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Zone 55 WGS)	Easting	Northing	
Soil landscape	Pothbury	Fraction	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope %	< 5%
Soil		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Cultural Heating/Fixing	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		charcoal flecs throughout	Yes throughout	
2	200	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation, for sediments/geophysical units)

Continuous stratigraphy Transition between soil units

Signs of burning/heating Yes. moderately clear.

(1) expansion?

1 Brown loam topsoil (5-10cm thick)

2 Light brownish yellow sandy loam.

3 Mottled w/brown/cream clay

in clay + sand content

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	295
Excavators	Sandra - Carly	Date 15-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Whether of expansion? Lower?	
Photograph #	
Sampler (description & number)	

LOCATION

GPS (Location Marker)	Easting		Northing	
Soil landscape	Rotatory	Brandon	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N E S W		Slope %	
pH			Moisture	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Ht.	Colour/Boundary/Leading	Disturbance/Disturbation	Aeroplanal Observation
1	100	A1 A2 B				
2	200	A1 A2 B				
3	300	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, deposits and ocean, moisture, bioturbation and vegetation (in each stratigraphic unit))

Condition and integrity

Signs of burning/heating

Title opening?

spit 1 grass

spit 2 grass roots charcoal artifacts

spit 3

ANAMBAR TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	295
Excavation	Sandra & corg	Date 15-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (Zone/Easting)	Easting				Northing		
Soil landscape	Rothbury		Branxton ?			Hunter	
Landform	Creek bank	Flat	Lower Mid	Upper Slope	Raised flat	Ridgetop	Hollow
Aspect	N	E	S	W	Slope %	<10%	
pH					Vacuum		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Texture	Sieved/Burning/Lenses	Disturbance/Bioturbation	Abs/Sieved Objects #
1	100	A1 A2 B		charcoal flecks throughout	Some roots throughout	
2	200	A1 A2 B				
3	280	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Complexity and integrity * Transition between soil units moderately clear.

Signs of burning/heating

TU expansion? * All mod. soft.

1 Brown loam topsoil (5-10cm).

2 Sandy loam/sandy clay loam -- light brown/ yellow.

3 "

B Mottled brown/oj/cream clay

increase clay + moist.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # / PLAN #	2.16
Excavator: SG + CS	Date: 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Was trench expanded? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (mN / mE)	Easting	Northing	
Soil Landscape	Rothbury	~~Branxton~~ (circled) ?	Hunter
Landform	Creek bank, Flat, Lower, Mid, Upper slope	Raised flat (circled)	Ridgeline, Hilltop
Aspect	N E S W (circled)	Slope %	< 5%
pH		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Vol to sieve	Charcoal/burning/heating	Disturbance/bioturbation	Number of Objects
1	100	(A1) A2 B		Some charcoal flecks / * charcoal concentration near SE corner Spit 2	Grass roots throughout	
2	200	A1 (A2) B				
3	260	A1 (A2)-(B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil properties, colour, texture, particle size, inclusions, thickness and extent, moisture, disturbances & bioturbation for each stratigraphic unit?

Condition and integrity

Signs of burning/heating

TU expansion?

Transition between soil units moderately ~~[struck out]~~ clear

1 Light brown loam topsoil (c. 5-10cm thick)

2 Sandy loam in places / sandy clay loam in north region

3

B Mottled of brown/cream clay

x Ironstone evident in spit 2 & 3

clay + mottled increasing ↓

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	297.
Excavators	DS + CW	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Wording of expansion/ [illegible]?	
Photograph #	
Samples (description & number)	

LOCATION

Grid Accuracy Value	Easting		Northing	
Soil Landscape	Rotabury	Brandon	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
pH					Moisture	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Type	Colour/Hardness/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	150	A1 A2 B				
2	200-300	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

NE corner deeper due to clay undulating clay surface.

FURTHER DESCRIPTIONS

Soil (compaction, consolidation, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TU expansion?

1 Brown loam topsoil (c. 10cm thick) - thickened @ NW corner + layer of organic rich dark loam.

2 Light brownish yellow sandy loam sitting above clay

3 Brown/orange/cream mottled clay undulating → lowest @ NW corner

* Transition between topsoil & organic rich dark layer + between this layer & sand + clay quite clear ⇒ Integrity much better.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	2971
Excavator	TOC 4	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description or number)	

LOCATION

GPS (Easting/Northing)	Easting		Northing	
Soil Landscape	Kolibury	Ecarston ✱	Flat	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	(Raised flat) Ridgeline Hilltop
Aspect	N E S (W)	Slope %	0 - 10	
Soil		Munsell		

EXCAVATION (wet sieved) dry sieved

Sample	Depth (cm)	Soil Horizon	Soil Pit Sizes	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects?
1	100	A1 A2 B				
2	200	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

Stop down to 300 due to cleaning filled hole.

LB DONE

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Contours and integrity

Signs of burning/heating

Transportation?

A1 - 100mm, dark brown very fine sandy loam

A2 -

Integrity increases as you come up the hill in this area.

ANAMBAH TEST EXCAVATION 124027		TEST UNIT # PLAN #	298
Excavation	TX + Cedrian Tempe.	Date 15.3.15	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Reference Tests)	Easting	Northing	
Hill Landscape	Rothbury	Branch	Hunter
Landform	Creek bank Flat Lower Mid Upper slope (Raised flat) Ridgeline Hilltop		
Aspect	N E (S) W	Slope % 0 – 10%	
pH		Moisture	

EXCAVATION (wet sieved) dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type code	Carbon Sampling Pit Log	Other Comments/Notes	Aboriginal Objects
1	100	(A1) A2 B	arbitrarily			
2	200	A1 (A2) B				
3		A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (pedogenesis, composition, particle size, mottling, thickness and extent, moisture, bioturbation and layer type for each stratigraphic unit)

Conditions and integrity

Signs of burning/heating

TU expansion?

A1 + A2 – mid brown loosely compact sandy loam (very fine grained or per all the soils) — Lost mixed little distinction.

B – moderately compact brown clay.

ANAMBAH TEST EXCAVATION 12-02		TEST UNIT # PLAN #	299.
Excavators	Sandra & Carly	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (no tracks)	Easting	Northing	
Soil landscape	Rothbury	Boonoon	Lunatic
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope S	<5%
pH		Mussel?	

EXCAVATION wet sieved dry sieved

Unit #	Depth (cm)	Soil Horizon	Sample code	Carbon/Burning/Heating	Distribution/Foundation	Aboriginal Object
	100	A1 A2 B		Some charc.	Yes. grass	
2	200	A1 A2 B		flecs	roots	
3	250	A1 A2 B		throughout	throughout	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, contours, boundaries, and regression to each stratigraphic unit)

Conditions and integrity Transition between soil units not massively clear - compared to 298.

Signs of burning/heating

TU expansion?

1 Light brown topsoil (Sweep Hill)

2 Brown sandy clay loam

3 "

3 Mottled oj/brown/cream clay

increasing clay & moisture content.

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	300
Excavators	DC, Sandy, Cindy	Date 13.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (Southern Plane)	Easting						Northing							
Soil landscape	Rothbury				Branxton				Hunter					
Landform	Creek bank		Flat		Lower Mid Upper slope		Raised flat		Ridgeline		Hollow			
Aspect	N	E	S	W	Slope %									
pH					Vis. well									

EXCAVATION wet sieved dry sieved

Spits	Dedicated	Soil Horizon			SAT Dr code	Calcium/Bicarb/Bauting	Diffuseness/Stratification	Abnormal Objects
1	100	A1	A2	B			grassroots.	
2	200	A1	A2	B			Grassroots very rocky.	
3	300	A1	A2	B				
4		A1	A2	B				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Total								

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and colour, moisture, bioturbation and vegetation, etc. (substratigraphic unit)

Condition and integrity	Spit 1 - 6 buckets
Signs of burning/heating	Spit 2 - 5 buckets
TU expansion?	Spit 3 - 6 buckets

A1 - Mid - Dark Brown loosely compact sandy loam

A2 - light grey brown loosely compact sandy loam
<10% gravel inclusions

B - Brown clay. Smooth mod-ately sticky.

grassroots to depth.

ANAMBAH TEST EXCAVATION 124227		TEST UNIT ♦ PLAN ♦	301
Excavators	DC / BW / Tom S.	Date 15.3.13	

SUMMARY OF EXCAVATION

Grout Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Reference Plan)	Eastings	Northing	
Soil landscape	Bathbury	☒ Brandon	Plants
Landform	Creek bank Flat Lower Mid Upper slope (Raised flat) Ridgeline Hillcrop		
Aspect	N E S (W)	Slope 3	
pH		Microtoll	

EXCAVATION (wet sieved) dry sieved

Value	Depth (cm)	Soil Horizon	Sample code	Carbon/Burnt/Heating	Obstruction/Recordation	Aboriginal Impacts
1	100	(A1) A2 B				
2	200	A1 (A2) B				
3	260 ~~300~~	A1 (A2) B				
4		A1 A2 (B)				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Other						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, interpretation and separation for each stratigraphic unit)

Condition and integrity

Significant homogeneity

Disappearance?

A1 ~~—~~

light brown ~~silty~~ fine grained sandy soil <5% orange gravel inclusions 90mm deep loose to moderately compact.

A2 - dark brown fine grained sandy soil with high clay content compact.

Grassroots to depth

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	302
Excavators	[illegible]	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Prior to excavation? Flow?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Eastings/Northings)	Easting		Northing	
Soil landscape	Solitary	% Transition	Flooded	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat (circled) Ridgeline Landfill
Aspect	N	E (circled) S	W (circled)	Slope % [illegible]
pH			Munsell	

EXCAVATION wet sieved (circled) dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type	Colour/Stratigraphy/Boring	Disturbance/Stratification	Aboriginal Objects
1	100	A1 (circled) A2 B				
2	200	A1 A2 (circled) B				
3	[illegible]	A1 A2 B (circled)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (comparison, [illegible], [illegible], [illegible], [illegible] and [illegible] [illegible], [illegible] and [illegible] for each stratigraphic unit)

Condition and integrity

Signs of pumping/boring

Tell expansion?

A1 - mottled dark and light grey/brown [illegible] fine sandy loam 112mm deep.
A2 - mottled dark and light grey/brown fine sandy loam.
Interface between A1 & 2 [illegible] clear.

B - brown clayey compact clay

Loosely compact

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	303
Excavators: Sandra + Carly	Date: 15 - 3 - 13	

SUMMARY OF EXCAVATION

Cultural Materials/Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS location (MGA)	Easting		Northing	
Soil Landscape	Anthony	Blacktown	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	(Raised flat) circled; Ridgeline; Hollow
Aspect	(N) E S (W)	Slope %	0 - 10	
Soil		Munsell		

EXCAVATION (wet sieved) circled — dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil ... code	Carbon/Burning/Heating	Disturbance/Bioturbation	Artefact/Objects #
1	155	(A1) A2 B				
2	260	A1 (A2) B				
3		A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil composition, compaction, particle size, inclusions, pH, boundary and colour, moisture, bioturbation and vegetation for each stratigraphic unit?

Condition and integrity

Signs of burning/heating

Interpretation?

Spit 1 — light grey/ ~~grey~~ brown fine sandy loam 85mm deep loosely compact transition clear.

Spit 2 — mid brown fine sandy loam with clay content increasing with depth. Loosely compact

Spit 3 — mottled light and dark brown compact sticky clay

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	304
Excavators	DC, DS, CW	Date 18.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (northing/ 50 km)	Easting	Northing	
Rel. landscape	Rothbury ? ← Bamboo	Lunter	
Landform	Creek bank Flat Lower Mid Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope % 0-10	
P-4		Mouse 1	

EXCAVATION wet sieved dry sieved

Spit #	Depth Sieve	Soil Feature	Soil % Ash	Colour/Tonning/Texture	Disturbance/Reduction	Aboriginal Objective
1	100	A1 A2 B				
2	200	A1 A2 B				
3	300	A1 A2 B				
	Brown sticky clay	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, thickness and extent, moisture, mixed/ion and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Its expansion?

very fine grained

A1 - loosely compact light grey sandy soil with gravel inclusions at interface with A2

A2 - < 50% gravels (Lancaster etc) light grey brown moderately compact sandy soil very fine grained

B - moderately sticky and compact brown clay

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	305
Excavators	[illegible]	Date	18.5.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? Why?	
Photograph #	
Samples (description & number)	

LOCATION

GPS or sensed Trends	Easting					Northing		
Soil landscape	Kalabury		Brandon			Hunter		
Landform	Creek bank	Flat	Lower Mid Upper Slope	Raised flat	Ridgeline	Hilltop		
Aspect	N	E	S	W	Slope %	0-10		
pH					Munsell			

EXCAVATION wet sieved dry sieved

Spits	Depth (cm)	Soil Horizon	Soil Unit code	Colour/Humidity/Heating	Disturbance/Sensitivity	Abnormal Objects #
1	60	A1 A2 B				
2	120	A1 A2 B				
3	230	A1 A2 B				
4	sandy brown clay	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, incrustation and sequence for each stratigraphic unit

Condition and integrity

Signs of burning/heating

TU expansion?

A1 – 60mm light brown sandy (very fine grained) soil clear transition to A2, Loosely compact.

A2 – brown sandy loam (very fine) high clay content. Moderately compact.

B – brown sticky clay – moderately compact.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	306
Excavation	BC	Date 12/3/13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Datum Name)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creekbank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hinter
Aspect	N	E	S	W	Slope % 0-10	
pH			Munsell	

EXCAVATION Wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pit code	Colour/Boring/Testing	Disturbance/Reduction	Abnormal Objects
1	1500	A1 A2 B				
2	2000	A1 A2 B				
3	sticky red clay	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil compaction, composition, pedestal size, inclusions, thickness of strata, moisture, bioturbation and exposition for raw stratigraphic field

Condition and integrity

Signs of burning/heating

Other comments?

A1 - moderately compact organic brown sandy loam 50mm in depth. fine grained

A2 - moderately compact brown sandy loam with high clay content (clay increasing with depth)

B sticky red compact clay.

ANAMBAH TEST EXCAVATION 32-0227		TEST UNIT # PLAN #	307
Excavators	AC (Cedric & Dwayne)	Date 15.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Northing/Easting)	Easting			Northing			
Soil landscape	Rothbury		Branston		Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope % 0-10		
pH					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Significance/Nature/Time	Aerogel Dryness
1	100 cm	150	A1 A2 B			
2	100 cm	2-10	A1 A2 B			
3		[illegible]	A1 A2 B			
4			A1 A2 B			
5			A1 A2 B			
6			A1 A2 B			
7			A1 A2 B			
Level						

OTHER DESCRIPTIONS

Soil formation, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of mixing/heating

TU expansion?

A1 – brown sandy loam loosely compact } very little distinction
A2 – slightly lighter compact sandy loam }

B – sticky brown moderately compact clay

ANAMBAH TEST EXCAVATION 12 11227		TEST UNIT # PLAN #	308
Excavators	DC, CW, DS	Date	14.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Accuracy? Map)	Easting	Northing	
Site landscape	Rotbury	Branston possibly changing away	Hunter
Landform	Crest/ridge Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N E S W	Slope % 0 – 10	
SM		Munsell	

EXCAVATION wet sieved dry sieved

Pit #	Depth (mm)	Soil Horizon	Soil Type code	Carbon/Burning/Hearths	Disturbance/Bioturbation	Abnormal Objects #
1	100	A1 A2 B				
2	200	A1 A2 B				
3	300	A1 A2 B				
4	very rock [illegible]	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (consistence, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/hearths

TU expansion?

A1 – light grey sandy soil, very fine grained moderately compact, ~~[illegible]~~ < 30% gravels + burnt clay. 180 mm deep.
+ charcoal

A2 – grey brown, compact, sticky moist loam with very high clay content < 30% gravels + burnt clay.
decomposing

B – dark brown clay with charcoal + gravels [illegible] in.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	309
Excavators	Alarm / Trevor	Date	5.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Sea level Datum)	Easting		Northing	
Sub landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N E S W	Slope %	< 10 %	
		Munsell		

EXCAVATION Wet sieved / Dry sieved

Spot#	Depth (mm)	Soil Horizon	Soil Pedals	Carbon/Burning/Heating	Disturbance/Disturbation	Aboriginal Objects
1	100	A1 A2 B		No.	Yes - grass roots	
2	200	A1 A2 B		↓	↓	
3	300	A1 A2 B		↓	↓	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil transmission, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit: Same as surrounding.

Condition and integrity

Signs of burning/heating: No.

Other observations

1. Light brown mod. soft loam topsoil (c. top 5cm) → transition to brown clayey loam.
2. Brown clayey loam
3. "

* all mod. soft.

Increasing clay & moist content with depth.

Sandstone / pebble / gravel throughout.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT 4 PLAN 4	309
Excavator:	EC, Nicole.	Date: [illegible]	

SUMMARY OF EXCAVATION

Cultural/Historical Objects	
Other evidence?	
Nature of deposition? Fire?	
Disturbance?	
Samples (sediment & artefacts)	

LOCATION

GPS (preferred datum)	Easting	Northing	
Soil landscape	Kerrabury	Boorowa	Lockie
Landform	Creek bank / Flat / Lower / Mid / Upper slope / Ridge top / Hilltop		
Aspect	N / (E) / S / W	Slope %	
pH		Munsell	

EXCAVATION (wet sieved) / dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Type code	Colour/Texture/Structure	Disturbance/Other Notes	Aboriginal Objects
1	100 mm	(A1) A2 B				
2	200 mm	A1 (A2) B				
3 (to 3" level)		A1 (A2) B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil composition, particle size distribution, clast roundness, roughness, bedding, bioturbation and weathering for each stratigraphic unit:

Consistence and integrity

Signs of bonding/binding

Disaggregation?

A1 light brown sandy moderately compact loam
clear interface at 70mm with A2 <20% gravels

A2 - moderately compact brown sandy loam <20% gravels

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	810
Excavators	DC, CS, SG.	Date 11-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Northern Area)	Easting	Northing	
Soil landscape	Rothbury	Brewster # [illegible]	Hunter
Landform	Crest/boat. Hat Lower, Mid, Upper slope (Raised flat) Ridgeline Hollow		
Aspect	N (E) S W	Slope % < 10 %	
pH		Mixed	

EXCAVATION (wet sieved) dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type code	Earth/Burnt/Bleeding	Disturbance/Relocation	Aboriginal Objects
1	100	A1 A2 B				
2	200	A1 A2 B				
3	brown dusky clay	A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation (in own stratigraphic units)

Comments and integrity

Signs of burning/bleeding

Worthy of expansion?

A1 – 5mm deep, light yellow sandy loam, moderately compact.

A2 – compact brown loam with high clay content increasing with depth.

B – dark brown, sticky, compact clay.

ANAMBAH TEST EXCAVATION T2-0227		TEST UNIT 4 PLAN 4	3/1
Recorder(s)	GW + DG, ES, SG.	Date 14.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Weather of excavation? Time?	
Photographs	
Samples (description & number)	

LOCATION

GPS position (Easting)	Easting				Northing		
Soil landscape	Rothbury		Branxton		Hunter		
Landform	Creek bank	Flat	Lower	Mid	Upper Slope	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	0 - 10 %	
pH					Munsell		

EXCAVATION wet sieved dry sieved

Units	Depth (cm)	Soil Horizon			Soil Pit code	Colour/Texture/Inclusions	Trowel-ready interface	Artefacts Objects
1	10cm	A1	A2	B		n/a	Yes. Grass roots	
2	20cm	A1	A2	B				
3	30cm	A1	A2	B				
4		A1	A2	B				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Total								

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Charcoal and charcoal lens

Signs of burning/heating No.

Will expansion?

1. Brown loam topsoil.
2. Brown clayey loam A2. + gravel
3. Brown clay loam (gravel) (undulating clay)

all moderately soft.

inc. clay + subsoil content

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	312
Excavator	Clive & Shannon	Date	15-3-13

SUMMARY OF EXCAVATION

Cross Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Sensitive Theory)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank Flat	Lower/Mid-Upper slope	Raised flat	Ridgeline Hilltop
Aspect	N E S W	Slope %	< 10 %	
pH		Munsell		

EXCAVATION sun-sieved dry-sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		No	Yes - grass roots.	
2	200	A1 A2 B		No.		
3	300	A1 A2 B		Yes charcoal		
4	400	A1 A2 B		No.		
5	500	A1 A2 B		No.		
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and degradation, etc.) stratigraphic unit: * Same as surrounding *

Condition and integrity

Signs of burning/heating: Yes -- charcoal fleck fragment spit 3.

TU expansion?

1. Brown loam topsoil
2. Brown clayey loam
3. " " + charcoal fragment.
4. " "
5. " Intense orange ⇒ fragments of orange sandstone.

increasing clay & sand content with depth.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	313
Excavators	TOC & Cedric	Date 15.3.13	Greg Kerr

SUMMARY OF EXCAVATION

Canal Aboriginal Objects	
Other evidence?	
Work by of excavation? Leave?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Accurate Plastic)	Easting		Northing	
Soil landscape	Rockhouse	*Reanstone	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope (down to creek unit)	Ridgeline	Hillslope
Aspect	N	E	S	W	Slope % 20 - 30 %
pH			Vessel	

EXCAVATION wet sieved dry sieved

Spike	Depth (mm)	Soil Horizon	Soil Weight	Carbonation/Bleaching	Date Lacs/Distribution	Aboriginal Objects
1	100 mm	A1 A2 B				
2	200 mm	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, unit/stress, dispersion and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TU expansion?

A1 – dark brown compact sandy loam with clay inclusions at interface with A2

A2 – dark brown, compact sandy loam with extremely high clay content.

B – dark brown clay with light brown streaking through

ANAMBAH TEST EXCAVATION 12-0727		TEST UNIT # PLAN #	314
Excavators	Nelson	Date 14.7.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description or number)	

LOCATION

GPS (Accuracy 50 m)	Easting						Northing								
Soil landscape	Rothbury				Branston				Hunter						
Landform	Creek bank	Flat	Lower, Mid, Upper slope		Aeolian flat		Alluvial flat		Hillslope						
Aspect	N	E	S	W	Slope %										
Soil					Munsell										

EXCAVATION wet sieved dry sieved

Spit #	Depth from	Soil Horizon	Soil on scale	Causes/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects#
1		A1 A2 B				
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, dryness and colour, moisture, bioturbation, and vegetation for each stratigraphic unit)

Common soil subgroup

Signs of burning/heating

Tool expansion

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	315
Excavators	DC Kerrie Hwy	Date 14.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS Recorded (Yes/No)	Easting					Northing		
Field Landscape	Rockbury			(Sandstone)			Hunter	
Landform	Creek bank	Flat	Lower	(Mid)	Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	(E)	S	W	Slope % 10 – 20%			
pH					Munsel			

EXCAVATION (wet sieved) dry sieved

Soil #	Depth (cm)	Soil Horizon	Soil Type code	Lab/Ordinary/Extras	Disturbance/Scarification	Aboriginal Objects #
1		(A1) A2 B				
2	300mm	A1 (A2) B		Three Spits excavated.		
3		A1 A2 (B)				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and colour, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and Integrity

Signs of burning/fertility

Tot excavation?

moderately compact

A1 + A2 – mixed with brown sandy loam, <10% gravel/charcoal inclusions

B – light brown sticky moderately compact clay

ANAMBAH TEST EXCAVATION (2-0??)	TEST UNIT # PLAN #	316
Excavators: Sandra & Maria	Date: 19-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (Address Name)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper slope	Ridge/Hill
Aspect	N	E S	W	Slope % 10 - 20 %
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Type	Colour/Porosity/Texture	Disturbance/Disturbance	Abs. Cond. Objects
1	100	A1 A2 B				
2	200	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, terrible size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit) grass and grass roots

Conclusion and integrity beetles

Signs of burning/heating Soil easy to excavate

Other comments

A1 – light brown fine grained sandy loam. Not compact

A2 – Moderately compact brown sandy loam with high clay content increasing with depth

clear interface

B – grass roots continue into clay

Brown, heavy compact clay

ANAMBAH TEST EXCAVATION 12-022/		TEST UNIT # / PLAN #	317
Excavators	DC, Shannon, Clive.	Date 14.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other Cultural Objects	
Who by of excavation? Class?	
Photographs	
Samples (description & number)	

LOCATION

GPS Recorded Yes/No	Easting			Northing			
Site Hand-over	Red Dairy		Branxton			Harder	
Landform	Creek bank	Flat	Lower/Mid	Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope % 0 – 10%		
pH					Munsell		

EXCAVATION wet sieved / dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type	Colour/Burning/Heating	Disturbance/Intrusion	Aboriginal Objects #
1	100mm	A1 A2 B				
2	200mm	A1 A2 B				
3	300mm	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TCI expansion?

A1 – well mixed with little distinction between A1 and A2.
A2 clay content increases significantly from 200mm.
B – brown clay, highly compact, increasingly dense/sticky with depth.

ANAMBAH TEST EXCAVATION 12 0227	TEST UNIT # PLAN #	# 3, 8
Excavator: Sandra & Marnie	Date: 9-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? Loss?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Grid Zone Waste)	Easting				Northing		
Soil landscape	Rafbury		Branxton			Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %		
pH					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon			Soil % code	Colour/Sorting/Mixing	Disturbance/Disturbation	Aboriginal Objects?
1	100	A1	A2	B		N/A	Yes	
2	200	A1	A2	B				
3	300	A1	A2	B				
4		A1	A2	B				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Total								

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Inclusions and integrity -- Same as surrounding pits.

Signs of mixing/sorting -- N/A

Other question? * Lithic size fine - mod.

spit 1 buckets 5 grass - brown loam (c5cm)

spit 2 buckets 5 grass root's worms - brown clayey loam (mixed)

spit 3 buckets 4 increasing clay + moisture content

* All mod. soft, good condition - low to mod integrity due to cattle etc.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	319
Excavators	VC, SG, CS.	Date 14.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Sea Level Datum)	Easting					Northing		
Soil Landscape	Rutherfurd			(Boonton)			Elmton	
Landscape	Creek bank	Flat	Lower (Mid)	Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	(E)	S	W	Slope S	0 – 10	Basically flat	
pH					Vanished			

EXCAVATION (wet sieved) dry sieved

Soil #	Depth (mm)	Soil Horizon			Soil Pit code	Carbon/Sorting/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100 mm	(A1)	A2	B				
2	200 mm	A1	(A2)	B				
3	300 mm	A1	(A2)	B				
4	[illegible]	A1	A2	(B)				
5		A1	A2	B				
6		A1	A2	B				
7		A1	A2	B				
Total								

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Other comments

A1 – light brown sandy loam, moderately compact

A2 – brown compact sandy loam with high clay content which increases with depth

B – Brown loose – moderately compact brown clay.

C – [illegible] to depth and [illegible] grassroots in clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	3cm
Excavators	DS + CW.	Date 14.3.13	

SUMMARY OF EXCAVATION

Count of original Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS/grid/Map Name	Easting		Northing	
Feature/Landscape	Rainbow	Extension	Hunter	
Landform	Creek/Bank	Flat	Lower, Mid, Upper slope	Raised Fan	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
Lat			Munsell	

EXCAVATION wet sieved dry sieved

Sp. #	Depth (cm)	Soil Division	Soil Dis code	Carbon/Burning/Hearth	Disturbance/Disturbance	Additional Obscure
1	100	A1 A2 B		No.	Yes.	
2	200	A1 A2 B		↓	↓ Grass roots	
3	300	A1 A2 B		↓	↓	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil formation, composition, particle size, inclusions, (A) knee and rubble, moisture, bioturbation and vegetation for each stratigraphic unit:

Condition and integrity * Same as surrounding pits) *

Signs of burning/heating No.

Tilt expansion:

1 Light brown loam topsoil (mod soft) fine
2 Brown clayey loam. ↓ increasing clay + moisture ↓ mod. plastic soil
3. " "

ANAMBAH TEST EXCAVATION 12 0227	TEST UNIT # PLAN #	321
Excavator: Sandra & Maree	Date 14. 3. 13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Working of expansion: How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Section of Parcel)	Easting	Northing	
Soil landscape	Bethbury	Branxton	Hunter
Landform	Creek bank (circled)	Flat / Lower Mid / Upper slope / Raised flat / Ridge line / Hill top	
Aspect	N E S (circled) W	Slope %	
pH		Marsh	

EXCAVATION wet sieved dry sieved

Unit	Depth (cm)	Soil Colour	Soil Texture	Colour/Heating/Heating	Dark/Ash/Rock/Foundation	Aboriginal Objects
1	100 mm	A1 (circled) A2 B		No	Yes - grass roots	
2	200	A1 A2 (circled) B		↓	↓	
3	300	A1 A2 B (circled)		Yes - charc. flecs + burnt clay		
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation / or even stratigraphic units)

Condition and Integrity: Same as all

Signs of burning/heating: Yes - spit 3.

TU expansion?

spit 1 buckets 8 — light brown loam topsoil

spit 2 " 6 — brown clayey loam

spit 3 " 6 "

↳ charcoal flecs + burnt clay flecs + gravel towards south side of pit running in east-west direction

moisture + clay content increasing

{ @ bottom of spit.

↳ some larger river pebbles associated with these inclusions

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	322
Excavators	VC + Chief's ~~[illegible]~~ [illegible]	Date 15 3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Sample (description & number)	

LOCATION

GPS (Location Utility)	Easting		Northing	
Soil landscape	Kurrabung	# Branxton	Hunter	
Landform	Chuck bank	Flat	Lower Mid Upper slope	Raised flat Ridgeline Hunter
Aspect	N E S W	Slope % 30 – 40%		
pH		Munsell		

EXCAVATION wet - sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Colour/Boundary/Lining	Disturbance/Inundation	Abundance Depth #
1	7.0mm	A1 A2 B				
2	Brown clay	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and colour), moisture, inclusions, and regulation for each stratigraphic unit)

Landscape and mag/Zn

Signs of mixing/sorting

Hill expansion?

A1 – loosely compact sandy loam – mid brown color.

A2 – [illegible]

B – compact, [illegible] brown clay.

ANAMBAH TEST EXCAVATION 32-0227		TEST UNIT # PLAN #	328
Excavator	Cedric + Dwayne	Date	18.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? Lower?	
Photograph #	
Samples description & number	

LOCATION

GPS (Location of Trench)	Easting			Northing			
Soil landscape	Soil Duty		Brandon		Hunter		
Landform	Creek bank	Flat	Lower	Mid, Upper slope	Raised flat	Ridge line	Fill top
Aspect	N	E	S	W	Slope %	<10 %	
pH				Munsell			

EXCAVATION wet sieved dry sieved

Sample	Depth (cm)	Soil Horizon	Soil Ks	Carbon/Bioturbation/Feeding	Distribution of Ground Cover	Marks or Objects
1	100	A1 A2 B		Charc.	Yes - grass	
2	160	A1 A2 B		flecs	root	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

OTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Temperature?

1

2 Same as 329

3

ANAMBAH TEST EXCAVATION 12 0227a		TEST UNIT # PLAN #	329.
Excavators	Sandra	Date	8.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Accuracy/Datum)	Easting	Northing	
Landscape	Rothbury	Branxton	Hunter
Landform	Creek bank	Flat	Lower, Mid, Upper Cone	Raised flat	Ridgeline	Lunette
Aspect	N E S W	Slope % < 1 %	
pH		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Profile	Soil Type	Cultural Remains/Heating	Disturbance/Substitution	Aboriginal Objects #
	1cc	A1 A2 B		Yes - charc. flecs	Grass roots throughout.	
2	2cc	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit): A loam component mod. compact transition to clay mod. clay

Landscape and integrity: Some mixing evident - Yes - charc flecs in 1 & 2. (not evident in clay.)

Signs of burning/heating (12 expansion):

1 Light brown/grey loam topsoil.

2 Light brown/grey loam to clayey loam.

3. Oj clay. (rotter than above loam).

increasing clay & moist content with depth

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	329
Excavators	[illegible]	Date 18 - 5 13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Why is it expansion?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Location Tracks)	Easting		Northing	
Soil landscape	Rathbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper Slope	Raised Flat / Ridge Line / Hill top
Aspect	N E S W	Slope %		
pH		Munsell		

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Pit Code	Colour/Banding/Heating	Disturbance/Intrusion Value	Aboriginal Objects
1	1	A1 A2 B				
2	2	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil transportation, stratification, particle size, inclusions, [illegible] and extent, moisture, bioturbation and [illegible] (for rock stratigraphic units)

Condition and integrity

Signs of burning/heating

Other [illegible]

Spit 1 6 grass artefact

Spit 2 5 wet clay

Spit 3

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	330
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other excavation?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Accuracy Range)	Easting		Northing	
Soil landscape	Zoo Lucy	Boundary	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	40 – 50
pH			Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Fe code	Carbon/Bioturbation/Heating	Disturbance/Evacuation	Absolute Objects #
1	100	A1 A2 B				
2	200	A1 A2 B				
3	300	A1 A2 B				
4	400	A1 A2 B				
5	470	A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil Excavation, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and segmentation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

TU expansion?

Loosely compact

A1 — 95mm Grey extremely fine grained sandy silt.

A2 — strata 1 → 95 - 145mm brown grey fine grained sandy silt < 10% charcoal flecking

strata 2 → 145 - 260mm light grey brown with 50% charcoal + orange flecking

strata 3 → 260 - 350mm brown fine grained sandy silt with very few inclusions

strata 4 → strata 3 soil with clay mixed in.

B — weak brown clay.

ANAMBAH TEST EXCAVATION 12-0327		TEST UNIT # PLAN #	332
Excavators	[illegible]	Date 19.3.13	

SUMMARY OF EXCAVATION (9.4.3 pm)

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion / Flow?	
Photograph #	
Samples (description & number)	

LOCATION

GPS or [illegible]	Easting		Northing	
Fed Hand Grade	Kalabury	Branston ✓	Hunter	[illegible]
Landform	Creek bank	Flat	Lower Mid Upper slope	Raised f.a. / Ridgeline / Hill top
Aspect	N / E / S / W		Slope %	0 - 10
pH			Munsell	

EXCAVATION wet sieved / dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Dry Code	Colour/Boundary/Texture	Disturbance/Soil Tables	Abnormal Objects
	100	A1 A2 B				
2	250	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size or tissues, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Flat expansion?

A1 - grey-brown very fine, powdery, silty ~~loam~~, loosely compact

A2 - very light grey-brown, powdery silty loam. Loosely compact + 30% burnt clay.

B - loosely compact, clayey, clay with very poor vesicular structure, brown grey in colour with burnt clay lumps pushed in,

Pit 31 skipped atm

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	333
Excavation	Clive + Sherrie, NC	Date	19.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Whether of expansion? Lines?	
Photograph #	
Samples (description & number)	

LOCATION

GPS or Water Table	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower Mid Upper Crest	Raised flat (circled) Ridgeline Hilltop
Aspect	N (circled) E (circled) S W		Slope %	0 - 10
pH			Munsell	

EXCAVATION wet sieved (circled) dry sieved

Spit #	Top Interval	Sub Horizon	Soil A code	Colour/Density/Relative	Disturbance/Excavation	Abs. g/m Chloro #
1	[illegible]	A1 (circled) A2 B				
2	[illegible]	A1 A2 (circled) B				
3	[illegible]	A1 A2 (circled) B				
4		A1 A2 B (circled)				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Fine composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and sequence (for each stratigraphic unit)

Condition and integrity

Types of burning/heating

Title sponsor?

A1 – light grey powdery silt loosely compact 90mm deep.
transition 40mm thick.
A2 – strata 1 – 180mm 220mm deep, light grey loosely compact silt with 230x flecking
– strata 2 – 220mm - 300mm strata 1 mixed with clay (orange + black)
B – [illegible] clay [illegible] in view.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	334
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other - [illegible]	
Whereby of expansion? How?	
Photographs #	
Samples (description & number)	

LOCATION

GPS [illegible]	Easting		Northing	
Soil landscape	Red Hill	Brandon	Hunter	
Land form	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hollow
Aspect	N	E	S	W	Slope %	10 - 20%
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spike	Depth (cm)	Soil Horizon	Soil Mix code	Lithics/Diagnostic Heating	Disturbance/Bioturbation	Aboriginal Objects#
1	100	A1 A2 B				
2	200	A1 A2 B				
3	300	A1 A2 B				
4	334	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Site expansion

A1 – 125mm dark brown silty sandy loam, loosely compact.

A2 – strata 1 125 – 230mm light grey brown silty sandy loam 50% Flecking – orange, black.

– strata 2 230 – 300/334 clay mixed with strata 1 contains burnt tree root which impacted pit depth (deeper) in southern end.

B – bright brown ~~moderately~~ – loosely compact orange brown clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	335
Excavators	[illegible]	Date	19.5.13

SUMMARY OF EXCAVATION

Cultural Aboriginal Objects	
Other – [illegible]	
Worthy of expansion? How?	
Photographs #	
Samples (description & number)	

LOCATION

Grid Assessment Basis	Easting		Northing	
Soil landscape	Rotatory	Brandon	*	Hunter
Landform	Creek bank	Flat	Lower Mid Upper slope	(Raised flat) Ridgeline Hilltop
Aspect	(N) (E) S (W)	Slope %	0–10	
pH		Moist?		

EXCAVATION (wet sieved) dry sieved

Setting	Depth Scale	Soil Horizon	Soil Dry Code	Colour/Humus/Mottles	Disturbance/Revolution	Aboriginal Objects
1	100	(A1) A2 B				
2	200	A1 (A2) B				
3	300	A1 (A2) B				
4		A1 A2 (B)				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, [illegible], hardness and colour, moisture, disturbance and vegetation for each stratigraphic unit?

Condition and integrity

Signs of burning/heating

Tot expansion?

Alluvial Soil.

A1 - 110mm loosely compact brown silt with black and some orange flecks

A2 - level one 110mm - 190mm light grey brown loosely compact silt with black flecks <40%.

- level two 190 - 300mm silt mixed with clay. Brown (mid-brown) colour. Moderately compact

B - [illegible] brown, moderately compact weak straight clay.

ANAMBAH TEST EXCAVATION 32-0227		TEST UNIT # PLAN #	336
Excavators	[illegible]	Date	19.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Assessed Points)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	Alluvium
Landform	Creek bank	Fw	Lower Mid Upper Lime	Raised flat / Ridge line / Hilltop
Aspect	N E S W		Slope %	0 - 10
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Wt. code	Colour/Blanny/Fleshy	Disturbance/Intrusion	Analysis/Objects
1	100	A1 A2 B				
2	200	A1 A2 B				
3	300	A1 A2 B				
	340	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

OTHER DESCRIPTIONS

Soil composition, compaction, particle size, inclusions, thickness and extent, moisture, bioturbation and regression for each stratigraphic unit.

Conservation/Integrity

Significance/Ranking

TO expansion?

A1 – 70mm dark brown/black very fine silty brown, loosely compact.
A2 – 70 – 230mm lighter brown very fine sandy silt with < 20% charcoal [illegible] flecking, loosely compact.
Bm
[illegible] – 230 – 330 light brown silt mixed with clay particles, < 10% gravels, loosely compact.

B – brown clay with weak composition. As per pit 50, 335, 32 & 332.

ANAMBAH TEST EXCAVATION 12-0727		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible]	Date 20.5.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Cells reinforced?	
Worthy of expansion? How?	
Photographed?	
Samples (description & number)	

LOCATION

GPS (Accessed Tracks)	Easting		Northing	
Soil landscape	Rotabury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower / Mid / Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N E S W		Slope % 0 10	
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spits	Depth (mm)	Soil Stratum	Soil Ins code	Carbon/Burnt/Ilmenite	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B				
2	180	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil Consistency, expansion, particle size, inclusions, abundance and variety of colours, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/dumping

Time passed?

A1 - loosely compact light grey brown silty ~~[illegible]~~ sand < 15% gravels (ironstone) 80mm

clear transition / interface

A2 - moderately compact brown silty loam, with very mixed trough 80 - 180mm

B - moderately strong coarse brown clay

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	341
Excavators	Tony, Sandy, Kel, [illegible]	Date 20.5.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Accurate Quality)	Easting				Northing		
Soil landscape	Rothbury		Branxton			Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	0 10 %	
pH					Moist		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Contour	Soil Type code	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B				
2	230	A1 A2 B				
3		A1 A2 B				
		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil inconsistent, compressed, particle size, inclusions, thickness and extent, structure, bioturbation and vegetation (to earn analogy/plan area)

Condition and integrity

Signs of landing/heating

TU expansion?

A1 – light grey brown silty loam, loosely compact 50mm deep.

A2 – 50 – 120mm brown silty loam, loosely compact. from 120 to base – mixed with clay

Silcrete cobbles everywhere on this area.

ANAMBAH TEST EXCAVATION T2 0227	TEST UNIT # PLAN #	3F-1
Excavators: Sandra tony . bec.	Date: 20-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Geodetic Datum)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Dunmore	
Landform	Creek bank	Fx	Lower Mid Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N E S W	Slope %		
pH		Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth/Level	Soil Horizon	Soil Dry Code	Colour/Bearing/Heating	Detachment/Termination	Aboriginal Objects
1	100	A1 A2 B				
2	200	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Notes						

FURTHER DESCRIPTIONS

Soil consistency, composition, nodule size, inclusions, Diversity and extent, moisture, stratification and organisation by each stratigraphic unit?

Condition and Integrity

Signs of bioturbation

Other evidence?

Spit 1 bucket 5 grass .. Artefacts in first 15 mm

Spit 2-6 grass roots

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	3-13
Excavators	[illegible]	Date 20.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Sample description & numbers	

LOCATION

Display screen extent	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope % 0-10
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth mm	Soil Horizon	Soil Type	Carbon/Burning/Bedding	Disturbance/Intrusion	Abnormal Objects #
1	100	A1 A2 B				
2	250	A1 A2 B				
3	[illegible]	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil formation, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

Thermoluminescence?

A1 - [illegible] silty [illegible] 45mm

A2 - [illegible] silty [illegible] [illegible] [illegible] Bedding clay content present from 170mm, <20-30% gravels,

B - [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	378
Excavators	Cedric, LM	Date	19-3-13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Location Value)	Easting		Northing	
Soil Landscape	Rod Bury	Branston	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper Slope	Raised Flat / Ridgeline / Hilltop
Aspect	N E S W		Slope %	10+20%
pH			Munsell	

EXCAVATION wet sieved Dry sieved

Spit #	Depth Level	Soil Horizon	Soil % Mole	Colour/Hardness/Heating	Disturbance/Inundation	Analysis/Observation
1	10	A1 A2 B		No	Yes - throughout grass roots	
2	20	A1 A2 B		Yes - charcoal flecs/frags		
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (consistency, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each *stratigraphic* unit)

Condition and integrity

Signs of burning/heating Yes - charcoal flecs/frags

Other evidence?

1. Light brownish grey loamy topsoil (Ab) compact + ironstone gravel (distinct band) above A2
2. Light ~~[illegible]~~ greyish brown sandy loam nothing on clay
3. Orangey brown clay + iron manganese staining + charcoal flecs/frags

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	350
Excavation	[illegible]	Date 19-3-13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS/Grid Reference	Easting		Northing	
Soil landscape	Rothbury	Branxton		Hunter
Landscape	Creek bank	Flat	Lower Mid, Upper slope	Raised flat / Ridgeline / Hill top
Aspect	N	E	S	W
Slope %				
Soil			Munsell	

EXCAVATION wet sieved dry sieved

Spec#	Depth (cm)	Unit Thickness	Soil as code	Cultural/Burnt/Sterile	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B		Charcoal flecs.	Yes [illegible]	
2	1000	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity: Moderately clear transition between loam

Signs of burning/heating: Charcoal flecs + burnt clay flecs and clay

(1) expansion:

1 Light greyish brown loam topsoil

2 Brown clayey loam

3 Slight orangey brown clay

} charcoal + burnt clay flecs

* Orientation of pit incorrect - post @ SW

Corner

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Working at exposure? Slow?	
Photographs	
Sample collection & number	

LOCATION

GPS coordinates (Easting / Northing)	Easting		Northing	
Site landscape	Rolling		Rounded	Hunter
Landform	Creek bank	Flat	Lower	Mid Upper slope Raised Flat Ridgeline Hilltop
Aspect	N E S W		Slope %	
pH			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Texture	Colour/Mottling/Heving	Disturbance/Intrusion	Aboriginal Objects #
	[illegible]	A1 A2 B				
2	[illegible]	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil composition, inclusions, particle size, inclusions, thickness and colour, moisture, bioturbation and vegetation for each stratigraphic layer

Condition and integrity Loose Sandy loam light to [illegible]

Signs of burning/heating

TU expansion?

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	357
Excavators	[illegible]	Date	20.3.13

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Standard Datum)	Easting		Northing	
Soil Landscape	Kalibrary	Bombala	Hunter	
Landform	Creek bank	Flat	Lower Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
pH			Slope %	10-20
			Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Density	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects #
1	100	A1 A2 B				
2	200	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, sandstone, bioturbation and separation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Is excavation?

A1 – light grey silty sand (very powdery) with <50% gravel. clear interface. loosely compact

A2 – brown silty loam, moderately compact with clay mixed in <50%.

B medium strength, moderately compact brown clay.

Tomorrow's

ANAMBAH TEST EXCAVATION T2-0227		TEST UNIT # PLAN #	358
Excavators	[illegible]	Date 19 3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description or number)	

LOCATION

GPS (Location Name)	Easting		Northing	
Soil landscape	Rothbury	Bowmans	★ Hunter	[illegible]
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridge line	Hilltop
Aspect	N	E	S	W	Slope % 10 ~ 20 %
LF					Munsell

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Sample	Carbon/Sterling/Heating	Distribution/Translation	Sample Objects
1	100	A1 A2 B				
2	140	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil recognition, composition, particle size, inclusions, thickness and extent, mottling, bioturbation, and vegetation for each stratigraphic unit

Condition and integrity

Signs of burning/heating

Unexpansion?

A1 — 60mm — light grey brown fine sandy silt, loosely compact

A2 — Strata 1 — 120mm — light grey brown fine sandy silt with 50% [illegible] orange flecking.

Strata 2 — 160mm — ~~200~~ 190 mm — SI mixed with clay (mid brown moderately compact)

B — weak structure brown clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	36.3
Excavators	Cedric, Cuppie, [illegible]	Date 20.3.13	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Sources (in sections & number)	

LOCATION

GPS (or nearest 10 sec)	Easting				Northing		
Soil landscape	Bathurst		Branxton		Hunter		
Landform	Creek bank	Flat	Lower Mid	Upper slope	Raised flat	Ridgeline	Lower
Aspect	N	E	S	W	Slope % 0-10		
pH					Munsell		

EXCAVATION wet sieved dry sieved

Sample	Depth (cm)	Soil Horizon	Soil Ex code	Cultural/burning/flooding	Disturbance/Disturbance	Aboriginal Objects#
1	100	A1 A2 B				
2	180	A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Evaluation and integrity

Significant burning/flooding

Disturbance?

A1 – loosely compact ~~light~~ grey powdery silty sandy ~~loam~~ soil to 90mm

A2 – loosely compact light grey powdery silty ~~loam~~ with <10% orange + black flecking

B – compact brown dry with high strength.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	365
Excavators	TARESSA + JOE	Date 3/12/12	

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence ?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS Location (Easting)	Easting		Northing	
Soil landscape	Rathbury	Brandon	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised Flat (circled) Ridgeline Hilltop
Aspect	N	E (circled)	S W	Slope % 5%
				Munsell

EXCAVATION wet sieved dry sieved

Spit #	Depth Sieve	Soil Horizon	Soil Pressure	Outlier/Burning/Heating	Disturbance/Tree Fall	Aboriginal Objects
1	120	A1 A2 (circled) B		Burnt clay	Roots	○
2	200	A1 A2 (circled) B		Burnt clay		|
3	220	A1 A2 B (circled)				○
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						|

FURTHER DESCRIPTIONS

Soil transparency, monocolour, particle size, inclusions, thickness and colour, variation, bioturbation and vegetation for each stratigraphic unit?

Condition and integrity

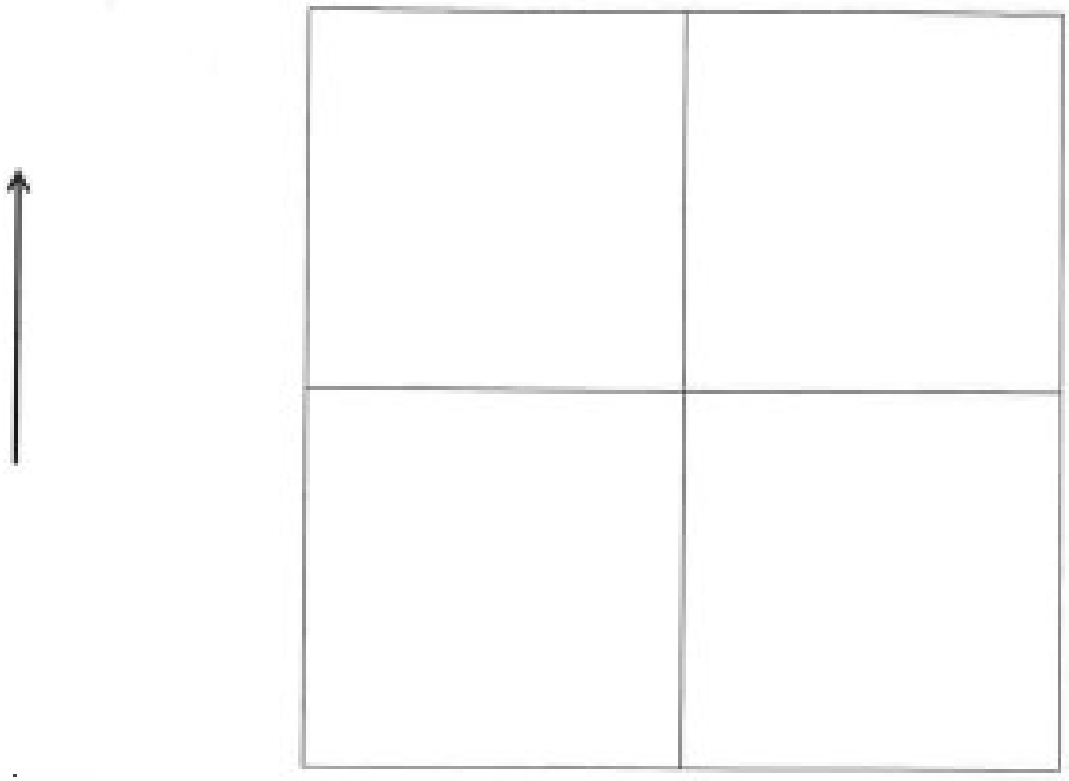
Signs of burning/heating

TU expansion?

A1 - A2 : Predominantly clay soil with silt particles present. Top 60mm is powdery and clay, but as depth increases soil transitions more toward moist, sticky and yet loose & pliable clay. This contains multiple burnt clay fragments, limestone & other rock deposits, and rock alum are common. Stone artefact found in NE quadrant of spit 2. This was found in a silty-clay deposit. Clearly ploughed.

B: At depth of 200-220mm, no easily pliable, homogeneous light coloured clay is encountered.

Plan

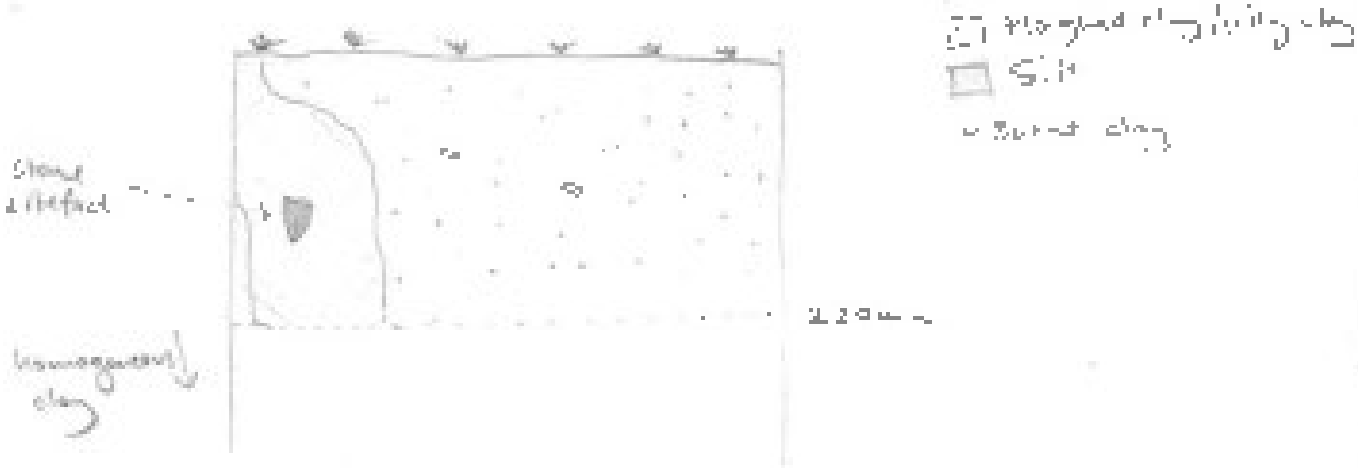


Semi-drawn:

Section Plan

Face: ☒

Scale: Not to scale



Structure Number TU

ANAMBAH TEST EXCAVATION 124227		TEST UNIT # PLAN #	306
Excavators	LARESSA + [illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Cultural/Aboriginal Objects	
Other evidence?	
Worthy of expansion? Hand?	
Photograph #	
Samples (description & number)	

LOCATION

Gate/Stationary Easting	Easting				Northing		
Soil Landscape	Rodbury		Branch		Hunter		
Landform	Crockbank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %	15%	
					Munsell		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pit code	Unconformity/Heating	Disturbance/Bioturbation	Abrupt or Obscure
1	100	A1 A2 B		Burnt clay	Roots	
2	160	A1 A2 B			Roots	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Contains soil integrity

Signs of burning/heating

Pit expansion?

A1-B Characterised by patches of dense, compact + softer, more pliable clay intermixed with small, individual "clumps" of clay 3-4mm in diameter. Roots + [illegible] activity are obvious, as are few, isolated fragments of burnt clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT ✱ PLAN ✱	Area 2 367
Excavators	Josh + Joey	Date 30/1/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Priority of expansion/ Hole?	
Photographs?	
Samples (description & number)	

LOCATION

Co-ordinates (AMG)	Easting		Northing	
Full landscape	Rolling	Riverine	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridge line / Hilltop
Aspect	N E S W		Slope %	
			Moisture	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Colour	Soil Tx code	Carbon/Gamma/Hearing	Disturbance/Disturbation	Aboriginal Objects
	0-20	A1 A2 B			[illegible] Grass	0
2	200	A1 A2 B			"	1
3	650	A1 A2 B			"	0
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, compaction, [illegible], [illegible], [illegible], [illegible], [illegible], [illegible] and [illegible] for each stratigraphic unit)

Conditions and integrity: Spits 1-3: dark brown loam ↑

Signs of burning/drawing: [illegible] clay [illegible] with [illegible]

TU expansion: spit 3 just dark brown clay

Clay: Wavy & crackled

Very ploughed areas & evident with the mix throughout the entire TU.

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	[illegible] N Pit 168
Excavator	Josh [illegible]	Date 3/12/17	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Weekness 10 m)	Easting	Northing	
Site landscape	Rothbury	Branston	Hunter
Landform	Creek bank Flat Lower/Mid Lower slope [illegible] [illegible] Hilltop		
Aspect	N E S W	Slope % 3	
		Munsell	

EXCAVATION wet sieved dry sieved

Sp #	Depth from	Soil Horizon	Soil Ex code	Carbon/Burning/Sediment	Disturbance/Bioturbation	Aboriginal Objects
1	[illegible]	A1 A2 B			[illegible]	
2	7200	A1 A2 B			[illegible]	
3	7600	A1 A2 B			[illegible]	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Depth						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Conservation/Integrity	Spit 1 & 2: No clear A1 & A2
Signs of burning/heating	Very loamy dark brown soil
Other comments	[illegible] grass roots throughout both spits ↑ in clay content with ↓
	Spit 3: Very loamy with [illegible] of clay & ↑ with ↓ very few inclusions
	Base: Dark brown crushed wavy clay

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area N 369
Recorders	Josh	Date 3/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Why by of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (provided) Tracks	Easting	Northing	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creek bank Flat	Lower Mid Upper slope	Raised flat Ridgeline Hilltop
Aspect	N E S W	Slope % 5	
		Vinnell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Texture	Colour/Boundary/Heating	Disturbance/Disturbance	Aboriginal Objects
1	100	A1 A2 B			plough	
2	200	A1 A2 B			"	
3	270	A1 A2 B			"	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Depth						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation) (is with stratigraphic unit)

Comments and integrity Spit 1-3 no clear differentiation

Signs of burning/heating in horizons very mixed due to

TD expansion? ploughing ↑ in clay content with depth occasional gravels, flecking of orange clay, brown clay clumps to burnt organics. Dark brown compact loam

clay/base. Wavy dark brown clay with occasional inclusions

Very disturbed

ANAMBAH TEST EXCAVATION [illegible]		TEST UNIT # PLAN #	370
Excavators	LAPESSIE + JOG	Date	3/12/[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS accuracy (Mode)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised bar / Ridgeline / Hill top
Aspect	N	E	S	W
Slope			Mt. well	

EXCAVATION wet sieved dry sieved

Sp. #	Depth (cm)	Soil Division	Soil Type	Carbon/Burning/Stones	Unbounded/Bounded	Aboriginal Objects #
1	100	A1 A2 B		Charcoal fragments	Roots	
2	140	A1 A2 B				1
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						1

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, continuity, bioturbation and organic lenses and stratigraphic units

Condition and integrity

Signs of overdisturbing

TU expansion?

Soil is especially dry and powdery, and predominantly silt due to (probably) erosion - deposition of silt from upper slope. At a depth of approx 90mm the silt is transitioning to a dense + compacted, ~~homogen~~ relatively moist clay. Roots 20mm are prevalent, as are deposits of limestone, other stone limestone?

At from about 90mm depth, dense + compacted, homogeneous clay is encountered and makes up a large part of the wall (80%). At a depth of 140mm, large pockets of dense, homogeneous + compact clay is encountered.

ANAMBAH TEST EXCAVATION 12-0727	TEST UNIT # PLAN #	[illegible]
Excavators: [illegible] , [illegible]	Date: [illegible]	

SUMMARY OF EXCAVATION

[illegible] Aboriginal Objects	
Other evidence?	
Why stop excavation? [illegible]?	
Photograph #	
Samples (description & number)	

LOCATION

GPS ([illegible])	Easting		Northing	
Soil landscape	[illegible]	[illegible]	[illegible]	
Landform	(Creek bank)	Flat	Lower, Mid, Upper slope	[illegible] · [illegible] · [illegible]
Aspect	N · E · (S) · W	Slope % [illegible]		
		[illegible]		

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	[illegible]	[illegible]	Disturbance/[illegible]	[illegible]
1	[~15 cm?]	(A1) A2 B		[illegible]	Grass roots	O
2	20 cm	A1 (A2) B			–	O
3	20 cm	A1 (A2) B		[illegible]	[illegible]	O
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)	Compact dark brown loam, tending to dark brown clay at base.
Condition and integrity	Fair.
[illegible]	Nil.
[illegible]	

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA O 372
Excavators	Y. Woseley / C. Wright	Date 04/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS Accuracy (Cross)	Easting				Northing		
Soil & Landscape	Rubbery			Fractured		Lithic	
Land Form	Crest/Bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope % 20%		
					Mansell		

EXCAVATION wet sieved dry sieved

Spit #	Depth Level	Soil Horizon	Soil Type	Cultural/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100 – 150	A1 A2 B	Silty Clay Loam		Root/Quartz	1
2	200 – 250	A1 A2 B	Clay			0
3	300 – 350	A1 A2 B	Clay			0
4	Under Ammo	A1 A2 B	Clay			
5	[illegible]	A1 A2 B				
6	[illegible]	A1 A2 B				
7	[illegible]	A1 A2 B				
Totals	Slope					1

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, hardness, thickness and extent, moisture, bioturbation and vegetation (in each stratigraphic unit)

Condition and integrity

Signs of heating/burning

Tile expansion?

0–50mm: Grayish brown silty clay topsoil. Loose. 0% surface visibility.

50 – 220/280 mm: Dark brown clay. Moderately compact. Orange and black flecking. Few inclusions.

220/280 – 300/350mm (end of excavation): Most brown clay. Little presence of flecking and even fewer inclusions than stratum above. Moderately soft to moderately compact. Lowergrade texture

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area D E7A
Excavators	[illegible]	Date 4/2/12	

SUMMARY OF EXCAVATION

Cultural/Aboriginal Objects	
Other residents?	
Worthy of expansion? How?	
Photograph #	
Sampler (description & number)	

LOCATION

GPS location (Easting)	Easting		Northing	
Soil landscape	Kolmore	Bonnefon	Jumbo	
Landform	Creek bank	Flat	Lower/Mid	Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	A	(F)	S	(W)	Slope % 7	
					Munsell	

EXCAVATION [illegible]

Spits	Depth (cm)	Soil Horizon	Soil Pit Spit	Carbon/Burning/Heating	Disturbance/Modification	Aboriginal Objects #
1	10	A1 (A2) B		[illegible]	G Rock Ploughed	0
2	200	A1 (A2) B		"	"	1
3	270	A1 (A2) B		"	"	0
4		A1 A2 (B)				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						1

FURTHER DESCRIPTIONS

Soil (compaction, compaction, particle size, hardness, tilt, loose and [illegible], [illegible], [illegible] and [illegible] for each stratigraphic unit)

Condition and integrity Spit 1: A1, 0-40m. Mid brown silt

Signs of burning/heating with grass inclusions. Mixed with an AZ

TU expansion? AZ: Dark brown loam ↑ in clay content with ↓. Orangeal gravels & orange clay flecking throughout

Spits 2 & 3: AZ ↑ clay [illegible] ↓ [as above]

approx. 60m from creek & on an undulating heavily ploughed surface

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area C 374
Excavators	[illegible]	Date 3/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (in-house) / Map	Easting			Northing			
Soil landscape	Sedimentary		Transition		Hunter		
Landform	Creek bank	Flat	Lower (Mid)	Upper slope	Raised flat	Ridgeline	Lithop
Aspect	N (E)	S (W)	Slope % 7 - 10 %	[6	15	[illegible]	]
GH			Mutual				

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Cultural/Burning/Hearth	Disturbance/Bioturbation	Aboriginal Objects
1	[illegible]	(A1) (A2) B			Grass + [illegible]	○
2	200	(A1) (A2) B			" "	○
3	280	A1 (A2) (B)			"	○
4		A1 A2 (B)				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						○

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, nature of bioturbation and regularity of each stratigraphic unit)

Condition and integrity: Spit 1 & 2 light grey silt heavily mixed with an A2 dark brown loam. Inclusions of grass roots, occasional gravel & clumps of clay

Signs of burning/hearth: clay A1 with [illegible]

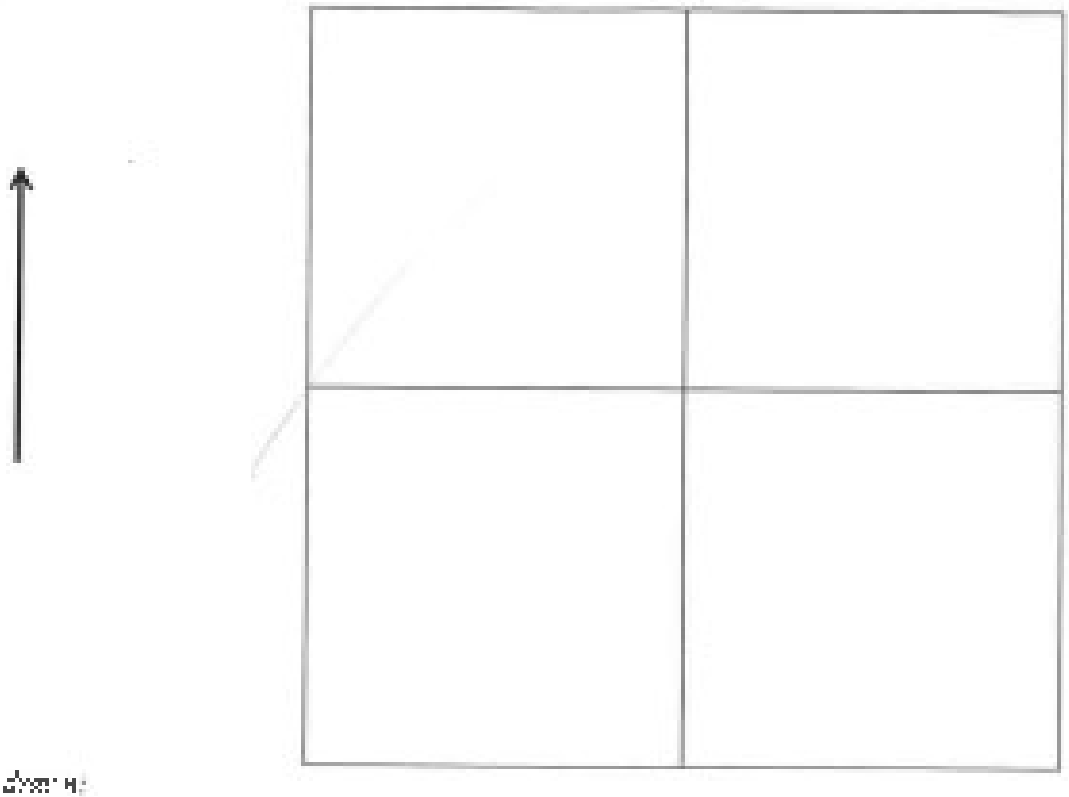
TU expansion?

Spit 3: A2 (as above)

Base: Yellow/brown waxy silt is cracked clay

TU is an area of alluvial & fluvial flow & [illegible] soil dump to possibly narrow the original swamp area to form a creek

Plan



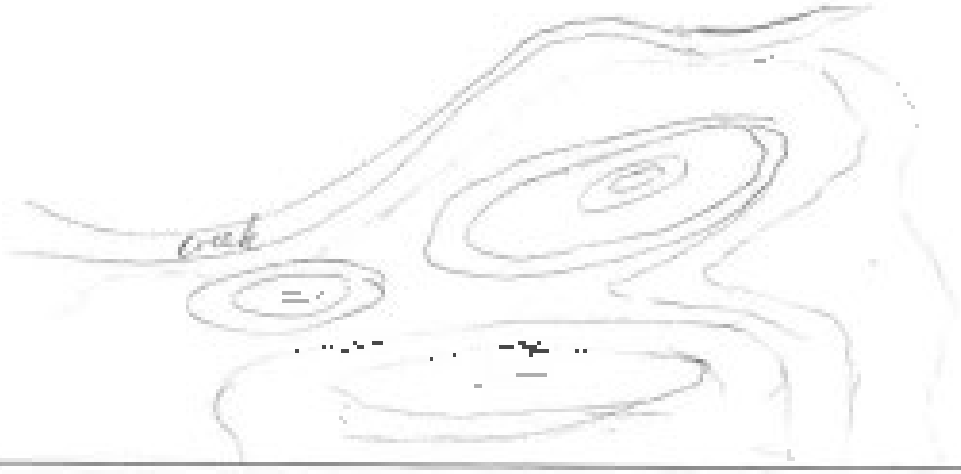
Soil drawn:

Section Plan

Not to Scale

Lines:

Scale:



Relation to other (1)

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area 6 375
Excavators	Sarah [illegible]	Date 4/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Summary (description & number)	

LOCATION

GPS recorded (Lat/Long)	Easting	Northing	
Soil Landscape	Rotatory	Beaconsfield	Hunter
Landform	Creek bank Flat Lower (M) Upper slope Raised flat Adgetion Hilltop		
Aspect	N (E) S (W)	Slope % 10	
PH		Munsell	

EXCAVATION (wet sieved / dry sieved)

Spit #	Depth (mm)	Soil Horizon	Soil Dist. code	Carbon/Burnt/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	1.0	(A1) (A2) B			Gravels [illegible]	0
2	2.10	(A1) (A2) B			[illegible]	2
3	3.20	A1 (A2) (B)			[illegible]	0
4		A1 A2 (B)				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						2

FURTHER DESCRIPTIONS

Soil description, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation, for each stratigraphic zone.

Condition and integrity Spt 1+2: A1 = light brown gravy silt. A2

Signs of burning/heating dark brown compact loam. Very mixed due

TU expansion? to ploughing. Grass roots + gravels throughout. ↑ + clay content with ↓

Spt 3: dark brown loam ↑ in clay with ↓ + gravels

clay/base: dark brown/yellow clay very weathy + cracked

TU on a mid slope is at an fluvial heading SE to the creek.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	AREA 0 376
Excavators: P. Woodley / C. Wright	Date: 04/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Working in expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Zone/Easting)	Easting	Northing	
Soil landscape	Rothbury	Boundary	Hunter
Landform	Crest/Ridge Fix Lower Mid Upper slope	Raised flat	Ridgeline Hilltop
Aspect	N E S W	Slope % 15 %	Down N
		Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Type	Colour/Mottling/Heating	Unfamiliar/Disturbed	Aboriginal Objects
1	100	A1 A2 B	Clay		Roots	0
2	200	A1 A2 B	Clay		Possible Remedial Clay??	0
3	300	A1 A2 B	Clay			0
4	Unexcavated	A1 A2 B	Clay			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						0

FURTHER DESCRIPTIONS

Soil formation, composition, particle size, inclusions, thickness and extent, variation, disturbance and organisms for each stratigraphic unit

Conductor and magnify

Signs of burning/heating

TU expansion?

0 – 60mm: Loose, greyish brown silty clay topsoil. 0% surface visibility.

60 – 300mm (end of excavation): Greyish brown clay with orange black and white flecking. Few inclusions. Compact.

No obvious change at 300mm. ~~Also~~ Test unit is situated on the edge of a raised mound which may be artificial and the test unit may comprise unoxidised clay??

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area O 377
Excavators	Dosh - Tied	Date 4/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS/grid coords	Easting		Northing	
Soil landscape	Rothbury	Gully	Branxton	Hunter
Landform	Creek bank	Flat	Low/Mid/Upper slope	Knoll/flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
Soil					Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil texture	Colour/mottling/structure	Observations/photos/notes	Abandoned Objects #
1	100	A1 A2 B			G'Roots plough	0
2	200	A1 A2 B			"	0
3	310	A1 A2 B			"	3
4	340	A1 A2 B			"	0
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						3

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, horizons and extent, evidence of bioturbation and vegetation for each stratigraphic unit

Condition and integrity: Spit 1: A1 light brown silt onto an A2 of

Signs of disturbance: [illegible]

Site expansion? [illegible]

Spit 2 & 3: light brown loam with [illegible] with [illegible] in clay with [illegible] clay lumps coming up at base [illegible] gravel interface

Spit 4: Gravel interface [illegible] clay

clay/base: Orange/brown waxy clay with lot of inclusions

[illegible] Gravels possibly alluvial

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavators	LP [illegible]	Date 4 12 [illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence of	
Worthy of expansion? How	
Photographs?	
Samples (description & number)	

LOCATION

GPS Accuracy (Range)	Easting				Northing		
Soil Landscape	Rothbury			Brewster		Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop	
Aspect	N	E	S	W	Slope %		
					Munsell		

EXCAVATION sent sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Scale code	Colour/Bottom/Boating	Disturbance/Substitution	Aboriginal Objects #
1	[illegible]	AL AB B		[illegible]	[illegible]	7
2		AL AB B				
3		AL AB B				
4		AL AB B				
5		AL AB B				
6		AL AB B				
7		AL AB B				
[illegible]						

FURTHER DESCRIPTIONS

Soil Description, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit: Dry compact sand mid brown (?) [illegible]

Condition and integrity: [illegible] red brown compact clay with large cracks

Signs of burning/heating: [illegible]

TU expansion?

Shallow [illegible] [illegible]

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	[illegible]
Excavation	CP [illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence?	
Worthy of expansion / How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (accuracy) (Lang)	Easting		Northing	
Soil landscape	Boulder	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Rolled flat	Ridgeline	Hollow
Aspect	N	E	S	W	Slope %	D
					Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Type code	Carbon/Burning/Heating	Disturbance/Disturbation	Aboriginal Objects
1	[illegible]	A1 A2 B		—	[illegible]	
2	[illegible]	A1 A2 B		[illegible]	—	
3	[illegible]	A1 A2 B		—	—	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						

FURTHER DESCRIPTIONS

Soil (proportion, composition, particle size, inclusions, thickness and colour, tensions, inclusions and weight for each stratigraphic unit)	Dark brown dry sand, quite loose (spit 1)
Condition and integrity	Dark brown sand, some moisture, compact (spit 2)
Signs of burning/heating	Dark brown sandy loam tending to dark
TU expansion?	brown compact clay at base (spit 3

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN J	AREA O 380
Excavator: R. WOODBY / C. WRIGHT	Date: 04/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Standard Units)	Easting	Northing	
Soil landscape	Rothbury	Branston	Hunter
Landform	Creek bank	Flat / Lower / Mid / Upper slope / Ridgeline / Hilltop	
Aspect	N (E) S W	Slope % 15%	Slope Sw.
		Mouse	

EXCAVATION wet sieved / dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Type	Carbon/Burning/Hearth	Disturbance/Disturbation	Aboriginal Objects
	100	A1 A2 B	Clay		Rabbit	
	200	A1 A2? B?	Clay		[illegible]	
	300	A1 A2? B?	Clay		[illegible]	
	400	A1 A2? B?	Clay			
	[illegible]	A1 A2 B?	Clay			
		A1 A2 B				
		A1 A2 B				

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, [illegible], moisture, [illegible] and [illegible] for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TU expansion?

0-80mm: Slightly deeper than usual topsoil. Greyish brown. Loose and moderately soft. Silty clay. 0% surface visibility.

80 - 400mm: Dark brown to greyish brown clay. Some orange black and buff flecking. Few inclusions. Moderately compact. Becomes wonder from about 350 to 400mm but no change in matrix at end of excavation at 400mm. Has the feel of clay which has been ~~underwa~~ under water in boggy ground and possibly trampled.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	361
Excavators	LP TG	Date 9/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS (Northing/Easting)	Easting		Northing	
Soil Landscape	Rothbury	Branston	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ringline	Hilltop
Aspect	N E (S) W	Slope %		
GPS		Munsell		

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil % rock	Lesion/Burning/Density	Disturbance/Disturbation	Aboriginal Objects
1	500	(A1) A2 B		--	Grass roots	2
2	300	(A1) A2 B		--		0
3	300	(A1) A2 B				0
4	360	(A1) (A2) B				0
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						2

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, buckness and extent, moisture, disturbance and vegetation, per each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TU expansion?

SPIT 1 -

SPIT 2 - light brown silty clay. Loose, friable.

SPIT 3 " " " " "

SPIT 4 CONTEXT " " " " " "

SPIT 4 CONTEXT 2 - CHANGE IN SOIL AT 330mm deep.

- orange silty clay, slightly more compact than above.

increasing clay with depth. Possibly A2 or

mixed with clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible] 383 [illegible]
Excavation	[illegible]	Date 28/[illegible]/12	

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence?	
Whole or expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS/Accessories Name	Easting		Northing	
Soil landscape	Bulbury	Branson	Jupiter	
Landform	Creek bank	Flat	Lower Mid	Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %	
Pit			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Pit Sieve	Lab/Bag/Bottle/Casing	Dist. from Mid-Landform	Aboriginal Objects
1	[illegible]	A1 A2 B			[illegible]	[illegible]
2	[illegible]	A1 A2 B			[illegible]	[illegible]
3	[illegible]	A1 A2 B				[illegible]
4	[illegible]	A1 A2 B				[illegible]
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						[illegible]

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, high friction and vegetation for each stratigraphic unit)

Condition and integrity Spit 1: light brown silty/loam compact

Signs of burning/hearing with grass root inclusions throughout

Tilt expansion? A1: lighter & more aerated & mixed into B2 which is dark brown loam & inclay with B

Spit 2 & 3: Mid brown loam & in clay content with B very crushed throughout with minimal [illegible]

Base: Mid brown [illegible] clay

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT 4 PLAN 4	[illegible] 382
Excavator: P. WOODLEY / A. FRENCH.	Date: 30/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Pinning upon?	
Sample (description & number)	

LOCATION

GPS (Sections Only)	Easting		Northing	
Soil landscape	Rodbury	Transition	Hunter	
Landform	(Creek bank)	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Landfill
Aspect	(N)	E	S	W	Slope % 20% (SEE SKETCH SECTION ON REVERSE)
Map					Viewpoint

EXCAVATION (wet sieved) dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Tx code	Colour/Bonding/Heating	Disturbance/Modification	Aboriginal Objects
1	50 - 100	A1 A2 B				
2	200	A1 A2 B				1
3	200 - 280	A1 A2 B	[illegible]			
4	280 - 330	A1 A2 B	Orn.			
5	OVERCHOATED	A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Tools						

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and depth from the rock stratigraphic unit?

Continuous and integrity

Signs of burning/heating

TU expansion?

0 – 50mm: Silty clay topsoil. Loose, moderately soft to moderately compact. Dark greyish brown. 0% surface visibility.

50 – 200/250mm: ~~Dark~~ Brown clay. Orange and black flecking. Some charcoal and mica fragments. Few inclusions. Compact.

200/250 – 280/330 (end of excavation): ~~Dark~~ Brown clay, softer and wetter than clay above (moderately soft to moderately compact). Also distinguished by decayed limestone inclusions (10%) up to about 10mm length.

ANAMBAH TEST EXCAVATION 17-0227		TEST UNIT # PLAN #	AREA K 3&3
Excavators	P. WOODLEY / A. FRENCH	Date 30/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (or corner # 1 only)	Easting	Northing	
Soil landscape	Rufibury	Branston	Hunter
Landform	Crest/bank Flat Lower, Mid, Upper slope / Raised Bit Ridgeline Hilltop		
Aspect	N (W) E S W	Slope % <5%	ROAD CREEK BANK TOWARDS FLAT OF LOWER SLOPE.
Soil		Munsell	

EXCAVATION wet-sieved dry-sieved

Soil #	Depth (mm)	Stratigraphy	Soil Type	Carbon/Burning/Heating	Recordings/Observations	Aboriginal Objects
1	100	A1 A2 B	CLAY		[illegible]	
2	200	A1 A2 B	CLAY		BANK CRACKED	
3	UNDERMINED	A1 A2 B	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil consumption, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation to form stratigraphic units

Condition and integrity

Signs of burning/heating

TH expansion?

0-50mm: Very dark brown silty clay topsoil. Loose and moderately soft to moderately compact. Probably ploughed. 5% surface visibility.

50 - 120/150: Very dark brown clay (some silt content). Orange soft stone inclusions (5-10%). Compact. Probably ploughed.

120/150 - 200: Very dark brown clay. Very compact. Homogeneous. Orange flecking, few inclusions.

ANA MIAH TEST EXCAVATION 12 0227		TEST UNIT 3 PLAN 4	388 AREA 3
Excavators	R. Cooley / J. Smith	Date 23/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Reason for excavation? Why?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (easting & northing)	Easting	Northing	
Soil landscape	Rockhampton	Stanthorpe	Durras
Landform	Creek bank / Flat / Terrace / Mid / Upper slope / Ridge top / Ridge line / Hilltop		
Aspect	N / E / S / W	Slope % 5–10%	
pH		Munsell	

EXCAVATION wet sieved / dry sieved

Spit	Depth (cm)	Sediment	Soil Type code	Colour/Texture/Feeling	Details/Stratigraphy	Number Objects
1	100	A1 A2 P	CLAY		[illegible]	[illegible]
2	[illegible] 150	A1 A2 B	CLAY		[illegible]	[illegible]
3	UNFINISHED	A1 A2 (B)	CLAY		[illegible]	
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil compaction, composition, texture, inclusions, Munsell and colour, moisture, bioturbation and expansion for soil micromorphology and

Feature and integrity

Signs of bioturbation/mixing

Disturbance?

0–50mm: Shallow topsoil level. 0% Surface visibility.

50–70/80mm: Compact brown clay. Orange and black flecking. Few inclusions.

70/80mm – 150mm (end of excavation): Yellowish brown clay. Compact. Orange flecking. Few inclusions.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	380 [illegible]
Excavators	[illegible] / [illegible]	Date 2[illegible]/1[illegible]/12 (sewer)	
SUMMARY OF EXCAVATION		[illegible]/1[illegible]/12 ([illegible])	
Count Aboriginal Objects			
Other evidence?			
Worthy of expansion? Plan?			
Photograph #			
Samples (description & number)			

LOCATION

GPS (x-sewer) Tasks	Easting ☐☐☐☐☐☐	Northing ☐☐☐☐☐☐☐	
Soil landscape	Tuffbury	Branston	Hunter
Landform	Creek bank Flat Lower Mid/Upper slope	Raised flat Ridgeline Hilltop	
Wind	N E S W	Slope 5 %	
pH		Munsell	

EXCAVATION wet-sieved dry-sieved

Spot #	Depth (cm)	Soil Horizon	Soil Type	Carbon/Burning/Heating	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B	CLAY		[illegible]	[illegible]
2	250	A1 A2 B	CLAY		[illegible]	1
3	300	A1 A2 B	CLAY		[illegible]	0
4	[illegible]	A1 A2 B	CLAY		[illegible]	0
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						1

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Ceramics and integrity

Signs of burning/heating

TU expansion?

0 – 50mm: Shallow topsoil. 0% surface visibility.

50 – 200/220mm: Compact brown clay with orange flecking. Few inclusions.

200/220 – 300mm (end of excavation): Compact brown clay with orange and black flecking. More homogeneous and a little lighter than the horizon above.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	380
Excavators	[illegible] / J. [illegible]	Date 22/10/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence	
Why type of excavation? Flow?	
Photographs #	
Samples (description & number)	

LOCATION

GPS (zone & easting northing)	Easting		Northing	
Soil landscape	Rothbury	Jerrys Plains	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Other
Aspect	N	E	S	W	Slope %	2.5%
pH					Munsell	

EXCAVATION wet sieved dry sieved

Spit	Depth (mm)	Soil Horizon	Soil Type code	Colour/Texture/Mottling	Disturbance/Interpretation	Aboriginal Objects #
1	100	A1 A2 B	CLAY			0
2	200	A1 A2 B	CLAY			0
3	250	A1 A2 B	CLAY			0
4	[illegible]	A1 A2 B	CLAY			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						0

FURTHER DESCRIPTIONS

Soil (compaction, consistence, particle size, inclusions, thickness and extent, moisture, distribution and variation, for matching against map)

Condition and integrity

Signs of burning/heating

Pit excavation?

0 – 50mm: Shallow, loose topsoil. Clay. 0% surface visibility.

50 – 200mm: Dark brown, compact clay. Orange fleckling. Few inclusions.

200 – 250mm (end of excavation): Dark yellowish brown clay. Orange and black fleckling. Compact.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	391
Excavators: [illegible] + [illegible]	Date: [illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? Why?	
Photograph #	
Samples (description & number)	

LOCATION

GPS or manual	Easting ☐☐☐☐☐☐	Northing ☐☐☐☐☐☐☐
In landscape	Boundary	Bracelet / Hunter
Landform	Creek bank / Flat / Lower, Mid, Upper slope / (Raised flat) / Ridgeline / Hilltop	
Aspect	N / E / (S) / (W)	Slope %: 5%
pH		Munsell

EXCAVATION wet sieved / dry sieved

Spit #	Depth (mm)	Soil Horizon	Sample code	Colour/texture/inclusions	Disturbance/bioturbation	Aboriginal Objects #
1	[illegible]	(A1) (A2) B		Silty [illegible] clay	ploughing	0
2	150-320	A1 (A2) (B)		Silty clay, clay		0
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						0

FURTHER DESCRIPTIONS

Soil description: composition, particle size, inclusions, thickness and extent, structure, Munsell colour – if necessary for each stratigraphic unit

Condition and integrity

Signs of burning/heating

TU expansion?

A1-A2: Surface is dry and powdery clay transitioning to slightly more moist, sticky clay at a depth of 80-90 [illegible]. Roots are present. Burnt clay fragments [illegible] rarely ([illegible]).

B: At a depth of 180-[illegible] a [illegible], sticky [illegible] moist clay is encountered.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	5/12-
Excavators	LARSEN	Date 28/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Sample (description & number)	

LOCATION

GPS location (Lat/Long)	Easting	Northing	
Soil landscape	Rotatory	Branxton	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline (Hilltop)		
Aspect	(N) E S (W)	Slope % 15	
		Munsell	

EXCAVATION wet sieved dry sieved

Soil #	Depth (mm)	Soil Horizon	Soil Pedo	Carbon/Sorting/Boring	Disturbance/Bioturbation	Aboriginal Objects #
1	100	(A1) (A2) 2		predom. silt	Roots, normal plowing	
2	200	(A1) (A2) 2		predom. silt, few clay	plowing	
3	250	A1 (A2) (B)		predom. clay, few silt		
4		A1 A2 2				
5		A1 A2 3				
6		A1 A2 3				
7		A1 A2 3				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Tie excavation?

A1 A2: Topsoil and moisture to a depth of between 180-250mm is predominantly medium-sized particles + clumps of moist, rich dark silt. At a depth of approx 180mm pockets of clay that is compacted + sticky begin to form, predominantly in SW corner.

B: At approx 250mm depth below surface, a dense, compacted, sticky + moist homogeneous, light brown clay is encountered.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN E	AREA G 393
Excavators: P. WOODLEY / [illegible]	Date: 27/11/12 (START) 28/11/12 (FINISH)	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS coordinates	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	Edge of crest
Landform	Creek bank	Flat	Lower, **Mid, Upper slope**	Raised flat · Ridgeline · **Hilltop**
Aspect	N · **E** · S · W		Slope %	5%
			Munsell:	

EXCAVATION **wet sieved** dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Texture	Charcoal/Cement/Nodules	Disturbance/Bioturbation	Aboriginal Objects
1	0-50	**A1 A2** B	CLAY		ROOTLETS	0
2	[illegible] -220	A1 **A2 B**	CLAY		NIL. [illegible] VEGETATION	0
3	[illegible]	A1 A2 **B**	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Expected future findings

Interpretation?

0 – 50mm: Shallow clay deposit. Loose. 0% surface visibility.
50 – 100/150mm: Brown clay with a reddish tint. Varying depth. Moderately compact. Orange and black flecking. Few inclusions.
100/150 – 200/220 (end of excavation): Reddish brown clay. Moderately compact. Orange, buff and black flecking. Inclusions encountered in SW corner (cst. buff coloured stone fragments, averaging 5 – 10mm length).

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area G 394
Excavators	Josh + Clive	Date 27/1/12	

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph?	
Samples (description or number)	

LOCATION

GPS reading (Lens)	Easting		Northing	
Soil landscape	Rotuberry	Boonstone	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ringeline	Hilltop
Aspect	N	E	S	W	Slope % 5	
Dip			Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type Code	Carbon/Burning/Heating	Disturbance/Disturbation	Aboriginal Objects
1	110	A1 A2 B			plough + grass roots	
2	200	A1 A2 B			plough	
3	240	A1 A2 B			"	
4	Unexcav	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, [illegible] and [illegible] per each stratigraphic unit)

Continuity and integrity

Signs of burning/heating

Soil expansion

Spit 1: Dark brown compact loam with A1, A2 + Clay mixed through together

Spit 2 + 3: Dark brown loam mixed with the orange/brown clay base. No inclusions in lower layers besides clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible]
Excavators	P. WOODLEY / T. WILSON	Date 28/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of excavation? How?	
Photographs	
Samples (description & number)	

LOCATION

GPS recorders Yes/No	Easting	Northing	
Soil landscape	Rothbury	Pearson	Hunter
Landform	Creek bank / Flat / Lower, Mid, Upper slope / K. & N. flat / Ridgeline / Hilltop		
Aspect	N / E / S / W	Slope %	
		Mouse	

EXCAVATION wet sieved / dry sieved

Sieve	Depth (cm)	Soil Horizon	Soil Pr code	Carbonation/Tannin	Disturbance/Bioturbation	Aboriginal Objects#
1	100 - 120	A1 A2 B	[illegible]		[illegible]	0
2	200	A1 A2 B	[illegible]		Ant [illegible]	0
3	300	A1 A2 B	[illegible]			0
4	350	A1 A2 B	[illegible]			0
5	[illegible]	A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						0

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation (in accordance with stratigraphy unit)

Comments and integrity

Signs of burning/heating

Other comments

0-50mm: Topsoil. Brown clay, loose. 10% surface visibility.

50 - 250mm: Dark brown moderately compact clay. Few inclusions. Charcoal and buff & fleckings.

250 - 350mm: Level of excavation. Brown clay, [illegible], moderately compacted with high proportion of fine and coarse inclusions. Possibly decayed limestone / dolomite (?). About 30% of clay matrix.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	[illegible] 396
Excavators	[illegible] Rob	Date 28/[illegible]/12	

SUMMARY OF EXCAVATION

Cover Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS/Grid Name	Easting	Northing	
Soil landscape	Rothbury	Boarbon	Hunter
Landform	Creekbank Flat Lower Mid Upper slope	Raised flat Ridgeline Hilltop	
Aspect	N E S W	Slope N [illegible]	
[illegible]		Mussel	

EXCAVATION wet sieved dry sieved

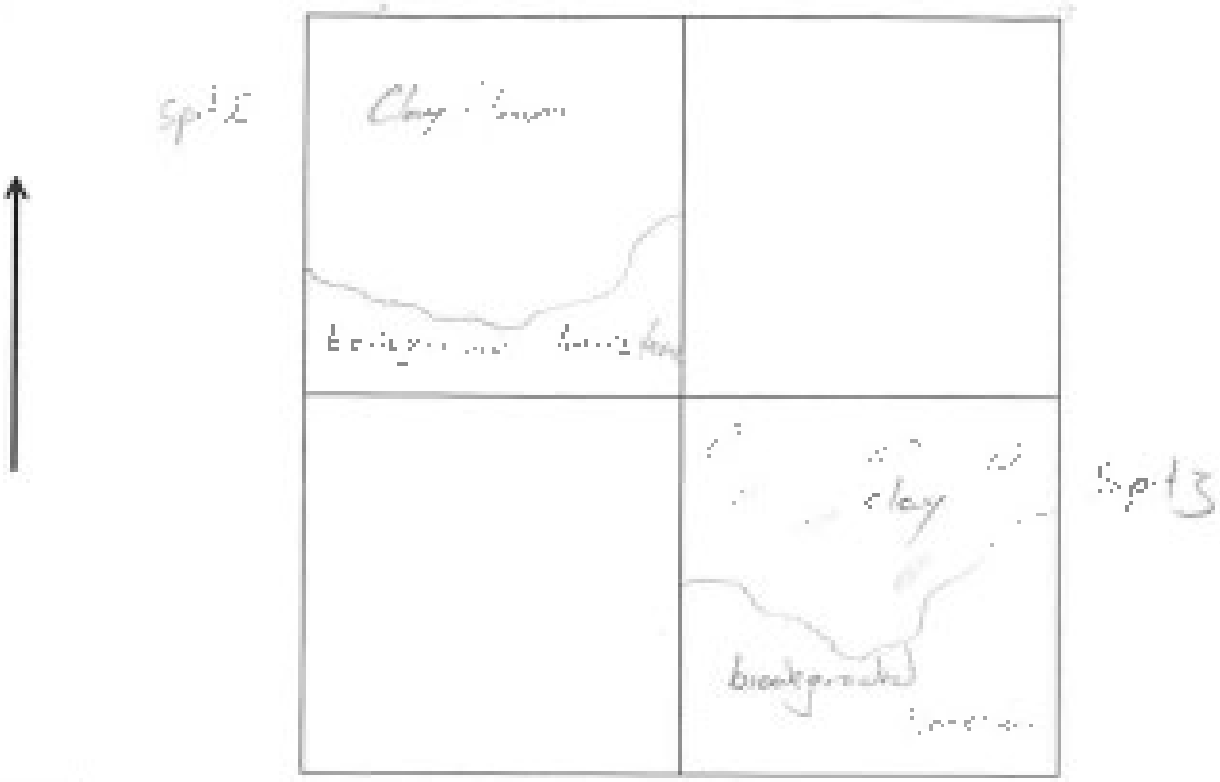
Spit #	Depth (cm)	Soil Horizon	Soil Type code	Carbon/Burning/Glazing	Disturbance/Disturbance	Aboriginal Objects #
1	[illegible]	A1 A2 B			[illegible]	[illegible]
2	200	A1 A2 B			[illegible]	[illegible]
3	200	A1 A2 B			[illegible]	[illegible]
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						[illegible]

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity	Spit 1 - A1 [illegible] dark brown silty loam
Signs of burning/heating	with grass roots. Only [illegible] A2 of dark brown
Till expansion?	[illegible]
Spit 2 & 3 - A2	Southern [illegible] of TO limestone [illegible]
	with [illegible] an increase of clay content [illegible]
	[illegible] 35% [illegible]
	55% dark [illegible] clay [illegible]

Plan



Spit [illegible]

Section Plan

Plan:
Facing:

Solution to other TU

AREA #1

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	247
Excavators	[illegible]	Date 28/11/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (or source of data)	Easting		Northing	
Soil landscape	Rothbury	Branchen	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
			Slope %	
			Munsell	

EXCAVATION wet sieved dry sieved

Spot #	Depth (mm)	Soil Horizon	Soil Lab Code	Carbon/Burning/Heating	Disturbance/Bioturbation	Abs. Zone Observed
1	140	A1 A2 B			GRA[illegible]	0
2	130	A1 A2 B			[illegible]	0
3	[illegible]	A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
[illegible]						0

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Tell exposure?

[illegible] – [illegible]

[illegible] COMPACTED

170 190 . DARK BROWN SILTY CLAY – MORE CLAYEY IN TEXTURE COMPACTED

– SOUTH WALL, BASE OF SPIT 2 – ROUNDED PIECE OF TIMBER. MOST LIKELY TO BE HISTORIC IN NATURE.

[illegible]

[illegible]

ANAMBAH TEST EXCAVATION 12 0227		TEST UNIT # PLAN #	Area M1 398
Excavators	Josh	Date 28/11/12	

SUMMARY OF EXCAVATION

Cross Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Pooling upon?	
Samples (description or number)	

LOCATION

GPS Reading Name	Easting	Northing	
Soil landscape	Rothbury	Branches	Hunter
Landform	Creek bank Fl. Lower Mid Upper Ridge	Raised flat	Ridgeline Hilltop
Aspect	N E S W	Slope 5	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Sample code	Carbon/Burning/Heating	Disturbance/Disturbation	Anomalous Objects
1	100	A1 A2 B			Grass [illegible]	
2	200	A1 A2 B			ploughed	
3	270	A1 A2 B			ploughed	
4	Unex	A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, [illegible] and vegetation for each stratigraphic unit)

Cavities and integrity: Spit 1: A1 0-40mm mixed with A2

Signs of burning/heating: light brown silt mixed in with the red

To expansion? brown loam with occasional gravel

Spit 2 & 3: A2 a ↑ in clay with ↓

Base: Waxy brown/yellow/orange clay. cracked during dry weather & expanded atm due to rain

Very ploughed pit = very disturbed

ANAMBAH TEST EXCAVATION 12-022		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible] / [illegible]	Date	[illegible]

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Vertical or [illegible]	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Zone 1 Unit)	Easting						Northing		
Soil landscape	Rubbury			Branson			Hunter		
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised Fan	Ridgeline	Hilltop			
Aspect	N	E	S	W	Slope %	5 %			
					Marsel				

EXCAVATION (wet-sieved) dry-sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Colour/Mottling/Heating	Description/Inclusion	Stratigraphic Subject
[illegible]	[illegible]	A1 A2 [illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	A1 A2 [illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	A1 A2 [illegible]	[illegible]			
[illegible]	[illegible]	A1 [illegible] [illegible]	[illegible]			
[illegible]	[illegible]	A1 A2 [illegible]	[illegible]			
[illegible]		A1 A2 [illegible]				
[illegible]		A1 [illegible] [illegible]				
Total						

FURTHER DESCRIPTIONS

Soil compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and explanation for each stratigraphic unit:

Localities and integrity

Signs of burning/heating

TU expansion?

0 - 70mm: Dark grayish brown topsoil. Loose and moderately [illegible]. 5% clay. 5% [illegible]

70 - 200/250 mm: Dark brown clay. Moderately compact. 10% inclusions (soft orange stone, manganese and rounded pebbles). Possible plough zone

200/250 - 350mm (end of excavation): Dark brown clay. Moderately compact. Fewer inclusions compared to [illegible] above [illegible] [illegible]. [illegible] [illegible]. Soft orange and black flecking

ANAMBAH TEST EXCAVATION 124227		TEST UNIT # PLAN #	AREA A [illegible]
Excavators	P. WOODLEY / J. GRIFFITHS /	Date 07/12/17	

SUMMARY OF EXCAVATION C. CAMPBELL

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph?	
Sample-Description & number?	

LOCATION

GDS Accuracy Setting	Easting		Northing	
Soil landscape	Rothbury	Brandon	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N E S W	Slope 5 15%	[illegible]	
		Manned		

EXCAVATION wet sieved dry sieved

Sample	Depth (mm)	Soil Horizon	Soil Type code	Carbon/Burning/Heating	Disturbance/Rubbish	Aboriginal Objects
1	100	A1 A2 B	[illegible]		[illegible]	0
2	200	A1 A2 B	Clay		[illegible]	0
3	300	A1 A2 B	Clay			0
4	[illegible]	A1 A2 B	Clay			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						0

FURTHER DESCRIPTIONS

Soil Description, composition, profile size, inclusions, distances and extent, moisture, [illegible] and expansion for each stratigraphic unit)

Evaluation and integrity

Signs of burning/heating

Other comments

0 - 60mm: Dark greyish brown silty clay. Loose and moderately soft. Few inclusions. 0% surface visibility

60 - 200mm: Dark greyish brown clay. Moderately compact. Orange and buff and black flecking. Few inclusions. possible plough zone.

200 - 300mm (end of excavation): Dark brown clay. Slight yellowish ~~[illegible]~~ tint. Orange and black flecking. Few inclusions. More homogenous and consistent matrix compared to stratum above. Moisture.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AR[illegible] A 502
Excavation	P. [illegible] / J. GRIFFITHS	Date: 12/18/[illegible]	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Location to site)	Easting	Northing	
Soil landscape	Rothbury	Branxton	Hunter
Landform	Creekbank Flat Lower, Mid, Upper slope	Raised flat	Ridgeline Hilltop
Aspect	N E S SW W	Slope %	[illegible]
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Carbon/Ironing/Heating	Disturbance/Modification	Aboriginal Objects #
1	100	A1 A2 B	[illegible]		[illegible]	
2	200	A1 A2 B	CLAY		[illegible]	
3	[illegible]	A1 A2 B	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation, for each sample unit)

Condition and integrity

Signs of burning/heating

To expansion?

0 – 50mm: [illegible] Greyish brown silty clay topsoil. Loose and moderately soft. Few inclusions. 0% surface visibility.

50 – 150/180mm: Dark brown clay. Moderately compact. Few inclusions. Orange flecking mottly.

150/180 – 200mm (end of excavation): [illegible] Brown to yellowish brown clay. Orange flecking. Consistent texture. Few inclusions.

NOTE: The topsoil and A2 horizons appear to have been truncated, leaving the underlying clay less than 200mm below the surface.

ANAMBAR TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA A 503
Excavators	P. WOODLEY / J. GRIFFITHS	Date	05/12/12

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? Lots?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (northing & easting)	Easting		Northing	
Soil landscape	Rathbury	Brandon	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N / E	S	W	Slope % 0%
				Munsell

EXCAVATION wet sieved / dry sieved

Spits	Depth (mm)	Soil Horizon	Soil Type	Urban/Rooting/Boating	Disturbance/Rubbish	Aboriginal Objects
1	100	A1 A2 B	[illegible]		[illegible]	
2	200	A1 A2 B	clay		[illegible]	
3	300	A1 A2 B	clay			
4	350	A1 A2 B	clay			
5	[illegible]	A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TM expansion?

0 - 60mm: Dark brown silty clay topsoil. Loose and moderately soft. 0% surface visibility. Few inclusions.

60 - 300mm: Dark brown clay. Moderately compact and clumpy. Few inclusions and little flecking.

300 - 350mm (end of excavation): Dark brown clay with decayed limestone (? buff coloured) inclusions in concentrated patches (about 10%). Compact.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA A 504
Excavator	P. WOODLEY / J. GRIFFITHS	Date 05/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographed	
Samples (description & number)	

LOCATION

GPS (Southern Plane)	Easting		Northing	
Soil landscape	Rothbury	Branstone	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N / NE / E / S / W		Slope % 0%	
			Munsell	

EXCAVATION wet sieved / dry sieved

Spit	Depth (cm)	Soil Horizon	Soil Type	Colour/Mottling/Feeling	Disturbance/Disturbation	Abs/Sub Objects#
1	100	A1 A2 B	[illegible]		[illegible]	5
2	150	A1 A2 B	Clay		[illegible]	1
3	[illegible]	A1 A2 B	Clay			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						6

FURTHER DESCRIPTIONS

Soil (composition, compaction, particle size, inclusions, thickness and extent, moisture, orthobarion and vegetation for each stratigraphic unit)

Conclusion and integrity

Suggested Hermeneutic

TU Expansion:

0-60mm: Greyish brown topsoil (silty clay). Loose and moderately soft. Few inclusions. 0% surface visibility.

60-80/100: Dark brown clay. Moderately compact. Orange flecking. Rounded pebble inclusions (few in number). Possible remnant plough zone.

80/100-150mm (end of excavation): Yellowish brown clay. Compact. Some orange flecking. Few inclusions. Consistent texture.

Note: Topsoil and A2 appears to have been truncated and a shallow plough zone remains above the underlying clay.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	AREA A 505.
Excavators: P. [illegible] / J. Griffiths	Date: 25/12/12	

SUMMARY OF EXCAVATION	
Found Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs	
Samples (description & number)	

LOCATION				
GPS [illegible]	Easting		Northing	
Soil landscape	Blacktown	Richmond	Theresa	
Landform	Creek bank; Flat; Terrace/Mid; Upper slope; **Raised flat** (circled); Ridgeline; Hill top			
Aspect	N E (circled) S W	Slope %	<1.5%	
		Notes		

EXCAVATION: wet sieved (circled) / dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Colour code	Carbon/Burning/Charcoal	Disturbance/Bioturbation	Aboriginal Objects
1 (circled)	100	A1 A2 (circled) B	[illegible] Grey + Dark		[illegible] Possible [illegible]	O
2 (circled)	200	A1 A2 B (A2 B circled)	[illegible]		[illegible]	O
3 (struck through)	[illegible]	A1 A2 B (B circled)	[illegible]			
4 (struck through)		A1 A2 B				
5 (struck through)		A1 A2 B				
6 (struck through)		A1 A2 B				
7 (struck through)		A1 A2 B				
Totals						O

FURTHER DESCRIPTIONS

Soil (composition, consistence, pebble size, inclusions, thickness and extent, moisture), bioturbation and vegetation for each stratigraphic unit?

Condition and integrity

Signs of burning/heating

[illegible]?

0 - 70mm: Dark greyish brown silty clay. Loose and moderately soft. Few inclusions. 0% surface visibility.

70 - 160mm: Dark brown clay. Moderately compact. Little presence of flecking. Few inclusions.

160 - 200mm: Dark brown clay with yellowish tint. Orange and buff flecking. Moderately compact. Few inclusions.

NOTES: A1/A2 horizons appear to have been truncated.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA A DOG
Excavators	P. GOODLEY / J. GRIFFITHS	Date 05/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS no. [illegible]	Easting			Northing			
Soil landscape	Rothbury			Branden	[illegible]	Hunter	
Landform	Crest/bank	Flat	Lower	Mid	Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	NE	E	S	W	Slope %	≈ 0%
Site				Mussel			

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Colour	Carbon/Burning/Bleaching	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B	GREY [illegible]		[illegible]	
2	200	A1 A2 B	GREY		PLOUGHED OVER AND TRUNKATED	
3	250	A1 A2 B	GREY			
4	[illegible]	A1 A2 B	GREY			
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil [illegible], composition, [illegible], inclusions, [illegible] and extent, moisture, bioturbation and vegetation for each stratigraphic unit?

Conditions and integrity

Signs of [illegible]

Transmission?

0 – 50mm: Greyish brown silty soil. Loose and moderately soft. Few inclusions.

50 – 200mm: Dark greyish brown clay. Few inclusions. Moderately compact.

200 – 250mm (end of excavation): Brown clay with slight yellowish tint. Moderately compact. Few inclusions and little [illegible]. Consistent texture.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area A 507
Excavators	Josh Tod	Date 6/12/12	

SUMMARY OF EXCAVATION

Found Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS recorded Above	Easting		Northing	
Soil Landscape	Kalabury	Brynstan	Hunter	
Landform	Creek bank Flat Lower Mid Upper slope	Raised flat Ridgeline	Hilltop	
Aspect	N E S W	Slope %		
		Munsell		

EXCAVATION sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Vis. Code	Colour/Training/Disease	Disturbance/Bioturbation	Aboriginal Objects
1	100	A1 A2 B			Grass roots/gravels	1
2	200	A1 A2 B			"	2
3	300	A1 A2 B			Gravels	0
4	400	A1 A2 B			bedrock	0
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						3

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, limestone, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Location and integrity Spits 1 & 2: light brown soft aerated silt.

Signs of burning/heating Grass roots 0-40mm Gravels starting @ 50mm

Aboriginal ↑ with ↓

Spit 3: light grey silt with increasing ↑

Spit 4: light grey silt with bedrock coming up @ approx. 350

Aboriginal In the ridgeline area of rock deposits on the surface.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	308
Excavators	LIBRARIA / GRADUES	Date 6/12/12	

SUMMARY OF EXCAVATION

Cultural Aborig. and Objects	
Other evidence?	
Worthy of expansion? How?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (Accession Table)	Easting	Northing	
Soil landscape	Rothbury	Branston	Hunts
Landform	Creek bank / Lower, Mid, Upper slope	Raised flat	Ridgeline / Hilltop
Aspect	N / E / S / W	Slope % 10%	
		Munsell	

EXCAVATION wet sieved / dry sieved

Units	Depth (cm)	Soil Horizon	Soil Ice code	Carbon/Burning/Heating	Ochre/Pigment/Resin/Ash	Aborigines/Objects
	100	A1 A2 B			Roots	
2	150	A1 A2 B			Roots clear	
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Photographs

A1-A2: Pockets of soft, powdery silty loam with pockets of dense, compacted clay. Clay is sticky and large cracks are present. It is here that the loam is trapped and builds up to form channels of softer material. Through the silty-loamy channels roots <1mm in diameter are common. At a depth of 160mm, few silt channels are present and the base consists of dense, homogeneous, sticky dark brown clay.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	AREA P 50%
Excavators	P. WOODLEY / S. CAMPBELL	Date 01/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion / Flow?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Weekend Wand)	Easting	Northing	
Soil landscape	Rothbury	Branston	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hilltop		
Aspect	N S SW W	Slope % ~~10%~~ 5 - 10%	
		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type	Cultural/Burning/Bedding	Unfeature/Bioturbation	Abundance Objects #
1	120	A2 A2 B	SILT		Roots	2
2	150 / 120	A2 A2 B	SILT + STONE			0
3	Unfeatured	A2 A2 B	BEDROCK			
4		A2 A2 B				
5		A2 A2 B				
6		A2 A2 B				
7		A2 A2 B				
8						2

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbations and regulations, for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

TU excavation?

40 – 30mm: Light greyish brown topsoil. Silt with very low clay content. Loose. Few inclusions. 10% surface visibility.

30 – 120mm: Light greyish brown silty soil. Moderately soft. Few inclusions. 1x small silcrete flake recovered during excavation.

120 – 150/200mm: Interface between silt above and bedrock below. Comprises decomposing bedrock stone within a silt matrix. 50% + stone content. Fragmentary.

150/200mm: Bedrock. Uneven, broken and friable surface.

ANAMBAH TEST EXCAVATION 12-0227		TEST UNIT # PLAN #	Area P 510
Excavators	Josh & Ted	Date 6/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Working or abandoned/ closed?	
Photographs?	
Samples (description & number)	

LOCATION

GPS (recorded in zone)	Easting		Northing	
Soil landscape	Rothbury	Branxton	Hunter	
Landform	Creek flats	Flat	Lower, Mid, Upper slope	Raised flat	Ridgeline	Hilltop
Aspect	N	E	S	W	Slope %
					Munsell

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil PH code	Cultural/Natural Features	Disturbance/Reference	Artefactual Objects #
1	100	A1 A2 B			Grass gravels	0
2	200	A1 A2 B			"	4
3	310	A1 A2 B			bedrock gravels	0
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						4

FURTHER DESCRIPTIONS

Soil (compaction, consolidation, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity: Spit 1: light brown silt with grass root

Signs of burning/heating: including [illegible] gravels @ [illegible]

TL expansion: alluvial aerated [illegible]

Spit 2: A1 from 100-150 A2: light grey soft aerated alluvial silt 4 in gravel content [illegible]

Spit 3: A2 with bedrock chunks & slabs [illegible] 270

ANAMBAH TEST EXCAVATION T2-0227		TEST UNIT # PLAN #	[illegible]
Excavators	[illegible] - BRANSTON	Date 6/12/22	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Sea Level Datum)	Easting		Northing	
Soil Landscape	Ruthbury	Branston	Hunter	
Landform	Creek bank	Flat	Lower / Mid / Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N / E / S / W		Slope % 10	
			Vis. soil	

EXCAVATION wet sieved dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Lab code	Colour/Humidity/Heating	Disturbance/Disturbation	Aboriginal Objects #
1	100	A1 A2 B			roots	0
2		A1 A2 B				
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Totals						

FURTHER DESCRIPTIONS

Soil (composition, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of housing/heating

TDs (precise)?

A1: Layer of predominantly clay with few silt particles. Silt forms within cracks in clay as channels. Clay is moist and sticky and especially dense + compacted.

At a depth of 80-100mm below the surface, the clay possess dominate. Clay is homogeneous + dark brown in colour. Few silt channels remain.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	AREA M 512
Excavators: P. WOODLEY / JOEY GRIFFITHS	Date: 07/12/12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Priority of expansion? How?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Zone/Easting)	Easting		Northing	
Soil landscape	Rathbury	Branxton	Hunter	
Landform	Creek bank	Flat	Lower, Mid, Upper slope	Raised flat / Ridgeline / Hilltop
Aspect	N	E	S	W
			Slope % 5 – 10%	
			Munsell	

EXCAVATION wet sieved / dry sieved

Spit #	Depth (mm)	Soil Horizon	Soil Pit code	Carbon/Burnt/Heating	Disturbance/Reduction	Aboriginal Objects
	100	A1 A2 B	CLAY		ROOTLETS	1
	180	A1 A2 B	CLAY		ROOTLETS	1
	[illegible]	A1 A2 B	CLAY			
		A1 A2 B				
		A1 A2 B				
		A1 A2 B				
		A1 A2 B				
						2

FURTHER DESCRIPTIONS

Soil (compaction, compaction, particulate, inclusions, thickness and colour, moisture, bioturbation and vegetation for each stratigraphic unit)

Conductive soil integrity

Signs of burning/heating

TU expansion?

0 – 60mm: Dark brown clay topsoil. Loose and moderately soft. Few inclusions. 0% surface visibility. 1x flake recovered during excavation.

60 – 150mm: Dark brown clay. Moderately soft and moist. Few inclusions and little flecking.

150 – 180mm: Reddish brown clay. Moderately soft and moist. Few inclusions. Some orange and black flecking.

END OF EXCAVATION

ANAMBAH TEST EXCAVATION 12 11227		TEST UNIT # PLAN #	513
Excavators	LP, Gdric	Date 7-12-12	

SUMMARY OF EXCAVATION

Count Aboriginal Objects	
Other evidence?	
Worthy of expansion? Hours	
Photograph #	
Samples (description & number)	

LOCATION

GPS (or Wood Tissue)	Easting ☐☐☐☐☐☐	Northing ☐☐☐☐☐☐☐	
Soil landscape	Rothbury	Branston	Hunter
Landform	Creek bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hill top		
Aspect	N E S W	Slope % 4	
Soil		Munsell	

EXCAVATION wet sieved dry sieved

Spit #	Depth (cm)	Soil Horizon	Soil Type code	Earthen/Burning/Heating	Disturbance/Naturalism	Abnormal Objects #
1	100	A1 A2 B		--	[illegible]	1
2	200	A1 A2 B				1
3		A1 A2 B				
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
Total						2

FURTHER DESCRIPTIONS

Soil (compaction, composition, particle size, inclusions, thickness and extent, moisture, bioturbation and vegetation for each stratigraphic unit) compact brown clayey loam (A horizon) coming down

Condition and integrity onto dark brown clay (B horizon) at base.

Signs of burning/heating Soil quite dry

Tell expansion? Clay contains cracks.

ANAMBAH TEST EXCAVATION 12-0227	TEST UNIT # PLAN #	[illegible] 514
Excavators: [illegible]	Date: 07/12/[illegible]	

SUMMARY OF EXCAVATION

Grand Aboriginal Objects	
Other evidence?	
Warning of expansion/ Flow?	
Photograph #	
Samples (description & number)	

LOCATION

GPS (Eastings & Northings)	Easting		Northing	
Site landscape	Rothbury	Brandon	Hunter	
Landform	Crest/bank Flat Lower, Mid, Upper slope Raised flat Ridgeline Hillside			
Aspect	N E SE S W	Slope %		
[illegible]		Munsell		

EXCAVATION wet sieved dry sieved

Spot #	Depth (mm)	Soil Horizon	Soil % code	Carbon/burning/heating	Ochre/cement/bioturbation	Abundant Objects #
1	100	A1 A2 B	SILT CLAY		[illegible]	3
2	100	A1 A2 B	SILTY CLAY + CLAY			1
3	[illegible]	A1 A2 B	CLAY			
4		A1 A2 B				
5		A1 A2 B				
6		A1 A2 B				
7		A1 A2 B				
8						4

FURTHER DESCRIPTIONS

Soil (composition, compaction, parent/sites, inclusions, fabrication and colour, moisture, bioturbation and vegetation for each stratigraphic unit)

Condition and integrity

Signs of burning/heating

Till expansion?

0-50 mm: Greyish brown silty clay. Loose. Few inclusions. 0% surface visibility

50-170 mm: Greyish brown to brown silty clay. More clay content as depth increases. Moderately soft to moderately compact. Few inclusions. Little flecking.

170-700 mm (end of excavation): Yellowish brown clay. Moderately soft and moist. Some orange and black flecking. Few inclusions. 1x rounded pebble (70mm).

Appendix G

Photo Register

Photographic Catalogue

Job Title: Anambah Aboriginal Excavation **Job No.:** 12-0227

Date	Photo No.	Orientation	Description
22/11/12	3033	N	GENERAL VIEW OF T.U. 231 (AREA A)
"	3034	S	SOUTH SECTION OF T.U. 231
"	3035	N	GENERAL VIEW OF T.U. 229
"	3036	S	SOUTH SECTION OF T.U. 229
"	3037	"	GENERAL VIEW OF T.U. 227
"	3038	W	WEST SECTION OF " "
"	3039	N	GENERAL VIEW OF T.U. 225
"	3040	S	SOUTH SECTION OF " "
"	3041	N	GENERAL VIEW OF " 224
"	3042	S	SOUTH SECTION OF " "
23/11/12	3043	N	GENERAL VIEW OF " 220 WRONG DATE (22/11)
"	3044	S	SOUTH SECTION OF TU 220 " "
"	3045	N	GENERAL VIEW OF " 226 " "
"	3046	N	NORTH SECTION OF " 226 " "
"	3047	N	GENERAL VIEW OF " 223 " "
"	3048	N	NORTH SECTION OF " 223
"	3049	N	GENERAL VIEW OF " 228
"	3050	N	NORTH SECTION OF " "
"	3051	N	GENERAL VIEW OF " 230
"	3052	W	WEST SECTION OF " 230
"	3053	N	GENERAL SHOT OF AREA (220-231)
23/11/12	3054	N	GENERAL VIEW OF TU 390 (AREA A)
"	3055	N	NORTH SECTION OF TU "
"	3056	N	GENERAL VIEW OF TU 219
"	3057	N	NORTH SECTION OF T.U. 219
"	3058	N	GENERAL VIEW OF TU. 214
"	3059	S	SOUTH SECTION " " "
"	3060	N	GENERAL VIEW OF TU 218
"	3061	S	SOUTH SECTION OF " "
"	3062	N	GENERAL VIEW OF TU 215
"	3063	N	NORTH SECTION OF TU 215
"	3064		DELETED
"	3065		DELETED
"	3066	N	GENERAL VIEW OF TU 389 (AREA B)
"	3067	W	WEST SECTION " " " "
"	3068	N	GENERAL VIEW OF TU 388
"	3069	S	SOUTH SECTION " " "
"	3070	N	GENERAL VIEW " " 216
"	3071	N	NORTH SECTION " " 216
"	3072	N	GENERAL VIEW " TU 217
"	3073	N	NORTH SECTION " " 217
"	3074	N	GENERAL VIEW " " 212
"	3075	N	NORTH SECTION " " " "

Photographic Catalogue

Job Title: Anambah Aboriginal Excavation **Job No.: 12-0227**

Date	Photo No.	Orientation	Description
23/11/12	3076	N	GENERAL VIEW OF TU 213 (AREA B)
"	3077	W	WEST SECTION OF TU 213 "
"	3078	N	GENERAL VIEW OF TU 391 "
"	3079	N	NORTH SECTION OF " 391 "
23/11/12	3080	N	GENERAL VIEW OF TU 232 (AREA C)
	3081	N	NORTH SECTION OF TU 232 "
26/11/12	3082	S	VIEW OVER AREA B "
"	3083	N	GENERAL VIEW OF TU 233 "
"	3084	S	SOUTH SECTION OF " " "
"	3085	N	GENERAL VIEW OF TU 234 "
"	3086	S	SOUTH SECTION OF TU 234 "
"	3087	N	GENERAL VIEW OF TU 235 (AREA C)
"	3088	S	SOUTH SECTION OF TU 235 "
"	3089	N	GENERAL VIEW OF TU 236 "
"	3090	S	SOUTH SECTION OF TU " "
"	3091	N	GENERAL VIEW OF TU 237 "
"	3092	S	SOUTH SECTION OF TU " "
"	3093	N	GENERAL VIEW OF TU 238 "
"	3094	S	SOUTH SECTION OF TU " "
"	3095	N	GENERAL VIEW OF TU 239 "
"	3096	S	SOUTH SECTION OF TU " "
"	3097	N	GENERAL VIEW OF TU 240 (AREA D)
"	3098	S	SOUTH SECTION OF TU 240 "
"	3099	N	GENERAL VIEW OF " 241 "
"	3100	S	SOUTH SECTION OF " " "
"	3101	N	GENERAL VIEW OF TU 242 "
"	3102	S	SOUTH SECTION OF TU 242 "
"	3103		DELETED
"	3104		DELETED
"	3105	N	GENERAL VIEW OF TU 243 "
"	3106	S	SOUTH SECTION OF TU 243 "
"	3107	N	GENERAL VIEW OF TU 253 "
"	3108	S	SOUTH SECTION OF " " "
"	3109	N	GENERAL VIEW OF TU 252 "
"	3110	S	SOUTH SECTION OF " " "
"	3111	N	GENERAL VIEW OF " 251 "
"	3112	S	SOUTH SECTION OF " " "
"	3113	N	GENERAL VIEW OF " 250 "
"	3114	S	SOUTH SECTION OF " " "
"	3115	N	GENERAL VIEW OF " 248 "
"	3116	S	SOUTH SECTION OF " " "
"	3117	N	GENERAL VIEW OF " 249 "
"	3118	S	SOUTH SECTION OF " " "

* NO SLIP

CORRECTED 27/11/12

Site ANAMBAH

PHOTO REGISTER

Photo #	Direction	Description	
3119	N	GENERAL VIEW OF TU 245	AREA D
3120	W	WEST SECTION OF TU 245	
3121		DELETED	
3122	W	WEST SECTION OF TU 246	
3123	N	GENERAL VIEW OF TU 246	
3124	N	" " " " 247	
3125	W	WEST SECTION OF " "	
3126	N	GENERAL VIEW OF TU 257	
3127	W	WEST SECTION OF TU "	
3128	N	GENERAL VIEW OF TU 256	
3129	W	WEST SECTION OF " 256	
3130	N	GENERAL VIEW OF TU 255	
3131	N	NORTH SECTION OF " "	
3132	N	GENERAL VIEW OF TU 254	
3133	W	WEST SECTION OF TU 254	
3134	N	GENERAL VIEW OF TU 265	AREA E
3135	W	WEST SECTION OF TU 265	
3136	N	GENERAL VIEW OF TU 263	
3137	W	WEST SECTION OF TU 263	
3138	N	GENERAL VIEW OF TU 261	
3139	W	WEST SECTION OF TU 261	
3140	N	GENERAL VIEW OF TU 260	
3141	W	WEST SECTION OF TU 260	
3142	N	GENERAL VIEW OF TU 258	
3143	W	WEST SECTION OF TU 258	
3144	N	GENERAL VIEW OF TU 259	
3145	W	WEST SECTION OF TU 259	
3146	N	GENERAL VIEW OF TU 262	
3147	W	WEST SECTION OF TU 262	
3148	N	GENERAL VIEW OF TU 274	AREA F
3149	W	WEST SECTION OF TU 274	
3150	N	GENERAL VIEW OF TU 269	
3151	S	SOUTH SECTION OF TU 269	
3152	N	GENERAL VIEW OF TU 268	
3153	W	WEST SECTION OF TU 268	
3154	N	GENERAL VIEW OF TU 267	
3155	W	WEST SECTION OF TU 267	
3156	N	GENERAL VIEW OF TU 270	
3157	W	WEST SECTION OF TU 270	
3158	N	GENERAL VIEW OF TU 273	
3159	W	WEST SECTION OF TU 273	
3160	N	GENERAL VIEW OF TU 272	
3161	N	NORTH SECTION OF TU 272	
3162	N	GENERAL VIEW OF TU 271	
3163	W	WEST SECTION OF TU 271	
3164	N	GENERAL VIEW OF TU 266	
3165	W	WEST SECTION OF TU 266	
3166	N	GENERAL VIEW OF TU 286	AREA G
3167	W	WEST SECTION OF TU 286	
3168	"	GENERAL VIEW OF TU 394	
3169	N	NORTH SECTION OF TU 394	
3170	N	GENERAL VIEW OF TU 285	(AREA G)
3171	W	WEST SECTION OF TU 285	
3172	N	GENERAL VIEW OF TU 393	
3173	W	WEST SECTION OF TU 393	
3174	N	GENERAL VIEW OF TU 392	
3175	W	WEST SECTION OF TU 392	
3176	N	GENERAL VIEW OF TU 284	

Site ANAMBAH

PHOTO REGISTER

Photo #	Direction	Description	↑
3177	W	WEST SECTION OF TU 284	AREA G
3178	N	GENERAL VIEW OF TU 396	AREA H
3179	W	WEST SECTION OF TU 396	↓
3180	N	GENERAL VIEW OF TU 282	
3181	W	WEST SECTION OF TU 282	
3182	N	GENERAL VIEW OF TU 283	
3183	N	NORTH SECTION OF TU 283	
3184	N	GENERAL VIEW OF TU 279	
3185	E	EAST SECTION OF TU 279	
3186	N	GENERAL VIEW OF TU 280	
3187	W	WEST SECTION OF TU 280	
3188	N	GENERAL VIEW OF TU 281	
3189	W	WEST SECTION OF TU 281	
3190	N	GENERAL VIEW OF TU 277	
3191	W	WEST SECTION OF TU 277	
3192	N	GENERAL VIEW OF TU 278	
3193	W	WEST SECTION OF TU 278	
3194	N	GENERAL SECTION OF TU 395	
3195	N	NORTH SECTION OF TU 395	
3196	N	GENERAL VIEW OF TU 398	
3197	W	WEST SECTION OF TU 398	
3198	N	GENERAL VIEW OF TU 275	
3199	W	WEST SECTION OF TU 275	
3200	N	GENERAL ~~SECT~~ VIEW OF TU 276	
3201	W	WEST SECTION OF TU 276	
3202	N	GENERAL VIEW OF TU 397	
3203	W	WEST SECTION OF TU 397	
3204	N	~~GENT~~ DETAIL OF WOOD (NORTH) IN TU 397	
3205	N	GENERAL VIEW OF TU 211	24/11/2012
3206	W	WEST SECTION OF TU 211	
3207	N	GENERAL VIEW OF TU 207	
3208	W	WEST SECTION OF TU 207	
3209	N	GENERAL VIEW OF TU 208	
3210	W	NORTH SECTION OF TU 209	
3211	N	GENERAL VIEW OF TU 210	
3212	W	WEST SECTION OF TU 210	
3213	N	GENERAL VIEW OF TU 209	
3214	N	NORTH SECTION OF TU 209	
3215	N	GENERAL VIEW OF TU 206	
3216	W	WEST SECTION OF TU 206	
3217	N	GENERAL VIEW OF TU 205	
3218	W	WEST SECTION OF TU 205	
3219	N	GENERAL VIEW OF TU 196	
3220	W	WEST SECTION OF TU 196	
3221	N	GENERAL VIEW OF TU 197	
3222	W	WEST SECTION OF TU 197	
3223	N	GENERAL VIEW OF TU 198	
3224	W	WEST SECTION OF TU 198	
3225	N	GENERAL VIEW OF TU 199	
3226	W	WEST SECTION OF TU 199	
3227	N	GENERAL VIEW OF TU 200	
3228	W	WEST SECTION OF TU 200	
3229	N	GENERAL VIEW OF TU 201	
3230	W	WEST SECTION OF TU 201	
3231	N	GENERAL VIEW OF TU 202	
3232	W	WEST SECTION OF TU 202	
3233	N	GENERAL VIEW OF TU 203	
3234	S	SOUTH SECTION OF TU 203	

Site ANAMBAH

PHOTO REGISTER

Photo #	Direction	Description	
3235	—	DELETED	29/11/2012
3236	N	GENERAL VIEW OF TU 204	"
3237	W	WEST SECTION OF TU 204	"
3238	N	GENERAL VIEW OF TU 383	30/11/2012
3239	E	EAST SECTION OF TU 383	"
3240	N	GENERAL VIEW OF TU 143	"
3241	S	SOUTH SECTION OF " "	"
3242	N	GENERAL VIEW TU 144	"
3243	S	SOUTH SECTION OF TU 144	"
3244	N	GENERAL VIEW OF TU 146	"
3245	S	SOUTH SECTION OF TU 146	"
3246	N	GENERAL VIEW OF TU 145	"
3247	S	SOUTH SECTION " " "	"
3248	N	GENERAL VIEW OF " 382	"
3249	S	SOUTH SECTION OF " "	"
3250	N	GENERAL VIEW OF TU 367	"
3251	S	SOUTH SECTION OF " "	"
3252	N	GENERAL VIEW OF TU 141	"
3253	S	SOUTH SECTION OF " "	"
3254	N	GENERAL VIEW OF TU 140	"
3255	W	WEST SECTION OF TU 140	"
3256	N	GENERAL VIEW OF TU 142	
3257	W	WEST SECTION OF " "	
3258	N	GENERAL VIEW OF TU 366	03/12/12
3259	W	WEST SECTION OF TU 366	
3260	N	GENERAL VIEW OF TU 138	
3261	W	WEST SECTION OF TU 138	
3262	N	GENERAL ~~SECTION~~ VIEW OF TU 139	
3263	W	WEST SECTION OF TU 139	
3264	N	GENERAL VIEW OF TU 365	
3265	W	WEST SECTION OF TU 365	
3266	N	GENERAL VIEW OF TU 127	
3267	W	WEST SECTION OF TU 127	
3268	N	GENERAL VIEW OF TU 136	
3269	N	NORTH SECTION OF TU 136	
3270	N	GENERAL VIEW OF TU 133	
3271	W	WEST SECTION OF TU 133	
3272	N	GENERAL VIEW OF TU 134	
3273	W	WEST SECTION OF TU 134	
3274	N	GENERAL VIEW OF " 132	
3275	S	SOUTH SECTION OF " "	
3276	N	GENERAL VIEW OF " 131	
3277	W	WEST SECTION OF " "	
3278		DELETED	
3279		"	
3280	N	GENERAL VIEW OF TU 133	
3281	S	SOUTH SECTION OF " "	
3282	N	GENERAL VIEW OF TU 130	
3283	W	WEST SECTION OF " "	
3284	N	GENERAL VIEW OF TU 369, AREAN	4/12/12
3285	N	NORTH SECTION OF " "	
3286	N	GENERAL VIEW OF " 129	
3287	E	EAST SECTION OF " "	
3288	N	GENERAL VIEW OF " 368	
3289	S	SOUTH SECTION OF " 368	
3290	N	GENERAL VIEW OF " 128	
3291	E	EAST SECTION OF " "	
3292	N	GENERAL VIEW OF " 127	
3293	S	SOUTH SECTION OF " 127	

Site ANAMBRA

PHOTO REGISTER

Photo #	Direction	Description		
3294	N	GENERAL VIEW OF TU 370		
3295	S	SOUTH SECTION OF " "		
3296	N	GENERAL VIEW OF TU 371		
3297	W	WEST SECTION OF TU 371		
3298	N	GENERAL VIEW OF TU 372		
3299	W	WEST SECTION OF " "		
3300	N	GENERAL VIEW OF TU 373		
3301	W	WEST SECTION OF " "		
3302	N	GENERAL VIEW OF TU 374		
3303	W	WEST SECTION OF " "		
3304	N	GENERAL VIEW OF TU 375		
3305	W	WEST SECTION OF " "		
3306	N	GENERAL VIEW OF TU 377		
3307	W	WEST SECTION OF " "		
3308	N	GENERAL VIEW OF " 194		
3309	W	WEST SECTION OF " 194		
3310	N	GENERAL VIEW OF TU 195		
3311	S	SOUTH SECTION OF " "		
3312	N	GENERAL VIEW OF TU 378		
3313	S	SOUTH SECTION OF TU 378		
3314	N	GENERAL VIEW OF TU 380		
3315	W	WEST SECTION OF " "		
3316	N	GENERAL VIEW OF TU 381		
3317	W	WEST SECTION OF " "		
3318	N	GENERAL VIEW OF TU 276		
3319	S	SOUTH SECTION OF " "		
3320	N	GENERAL VIEW OF TU 191	AREA ?	5/12/2012
3321	E	EAST SECTION OF " "	"	"
3322	N	GENERAL VIEW OF TU 192	"	"
3323	E	EAST SECTION OF TU "	"	"
3324				
3325				
3326	N	GENERAL VIEW OF TU 193	"	"
3327	E	EAST SECTION OF TU "	"	"
3328	N	GENERAL VIEW OF TU 189	"	"
3329	E	EAST SECTION OF " "	"	
3330	N	GENERAL VIEW OF TU 190	"	
3331	E	EAST SECTION OF TU "	"	
3332	N	GENERAL VIEW OF TU 186	"	
3333	S	SOUTH SECTION OF " "	"	
3334	N	GENERAL VIEW OF TU 187	"	
3335	S	SOUTH SECTION OF " "	"	
3336	N	GENERAL VIEW OF TU 188	"	
3337	S	SOUTH SECTION OF " "	"	
3338	N	GENERAL VIEW OF TU 185	"	
3339	W	WEST SECTION OF TU "	"	
3340	N	GENERAL VIEW OF TU 184	"	
3341	S	SOUTH SECTION OF TU 184	"	
3342	N	GENERAL VIEW OF TU 183	"	
3343	S	SOUTH SECTION OF " "		
3344	N	GENERAL VIEW OF TU 182		
3345	E	EAST SECTION OF TU 182		
3346	N	GENERAL VIEW OF TU 181		
3347	E	EAST SECTION OF TU 181		
3348	N	GENERAL ~~SECTION~~ VIEW OF TU 180		
3349	S	SOUTH SECTION OF TU 180		
3350	N	GENERAL VIEW OF TU 179		
3351	S	SOUTH SECTION OF TU 179		

Move? ?

Check! No.s

Site

PHOTO REGISTER

Photo #	Direction	Description	
3352	N	GENERAL VIEW OF TU 178	AREA P
3353	S	SOUTH SECTION OF TM 178	
3354	N	GENERAL VIEW OF TM 177	
3355	S	SOUTH SECTION OF TM 177	
3356	N	GENERAL VIEW OF T.U. 506	AREA A
3357	W	WEST SECTION OF T.U. 506	
3358	N	GENERAL VIEW OF T.U. 505	
3359	W	WEST SECTION OF T.U. 505	
3360	N	GENERAL VIEW OF T.U. 504	
3361	W	WEST SECTION OF T.U. 504	
3362	N	GENERAL VIEW OF T.U. 503	
3363	W	WEST SECTION OF T.U. 503	
3364	N	GENERAL VIEW OF T.U. 500	
3365	W	WEST SECTION OF T.U. 500	
3366	N	GENERAL VIEW OF T.U. 501	
3367	E	EAST SECTION OF T.U. 501	
3368	N	GENERAL VIEW OF T.U. 502	
3369	E	EAST SECTION OF T.U. 502	
3370	N	GENERAL VIEW OF T.U. 173	AREA P
[illegible]371	E	EAST SECTION OF TU 173	"
3372	N	GENERAL VIEW OF TU 174	
3373	S	SOUTH SECTION OF TM 174	
3374	N	GENERAL VIEW OF TM 175	
3375	W	WEST SECTION OF TM 175	
3376	N	GENERAL VIEW OF TM 169	
3377	S	SOUTH SECTION OF TM 169	
3378	N	GENERAL VIEW OF TU 170	
3379	S	SOUTH SECTION OF TU 170	
3380	N	GENERAL VIEW OF TM 171	
3381	W	WEST SECTION OF TM 171	
3382	N	GENERAL VIEW OF TM 172	
3383	S	SOUTH SECTION OF TM 172	
3384	N	GENERAL VIEW OF TM 166	
3385	S	SOUTH SECTION OF TM 166	
3386	N	GENERAL VIEW OF TM 165	
3387	W	WEST SECTION OF TM 165	
3388	N	GENERAL VIEW OF TM 167	
3389	S	SOUTH SECTION OF TU 167	
[illegible]390	N	GENERAL VIEW OF TM 168	
3391	S	SOUTH SECTION OF TM 168	
3392	N	GENERAL VIEW OF TM 164	
3393	S	SOUTH SECTION OF TM 164	
3394	N	GENERAL VIEW OF TM 163	
3395	W	WEST SECTION OF TM 163	
3396	N	GENERAL VIEW OF TM 162	
3397	S	SOUTH SECTION OF TM 162	
3398	N	GENERAL VIEW OF TM 161	
3399	W	WEST SECTION OF TM 161	
3400	N	GENERAL VIEW OF TM 160	
3401	W	WEST SECTION OF TM 160	
3402	N	GENERAL VIEW OF TM 159	
3403	W	WEST SECTION OF TM 159	
3404	N	GENERAL VIEW OF TM 158	
3405	W	WEST SECTION OF TM 158	
3406	N	GENERAL VIEW OF TM 157	
3407	W	WEST SECTION OF TM 157	
3408	N	GENERAL VIEW OF TM 156	
3409	S	SOUTH SECTION OF TM 156	

6/12/2012

ANAMBAH
PHOTO REGISTER

3410	N	GENERAL VIEW OF TM 155	
3411	S	SOUTH SECTION OF TM 155	
3412	N	GENERAL VIEW OF TM 154	
3413	N	NORTH SECTION OF TM 154	
3414	N	GENERAL VIEW OF TM 153	
3415	W	WEST SECTION OF TM 153	
3416	N	GENERAL VIEW OF TM 152	
3417	S	SOUTH SECTION OF TM 152	
3418	N	GENERAL VIEW OF TM 151	
3419	W	WEST SECTION OF TM 151	
3420	N	GENERAL VIEW OF TM 150	
3421	S	SOUTH SECTION OF TM 150	
3422	N	GENERAL VIEW OF TM 149	
3423	S	SOUTH SECTION OF TM 149	
3424	N	GENERAL VIEW OF TM 148	
3425	S	SOUTH SECTION OF TM 148	
3426	N	GENERAL VIEW OF TM 147	
3427	S	SOUTH SECTION OF TM 147	
3428	N	GENERAL VIEW OF TM 509	
3429	E	EAST SECTION OF TM 509	
3430	N	GENERAL VIEW OF TM 507	
3431	E	EAST SECTION OF TM 507	
3432	N	GENERAL VIEW OF TM 508	
3433	S	SOUTH SECTION OF TM 508	
3434	N	GENERAL VIEW OF TM 511	
3435	W	WEST SECTION OF TM 54	
3436	N	GENERAL VIEW OF TM 510	
3437	E	EAST SECTION OF TM 510	
3438	N	GENERAL VIEW OF TM 221	
3439	W	WEST SECTION OF TM 221	
3440	N	GENERAL VIEW OF TM 227	
3441	W	WEST SECTION OF TM 227	
3442	N	AREA A,	7/12 2012
3443	NE	"	"
3444	S	LOOKING TOWARDS DAM FROM AREA A	7/12/2012
3445	N	AREA B	"
3446	S	LOOKIN TOWARDS DRY CREEK FROM AREA B	"
3447	E	LOOKING TOWARDS DAM + AREA C, FROM AREA D	"
3448	S	AREA D	"
3449	N	LOOKING TOWARDS DRY CREEK FROM AREA D	"
3450	N	LOOKING TOWARDS CREEK FROM AREA D	"
3451	E	LOOKING TOWARDS CREEK + DAM FROM AREA D	
3452		WORKING SHOTS IN AREA M	
3453			
3454			
3455			
3456			
3457			
3458			
3459			
3460	NE	VIEW TOWARDS AREA M	
3461	N	" " " + CREEK TO LEFT	"
3462	N	VIEW TOWARDS AREA L + CREEK + GULLY	"
3463	N	VIEW TOWARDS AREA K + CREEK	"
3464	NW	AREA K, WASHEDOUT CUT NEAR CREEK	
3465	NE	VIEW ALONG CREEK FROM AREA K	
3466	NW	VIEW ACROSS DAM TOWARDS AREA J	
3467	NE	" " AREA J + ALONG CREEK	
3468	W	VIEW ACROSS THE CREEK TO AREA O	

ANAMBAH
PHOTO REGISTER

PHOTO NO.	DIR	DESCRIPTION	AREA	DATE
3469	N	GENERAL VIEW OF T.U. 512	M	07/12/12
3470	S	SOUTH SECTION OF T.U. 512	"	"
3471	N	GENERAL VIEW OF T.U. 513	"	"
3472	S	SOUTH SECTION OF T.U. 513	"	"
3473	N	GENERAL VIEW OF T.U. 514	"	"
3474	S	SOUTH SECTION OF T.U. 514	"	"
3475	E	Area E, with Creek	AREA E	"
3476	SE	Area E looking towards creek.		
3477	E	Area E, creek		
3478	SE	Area F looking Towards creek.		
3479	E	View from area G Towards creek.		
3480	N	View from Area G Towards Creek.		
3481	SW	Looking across Area H Looking Towards Area G		
3482	E	Looking Towards Dam From Area G		
3482	N	Looking North from Area G		
3483	SW	Looking across Area I		
3484	E	Looking East from Area I		
3485	S	Rocks in Area I, towards Area H		
to 3496		SIEVING SHOTS		
3497	S	Looking South towards Area O		
3498	SE	Looking South East Towards Area J		
3499	SW	Looking South West Towards Area O		
3500	E	Looking East across Area P.		
3501	N	Looking North from Area P		
3502	E	Looking East From Area P		
3503	E	Looking East across Area N		

Site AMAMBAM (STAGE 2) GML **PHOTO REGISTER** MARCH 2013

Date	Photo #	Dir	Area	Unit	Description
[illegible]/3/13	06-0472	N	A	15	GENERAL VIEW
"	0473	N	"	"	" "
	0474	N	"	"	NORTH SECTION
	0475	N	"	17	GENERAL VIEW
	0476	N	"	17	" "
	0477	N	"	17	NORTH SECTION
	0478	N	"	16	GENERAL VIEW
	0479	N	"	16	NORTH SECTION
[illegible]	0480	N	"	15	GENERAL VIEW
	0481	N	"	15	NORTH SECTION
	0482	N	"	14	GENERAL VIEW
	0483	N	"	14	NORTH SECTION
	0484	N	"	13	GENERAL VIEW
	0485	N	"	13	NORTH SECTION
	0486	N	"	22	GENERAL VIEW
	0487	N	"	22	NORTH SECTION
	0488	N	"	28	GENERAL VIEW
	0489	N	"	28	NORTH SECTION
	0490	N	"	26	GENERAL VIEW
	0491	N	"	26	NORTH SECTION
	0492	N	"	25	GENERAL VIEW
	0493	N	"	25	NORTH SECTION
	0494	N	"	27	NORTH SECTION
	0495		.		DISCARDED
	0496	"	"	24	NORTH SECTION
	0497	"	"	24	GENERAL
	0498	"	"	23	GENERAL VIEW
	0499	N	"	23	NORTH SECTION
	0500	N	"	11	GENERAL VIEW
	0501	N	"	22	NORTH SECTION
	0502	N	"	19	GENERAL VIEW
	0503	N	"	19	NORTH SECTION
	0504	N	"	20	GENERAL VIEW
	0505	N	"	20	NORTH SECTION
	0506	N	"	21	GENERAL VIEW
	0507	N	"	21	NORTH SECTION
	0508	N	B	316	GENERAL VIEW
	0509	N	B	316	NORTH SECTION
	0510	N	B	317	GENERAL VIEW
	0511	N	"	317	NORTH SECTION
	0512	N	"	318	GENERAL VIEW
	0513	N	"	318	NORTH SECTION
	0514	N	"	319	GENERAL VIEW
	0515	N	"	319	NORTH SECTION
	0516	N	"	86	GENERAL VIEW
	0517	N	"	86	NORTH SECTION
	0518	N	"	320	GENERAL VIEW
	0519	N	"	321	NORTH SECTION
	0520	N	"	85	GENERAL VIEW
	0521	N	"	85	NORTH SECTION
	0522	N	"	317	GENERAL VIEW
	0523	N	"	320	NORTH SECTION
	0524	N	"	320	GENERAL VIEW
	0525	N	"	315	NORTH SECTION
	0526	N	"	315	NORTH SECTION
	0527	N	"	314	GENERAL VIEW
	0528	E	"	314	EAST SECTION
	0529	N	"	314	GENERAL VIEW
	0530	E	"	91	EAST SECTION

Site

ANNAN BAY (PHASE 2) [illegible] | GM | MARCH 2013

PHOTO REGISTER

Date	Photo #	Dir.	Area	Unit	Description
15/3/13	0541	N	3	[illegible]	GENERAL VIEW (WRONG DATE ON BOARD)
"	0542	N	1	311	NORTH SECTION
	0543	N	4	[illegible]	GENERAL VIEW (WRONG DATE ON BOARD)
	0544	N	[illegible]	[illegible]	NORTH SECTION
	0545	N	S	[illegible]	GENERAL VIEW
	0546	N	S	[illegible]	NORTH SECTION
	0547	N	N	302	GENERAL VIEW
	0548	N	S	[illegible]	NORTH SECTION
	0549	N	S	[illegible]	GENERAL VIEW
	0550	N	S	[illegible]	NORTH SECTION
	0551	N	S	[illegible]	GENERAL VIEW
	0552	N	S	[illegible]	NORTH SECTION
	0553				DELETED
	0554	N	S	308	GENERAL VIEW
	0555	N	S	308	NORTH SECTION
	0556	N	S	82	GENERAL VIEW
	0557	N	S	82	NORTH SECTION
	0558	N	S	312	GENERAL VIEW
	0559	N	S	312	NORTH SECTION
	0560	N	S	300	GENERAL VIEW
	0561	N	S	307	NORTH SECTION
	0562	N	T	300	GENERAL VIEW
	0563	N	T	300	NORTH SECTION
	0564	N	T	259	GENERAL VIEW
	0565	N	T	259	NORTH SECTION
	0566	N	T	288	GENERAL VIEW
	0567	N	T	288	NORTH SECTION
	0568	N	T	299	GENERAL VIEW
	0569	N	T	299	NORTH SECTION
	0570	N	T	5	GENERAL VIEW
	0571	N	T	5	NORTH SECTION
	0572	N	T	298	GENERAL VIEW
	0573	N	T	298	NORTH SECTION
	0574	N	T	6	GENERAL VIEW
	0575	N	T	6	NORTH SECTION
	0576	N	T	297	GENERAL VIEW
	0577	N	T	297	NORTH SECTION
	0578	N	T	296	GENERAL VIEW
	0579	N	T	296	NORTH SECTION
	0580	N	T	7	GENERAL VIEW
	0581	N	T	7	NORTH SECTION
	0582	N	T		DELETED
	0583	N	T	8	GENERAL VIEW
	0584	N	T	8	NORTH SECTION
	0585	N	T	9	GENERAL VIEW
	0586	N	T	9	NORTH SECTION
	0587	N	T	290	GENERAL VIEW
	0588	N	T	290	NORTH SECTION
	0589	N	T	[illegible]	GENERAL VIEW
	0590	N	T	[illegible]	NORTH SECTION
	0591	N	T	[illegible]	GENERAL VIEW
	0592	N	T	304	NORTH SECTION
18/3/13	0593	N	T	10	GENERAL VIEW
"	0594	E	T	10	EAST SECTION
	0595	N	T	287	GENERAL VIEW
	0596	N	T	287	NORTH SECTION
	0597	N	T	291	GENERAL VIEW
	0598	N	T	291	NORTH SECTION

Suspect this wrong, entered as 308

Site [illegible] (STAGE 2)

GML.

PHOTO REGISTER

MARCH 2013

Date	Photo #	Dir.	Area	Unit	Description
18/3/13	0589	N	T	291	GENERAL VIEW
	0590	N	T	291	NORTH SECTION
	0591	N	T	293	GENERAL VIEW
	0592	S	T	293	SOUTH SECTION
	0593	N	T	292	GENERAL VIEW
	0594	N	T	292	NORTH SECTION
	0595	N	T	302	GENERAL VIEW
	0596	N	T	302	NORTH SECTION
	0597	N	T	303	GENERAL VIEW
	0598	N	T	303	NORTH SECTION
	0599	N	T	304	GENERAL VIEW
	0600	N	T	304	NORTH SECTION
	0601	N	T	305	GENERAL VIEW
	0602	N	T	305	NORTH SECTION
	0603	N/E	T		WORK AREA ALONG [illegible] (N-W OF [illegible])
	0604	N	T		[illegible]
	0605	N	T		VIEW " " " " "
	0606	E	S		[illegible] AREA 5
	0607	N	S		VIEW ACROSS AREA 5 TOWARDS [illegible] CREEK
	0608	S	R		VIEW ACROSS AREA R TOWARDS CREEK [illegible]
	0609	SE	R		VIEW ACROSS AREA R TOWARDS [illegible] CREEK
	0610	SW			VIEW OVER SITE FROM NORTH GATE
	0611	SW			VIEW OF [illegible]
	0612	N	T	306	GENERAL VIEW
	0613	N	T	306	NORTH SECTION
	0614	N	V	329	GENERAL VIEW
	0615	N	V	329	NORTH SECTION
	0616	N	V	120	GENERAL VIEW
	0617	N	V	120	NORTH SECTION
	0618	N	V	328	GENERAL VIEW
	0619	N	V	328	NORTH SECTION
	0620	N	V	121	GENERAL VIEW
	0621	N	V	121	NORTH SECTION
	0622	N	V	122	GENERAL VIEW
	0623	N	V	122	NORTH SECTION
	0624	N	V	123	GENERAL VIEW
	0625	N	V	123	NORTH SECTION
19/3/13	0626	N	U	92	GENERAL VIEW (WRONG DATE)
	0627	N	U	92	GENERAL VIEW "
	0628	N	U	92	NORTH SECTION "
	0629	N	U	118	GENERAL VIEW
	0630	N	U	118	NORTH SECTION
	0631	N	U	118	GENERAL VIEW
	0632	N	U	118	NORTH SECTION
	0633	N	U	88	GENERAL VIEW
	0634	N	U	99	NORTH SECTION
✓	0635	N	U	117	GENERAL VIEW
✓	0636	N	U	117	NORTH SECTION
✓	0637	N	U	113	GENERAL VIEW
✓	0638	N	U	113	NORTH SECTION
✓	0639	N	U	96	GENERAL VIEW ([illegible])
✓	0640	N	U	96	NORTH SECTION
✓	0641	N	U	84	GENERAL VIEW
✓	0642	N	U	84	NORTH SECTION
✓	0643	N	U	94	GENERAL VIEW
✓	0644	N	U	94	NORTH SECTION
✓	0645	N	U	91	GENERAL VIEW
✓	0646	S	U	91	SOUTH SECTION
✓	0647	N	U	84	GENERAL VIEW
✓	0648	S	U	84	SOUTH SECTION

Site ANAMBAH (PHASE 2) CMCL

PHOTO REGISTER

MARCH 2013

Date	Photo #	Dir.	Area	Unit	Description
18/3/13	0649	N	W1	3.2	GENERAL VIEW
"	0650	N	"	3.2	NORTH SECTION
"	0651	N	"	3.2	GENERAL VIEW
"	0652	N	"	3.2	NORTH SECTION
"	0653	N	"	3.2	GENERAL VIEW
"	0654	N	"	3.2	NORTH SECTION
"	0655	N	"	3.2	GENERAL VIEW
"	0656	N	"	3.2	NORTH SECTION
	0657	N	"	3.2	GENERAL VIEW
	0658	N	"	3.2	NORTH SECTION
	0659	N	"	3.2	GENERAL VIEW
	0660	N	"	3.2	NORTH SECTION
	0661	N	"	3.2	GENERAL VIEW
	0662	N	"	3.2	GENERAL VIEW
	0663	N	"	3.2	NORTH SECTION
	0664	N	"	3.2	GENERAL VIEW
	0665	N	"	3.2	NORTH SECTION
	0666	N	"	3.2	GENERAL VIEW
	0667	N	"	3.2	NORTH SECTION
	0668	N	"	3.2	" "
* 20/3/13	0669	NE	W	1.2	GENERAL VIEW
"	0670	NE	W	1.2	NE SECTION
	0671	NE	W	1.2	NE SECTION
	0672	N	W	1.2	GENERAL VIEW
	0673	N	W	1.2	N SECTION
	0674	N	W1	1.2	GENERAL VIEW
	0675	N	"	1.2	NORTH SECTION
	0676	N	"	1.2	GENERAL VIEW
	0677	N	"	1.2	NORTH SECTION
[	0678	N	"	2.3	GENERAL VIEW] Duplicate
	0679	N	"	2.3	NORTH SECTION
	0680	N	"	2.3	GENERAL VIEW
	0681	N	"	2.3	NORTH SECTION
	0682	N	"	2.3	GENERAL VIEW
	0683	N	"	2.3	NORTH SECTION
	0684	N	"	2.3	GENERAL VIEW
	0685	E	"	2.3	EAST SECTION
	0686	N	"	2.4	GENERAL VIEW
	0687	N	"	2.4	NORTH SECTION
	0688	N	"	2.4	GENERAL VIEW
	0689	N	"	2.4	NORTH SECTION
	0690	N	"	2.4	GENERAL VIEW
	0691	N	"	2.4	NORTH SECTION
	0692		"		DELETED
	0693		"		DELETED
	0694	N	"	3.2	GENERAL VIEW
	0695	N	"	3.2	NORTH SECTION
	0696	N	"	3.2	GENERAL VIEW
	0697	N	"	3.2	NORTH SECTION
	0698		"		DELETED
	0699		"		"
	0700	N	"	3.2	GENERAL VIEW
	0701	N	"	3.2	NORTH SECTION
	0702	N	"	3.2	GENERAL VIEW
	0703	N	"	3.2	NORTH SECTION
	0704	N	"	3.2	GENERAL VIEW
	0705	N	"	3.2	NORTH SECTION
	0706	N	"	3.2	GENERAL VIEW
	0707	N	"	3.2	NORTH SECTION

Site
ANAMBAH (STAGE 2)

PHOTO REGISTER
MARCH 2013

Date	Photo #	Dir.	Area	Unit	Description
20/3/13	0708	N	N ?	40	GENERAL VIEW
"	0709	N	"	40	NORTH SECTION
	0710				DELETED
	0711	N	"	50	GENERAL VIEW
	0712	N	"	50	NORTH SECTION
	0713	N	"	49	GENERAL VIEW
	0714	N	"	43	NORTH SECTION
	0715				DELETED
	0716	N	"	45	NORTH SECTION
	0717	N	"	42	GENERAL VIEW
	0718	N	"	57	GENERAL VIEW
	0719	N	"	57	NORTH SECTION
	0720	N	"	68	GENERAL VIEW
	0721	N	"	68	NORTH SECTION
	0722	N	X ?	11	GENERAL VIEW
	0723	N	"	11	NORTH SECTION
	0724	N	"	12	GENERAL VIEW
	0725	N	"	12	NORTH SECTION

Appendix H

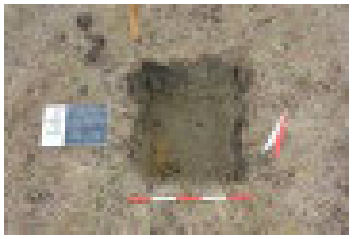
Site Photos Thumbnails

IMG_3033.JPG

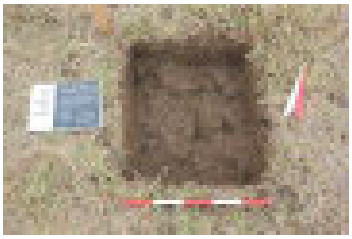
IMG_3034.JPG

IMG_3035.JPG

IMG_3036.JPG


IMG_3037.JPG

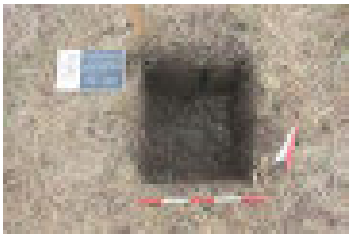
IMG_3038.JPG


IMG_3039.JPG

IMG_3040.JPG

IMG_3041.JPG

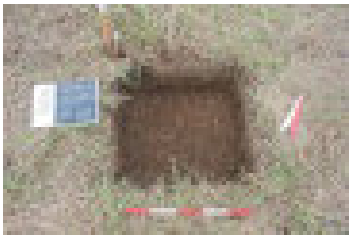
IMG_3042.JPG


IMG_3043.JPG

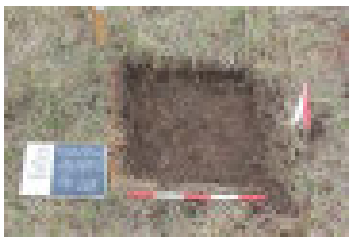
IMG_3044.JPG

IMG_3045.JPG

IMG_3046.JPG


IMG_3047.JPG

IMG_3048.JPG

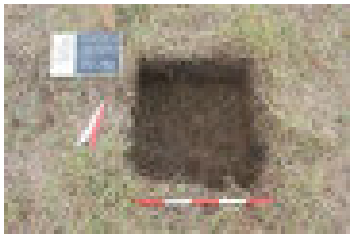

IMG_3049.JPG

IMG_3050.JPG

IMG_3051.JPG

IMG_3052.JPG

IMG_3053.JPG


IMG_3054.JPG

IMG_3055.JPG

IMG_3056.JPG

IMG_3057.JPG

IMG_3058.JPG

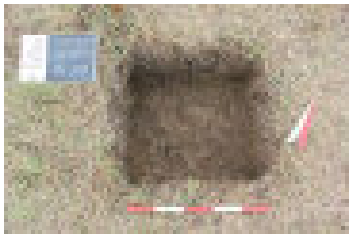
IMG_3059.JPG

IMG_3060.JPG

IMG_3061.JPG

IMG_3062.JPG

IMG_3063.JPG


IMG_3066.JPG

IMG_3067.JPG

IMG_3068.JPG

IMG_3069.JPG

IMG_3070.JPG

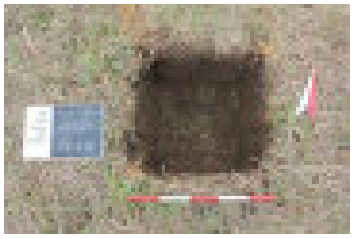
IMG_3071.JPG

IMG_3072.JPG

IMG_3073.JPG

IMG_3074.JPG

IMG_3075.JPG


IMG_3076.JPG

IMG_3077.JPG

IMG_3078.JPG

IMG_3079.JPG

IMG_3080.JPG

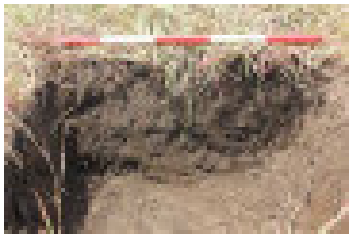
IMG_3081.JPG

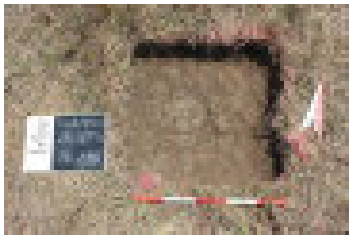
IMG_3082.JPG

IMG_3083.JPG

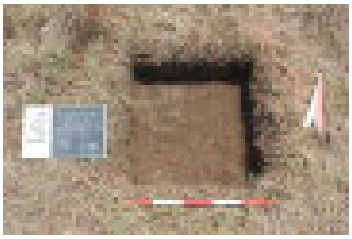
IMG_3084.JPG

IMG_3085.JPG

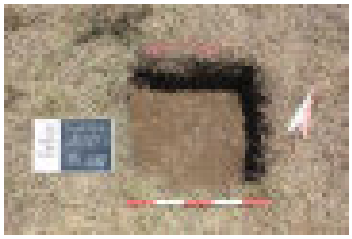

IMG_3086.JPG


IMG_3087.JPG

IMG_3088.JPG


IMG_3089.JPG

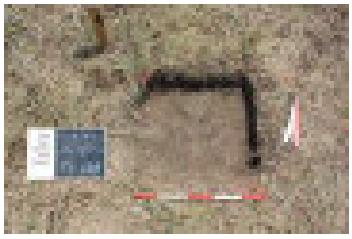
IMG_3090.JPG


IMG_3091.JPG

IMG_3092.JPG

IMG_3093.JPG

IMG_3094.JPG


IMG_3095.JPG

IMG_3096.JPG

IMG_3097.JPG

IMG_3098.JPG

IMG_3099.JPG

IMG_3100.JPG

IMG_3101.JPG

IMG_3102.JPG

IMG_3105.JPG

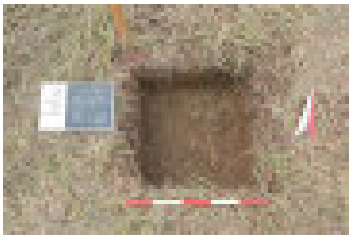
IMG_3106.JPG

IMG_3107.JPG

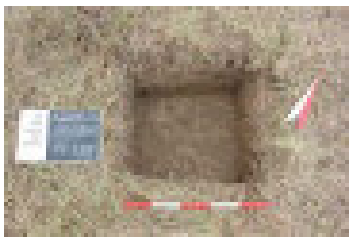
IMG_3108.JPG

IMG_3109.JPG

IMG_3110.JPG


IMG_3111.JPG

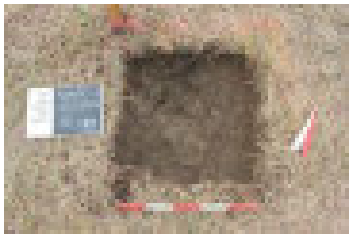
IMG_3112.JPG


IMG_3113.JPG

IMG_3114.JPG

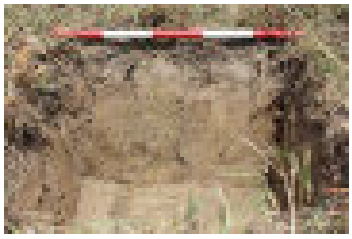
IMG_3115.JPG

IMG_3116.JPG


IMG_3117.JPG

IMG_3118.JPG

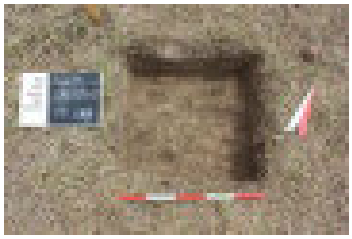
IMG_3119.JPG


IMG_3120.JPG

IMG_3121.JPG

IMG_3122.JPG

IMG_3123.JPG


IMG_3124.JPG

IMG_3125.JPG

IMG_3126.JPG

IMG_3127.JPG

IMG_3128.JPG

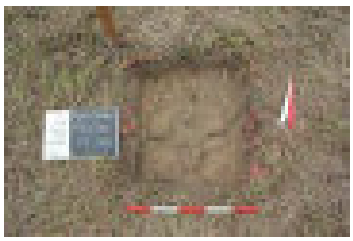
IMG_3129.JPG

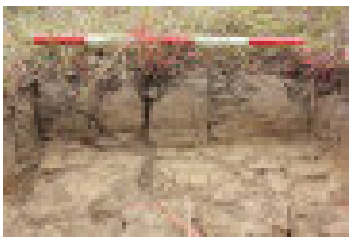
IMG_3130.JPG

IMG_3131.JPG

IMG_3132.JPG

IMG_3133.JPG

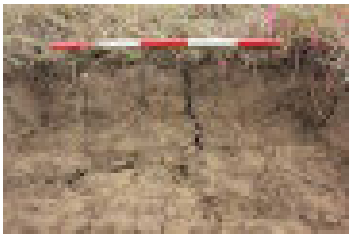

IMG_3134.JPG


IMG_3135.JPG

IMG_3136.JPG

IMG_3137.JPG

IMG_3138.JPG

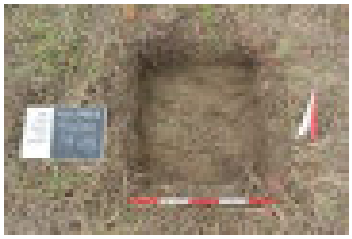

IMG_3139.JPG

IMG_3140.JPG

IMG_3141.JPG

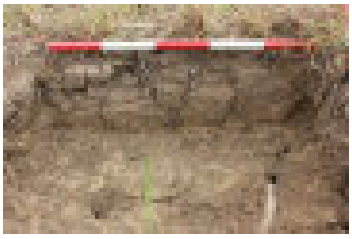
IMG_3142.JPG

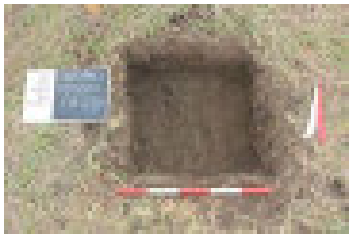
IMG_3143.JPG


IMG_3144.JPG

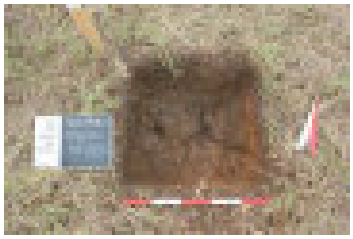
IMG_3145.JPG

IMG_3146.JPG

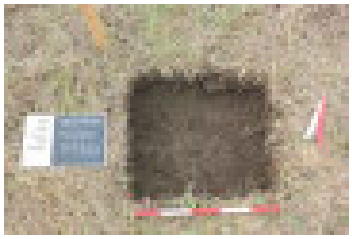

IMG_3147.JPG


IMG_3148.JPG

IMG_3149.JPG


IMG_3150.JPG

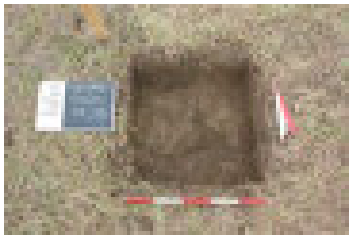
IMG_3151.JPG


IMG_3152.JPG

IMG_3153.JPG

IMG_3154.JPG

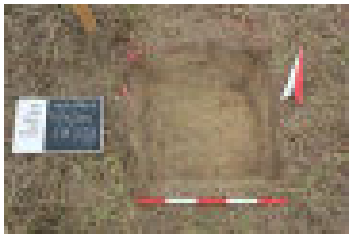
IMG_3155.JPG


IMG_3156.JPG

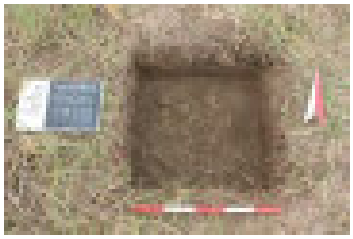
IMG_3157.JPG

IMG_3158.JPG

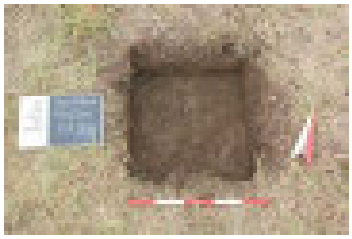
IMG_3159.JPG


IMG_3160.JPG

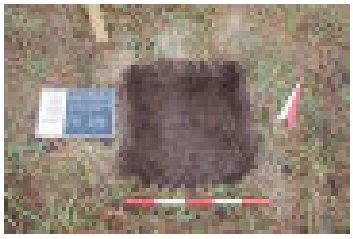
IMG_3161.JPG


IMG_3162.JPG

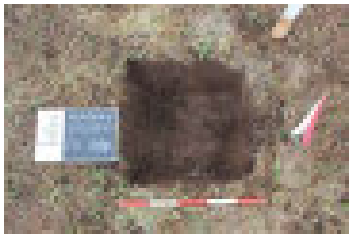
IMG_3163.JPG


IMG_3164.JPG

IMG_3165.JPG


IMG_3166.JPG

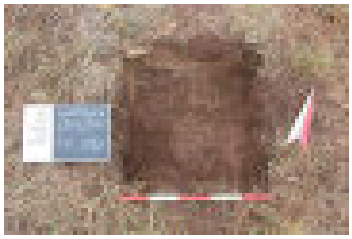
IMG_3167.JPG


IMG_3168.JPG

IMG_3169.JPG

IMG_3170.JPG

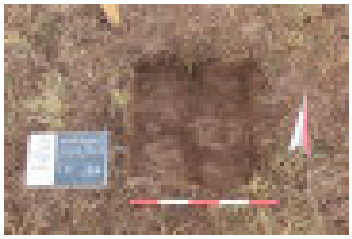
IMG_3171.JPG

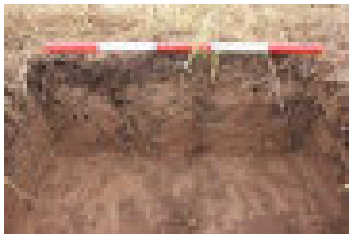

IMG_3172.JPG

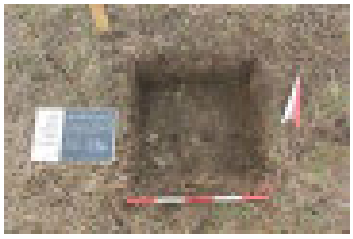
IMG_3173.JPG

IMG_3174.JPG

IMG_3175.JPG


IMG_3176.JPG

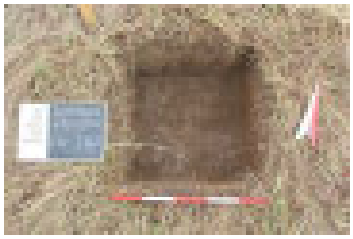

IMG_3177.JPG


IMG_3178.JPG

IMG_3179.JPG

IMG_3180.JPG

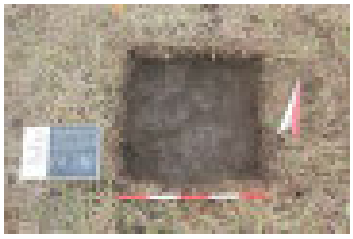
IMG_3181.JPG


IMG_3182.JPG

IMG_3183.JPG

IMG_3184.JPG

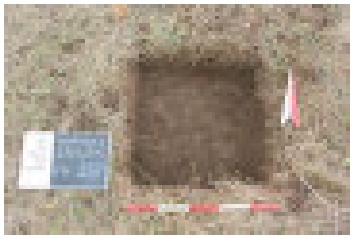
IMG_3185.JPG


IMG_3186.JPG

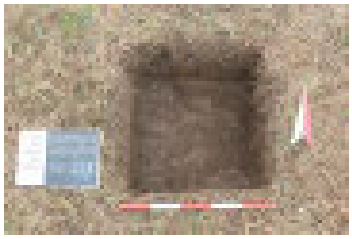
IMG_3187.JPG

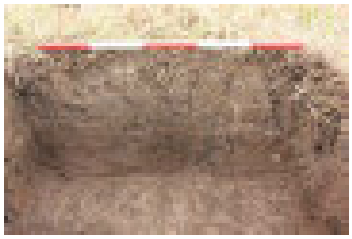
IMG_3188.JPG

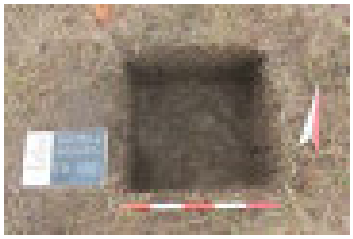
IMG_3189.JPG

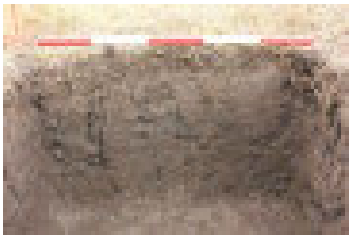

IMG_3190.JPG

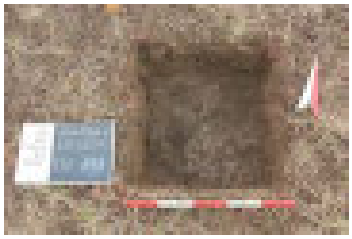
IMG_3191.JPG


IMG_3192.JPG

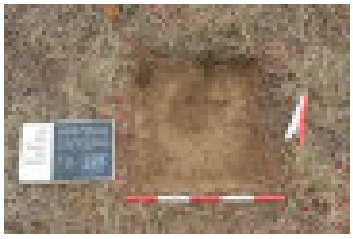

IMG_3193.JPG


IMG_3194.JPG


IMG_3195.JPG


IMG_3196.JPG

IMG_3197.JPG



IMG_3198.JPG

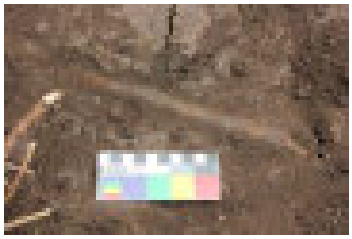
IMG_3199.JPG

IMG_3200.JPG

IMG_3201.JPG

IMG_3202.JPG

IMG_3203.JPG



IMG_3204.JPG

IMG_3205.JPG

IMG_3206.JPG

IMG_3207.JPG

IMG_3208.JPG

IMG_3209.JPG

IMG_3210.JPG

IMG_3211.JPG

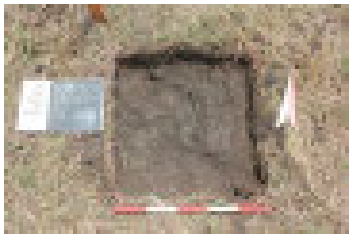
IMG_3212.JPG

IMG_3213.JPG

IMG_3214.JPG

IMG_3215.JPG

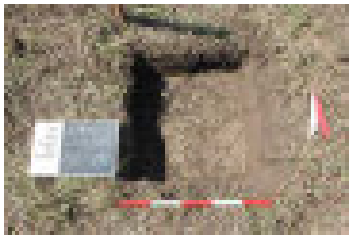
IMG_3216.JPG


IMG_3217.JPG

IMG_3218.JPG

IMG_3219.JPG

IMG_3220.JPG


IMG_3221.JPG

IMG_3222.JPG

IMG_3223.JPG

IMG_3224.JPG

IMG_3225.JPG

IMG_3226.JPG

IMG_3227.JPG

IMG_3228.JPG

IMG_3229.JPG

IMG_3230.JPG

IMG_3231.JPG

IMG_3232.JPG

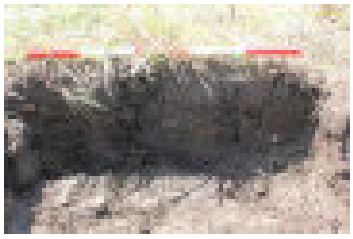
IMG_3233.JPG

IMG_3234.JPG

IMG_3236.JPG

IMG_3237.JPG

IMG_3238.JPG


IMG_3239.JPG

IMG_3240.JPG

IMG_3241.JPG

IMG_3242.JPG

IMG_3243.JPG

IMG_3244.JPG

IMG_3245.JPG

IMG_3246.JPG

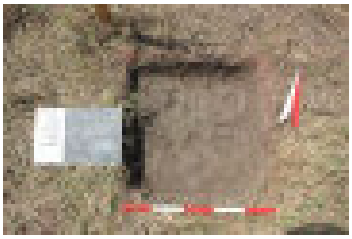
IMG_3247.JPG

IMG_3248.JPG

IMG_3249.JPG

IMG_3250.JPG

IMG_3251.JPG


IMG_3252.JPG

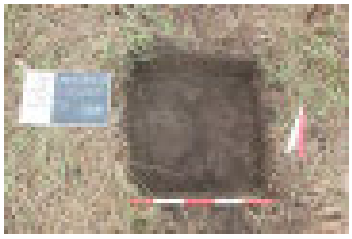
IMG_3253.JPG

IMG_3254.JPG

IMG_3255.JPG

IMG_3256.JPG

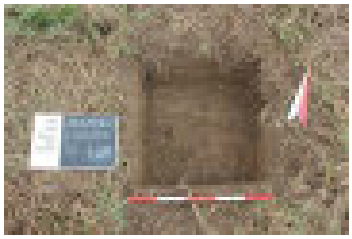
IMG_3257.JPG


IMG_3258.JPG

IMG_3259.JPG

IMG_3260.JPG

IMG_3261.JPG


IMG_3262.JPG

IMG_3263.JPG

IMG_3264.JPG

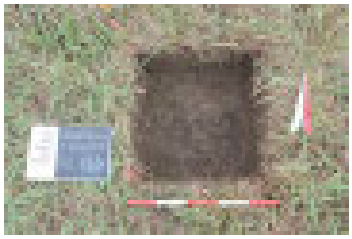
IMG_3265.JPG

IMG_3266.JPG

IMG_3267.JPG

IMG_3268.JPG

IMG_3269.JPG


IMG_3270.JPG

IMG_3271.JPG

IMG_3272.JPG

IMG_3273.JPG

IMG_3274.JPG

IMG_3275.JPG

IMG_3276.JPG

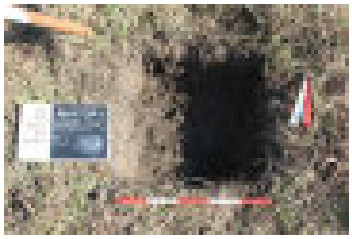
IMG_3277.JPG

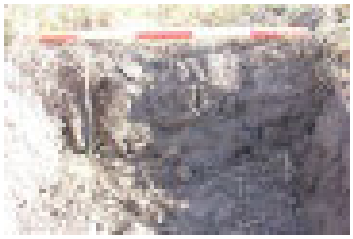
IMG_3280.JPG

IMG_3281.JPG

IMG_3282.JPG

IMG_3283.JPG


IMG_3284.JPG


IMG_3285.JPG

IMG_3286.JPG

IMG_3287.JPG

IMG_3288.JPG

IMG_3289.JPG

IMG_3290.JPG

IMG_3291.JPG

IMG_3292.JPG

IMG_3293.JPG

IMG_3294.JPG

IMG_3295.JPG

IMG_3296.JPG

IMG_3297.JPG

IMG_3298.JPG

IMG_3299.JPG

IMG_3300.JPG

IMG_3301.JPG

IMG_3302.JPG

IMG_3303.JPG

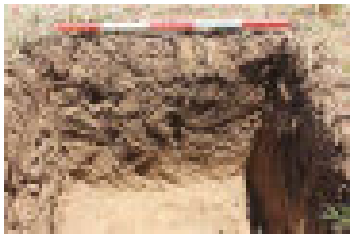
IMG_3304.JPG

IMG_3305.JPG

IMG_3306.JPG

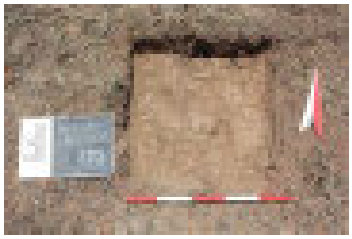
IMG_3307.JPG

IMG_3308.JPG


IMG_3309.JPG

IMG_3310.JPG

IMG_3311.JPG


IMG_3312.JPG

IMG_3313.JPG

IMG_3314.JPG

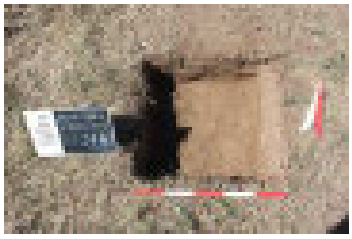
IMG_3315.JPG

IMG_3316.JPG

IMG_3317.JPG

IMG_3318.JPG

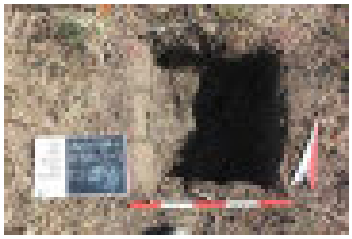
IMG_3319.JPG


IMG_3320.JPG

IMG_3321.JPG

IMG_3322.JPG

IMG_3323.JPG


IMG_3324.JPG

IMG_3325.JPG

IMG_3326.JPG

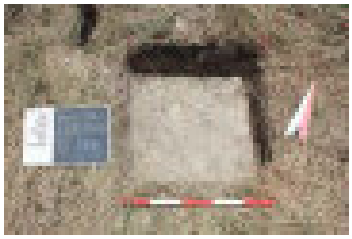
IMG_3327.JPG

IMG_3328.JPG

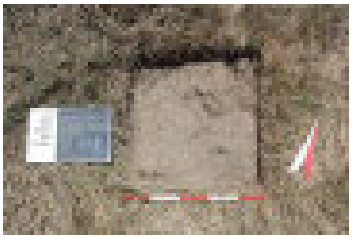
IMG_3329.JPG

IMG_3330.JPG

IMG_3331.JPG


IMG_3332.JPG

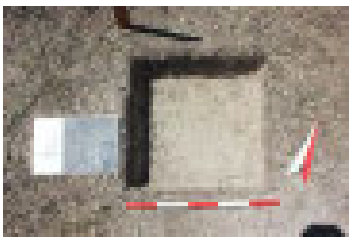
IMG_3333.JPG


IMG_3334.JPG

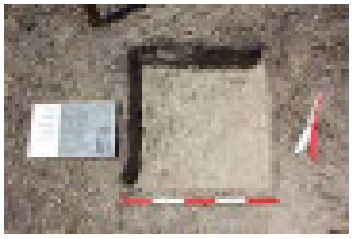
IMG_3335.JPG

IMG_3336.JPG

IMG_3337.JPG


IMG_3338.JPG

IMG_3339.JPG


IMG_3340.JPG

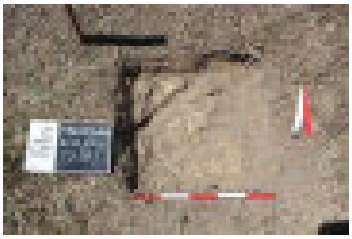
IMG_3341.JPG

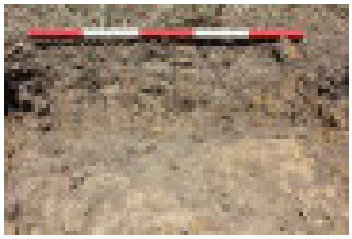
IMG_3342.JPG

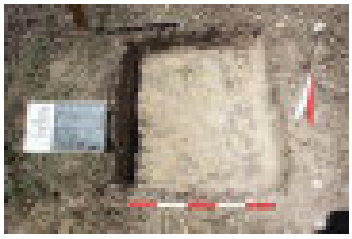
IMG_3343.JPG

IMG_3344.JPG

IMG_3345.JPG


IMG_3346.JPG


IMG_3347.JPG


IMG_3348.JPG

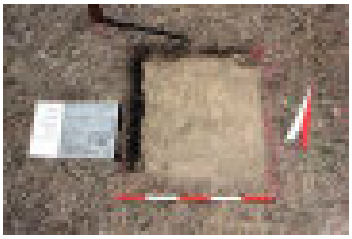
IMG_3349.JPG

IMG_3350.JPG

IMG_3351.JPG

IMG_3352.JPG

IMG_3353.JPG


IMG_3354.JPG

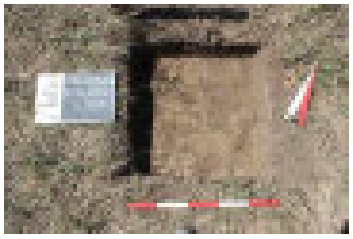
IMG_3355.JPG

IMG_3356.JPG

IMG_3357.JPG

IMG_3358.JPG

IMG_3359.JPG


IMG_3360.JPG

IMG_3361.JPG

IMG_3362.JPG

IMG_3363.JPG

IMG_3364.JPG

IMG_3365.JPG

IMG_3366.JPG

IMG_3367.JPG

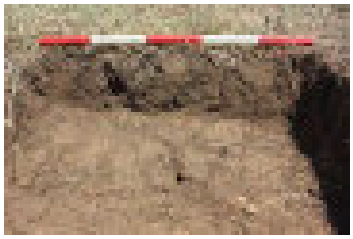
IMG_3368.JPG

IMG_3369.JPG

IMG_3370.JPG

IMG_3371.JPG

IMG_3372.JPG

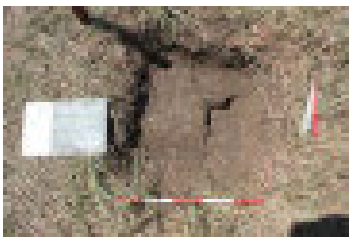

IMG_3373.JPG

IMG_3374.JPG

IMG_3375.JPG

IMG_3376.JPG

IMG_3377.JPG


IMG_3378.JPG

IMG_3379.JPG

IMG_3380.JPG

IMG_3381.JPG

IMG_3382.JPG

IMG_3383.JPG

IMG_3384.JPG

IMG_3385.JPG

IMG_3386.JPG

IMG_3387.JPG

IMG_3388.JPG

IMG_3389.JPG

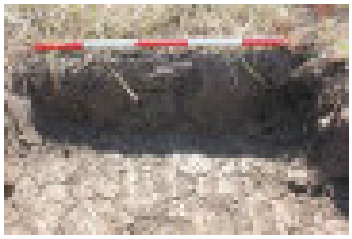
IMG_3390.JPG

IMG_3391.JPG

IMG_3392.JPG

IMG_3393.JPG

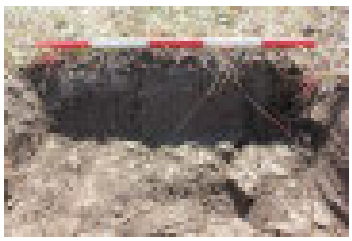
IMG_3394.JPG

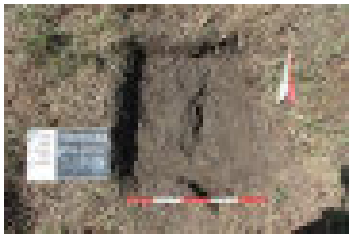

IMG_3395.JPG

IMG_3396.JPG

IMG_3397.JPG

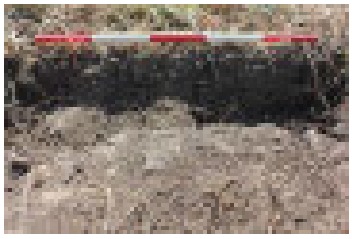
IMG_3398.JPG


IMG_3399.JPG


IMG_3400.JPG

IMG_3401.JPG

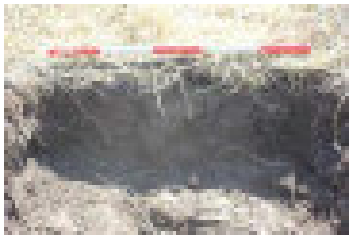
IMG_3402.JPG


IMG_3403.JPG

IMG_3404.JPG

IMG_3405.JPG

IMG_3406.JPG


IMG_3407.JPG

IMG_3408.JPG

IMG_3409.JPG

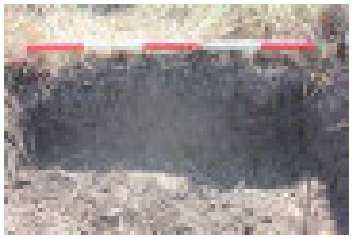
IMG_3410.JPG

IMG_3411.JPG

IMG_3412.JPG

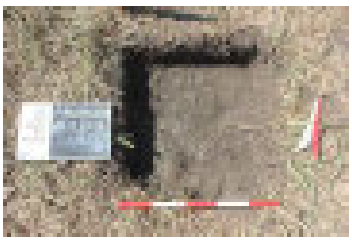
IMG_3413.JPG

IMG_3414.JPG


IMG_3415.JPG

IMG_3416.JPG

IMG_3417.JPG

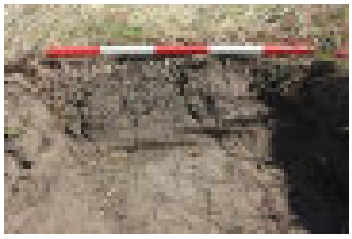

IMG_3418.JPG

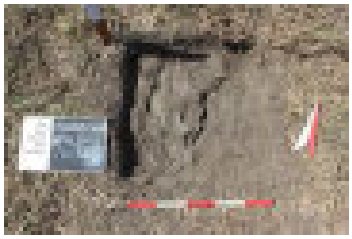
IMG_3419.JPG

IMG_3420.JPG

IMG_3421.JPG

IMG_3422.JPG


IMG_3423.JPG


IMG_3424.JPG

IMG_3425.JPG

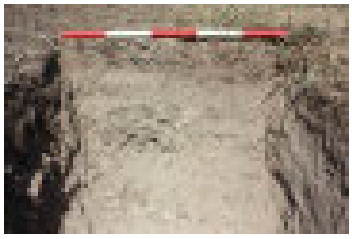
IMG_3426.JPG

IMG_3427.JPG

IMG_3428.JPG

IMG_3429.JPG

IMG_3430.JPG

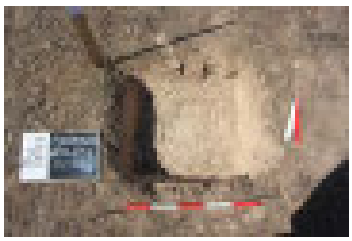

IMG_3431.JPG

IMG_3432.JPG

IMG_3433.JPG

IMG_3434.JPG

IMG_3435.JPG


IMG_3436.JPG

IMG_3437.JPG

IMG_3438.JPG

IMG_3439.JPG

IMG_3440.JPG

IMG_3441.JPG

IMG_3442.JPG

IMG_3443.JPG

IMG_3444.JPG

IMG_3445.JPG

IMG_3446.JPG

IMG_3447.JPG

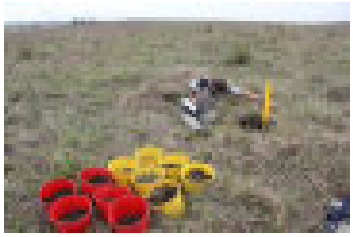
IMG_3448.JPG

IMG_3449.JPG

IMG_3450.JPG

IMG_3451.JPG

IMG_3452.JPG


IMG_3453.JPG

IMG_3454.JPG

IMG_3455.JPG

IMG_3456.JPG

IMG_3457.JPG

IMG_3458.JPG

IMG_3459.JPG

IMG_3460.JPG

IMG_3461.JPG

IMG_3462.JPG

IMG_3463.JPG

IMG_3464.JPG

IMG_3465.JPG

IMG_3466.JPG

IMG_3467.JPG

IMG_3468.JPG

IMG_3469.JPG

IMG_3470.JPG

IMG_3471.JPG

IMG_3472.JPG

IMG_3473.JPG

IMG_3474.JPG

IMG_3475.JPG

IMG_3476.JPG

IMG_3477.JPG

IMG_3478.JPG

IMG_3479.JPG

IMG_3480.JPG

IMG_3481.JPG

IMG_3482.JPG

IMG_3483.JPG

IMG_3484.JPG

IMG_3485.JPG

IMG_3486.JPG

IMG_3487.JPG

IMG_3488.JPG

IMG_3489.JPG

IMG_3490.JPG

IMG_3491.JPG

IMG_3492.JPG

IMG_3493.JPG

IMG_3494.JPG

IMG_3495.JPG

IMG_3496.JPG

IMG_3497.JPG

IMG_3498.JPG

IMG_3499.JPG

IMG_3500.JPG

IMG_3501.JPG

IMG_3502.JPG

IMG_3503.JPG

P1060472.JPG

P1060473.JPG

P1060474.JPG

P1060475.JPG

P1060476.JPG

P1060477.JPG

P1060478.JPG

P1060479.JPG

P1060480.JPG

P1060481.JPG

P1060482.JPG

P1060483.JPG

P1060484.JPG

P1060485.JPG

P1060486.JPG

P1060487.JPG

P1060488.JPG

P1060489.JPG

P1060490.JPG

P1060491.JPG

P1060492.JPG

P1060493.JPG

P1060494.JPG

P1060496.JPG

P1060497.JPG

P1060498.JPG

P1060499.JPG

P1060500.JPG

P1060501.JPG

P1060502.JPG

P1060503.JPG

P1060504.JPG

P1060505.JPG

P1060506.JPG

P1060507.JPG

P1060508.JPG

P1060509.JPG

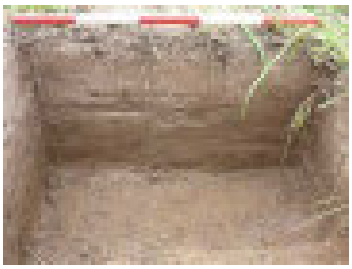
P1060510.JPG

P1060511.JPG

P1060512.JPG

P1060513.JPG

P1060514.JPG


P1060515.JPG

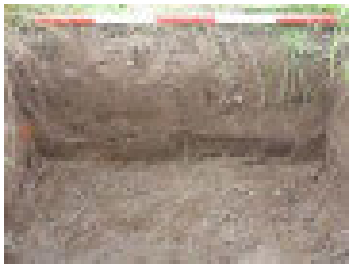
P1060516.JPG

P1060517.JPG

P1060518.JPG

P1060519.JPG

P1060520.JPG


P1060521.JPG

P1060522.JPG

P1060523.JPG

P1060524.JPG

P1060525.JPG

P1060526.JPG

P1060527.JPG

P1060528.JPG

P1060529.JPG

P1060530.JPG

P1060531.JPG

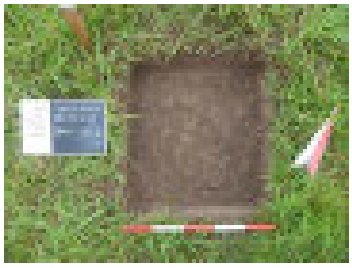
P1060532.JPG

P1060533.JPG

P1060534.JPG

P1060535.JPG

P1060536.JPG


P1060537.JPG

P1060538.JPG

P1060539.JPG

P1060540.JPG

P1060541.JPG

P1060542.JPG

P1060544.JPG

P1060545.JPG

P1060546.JPG

P1060547.JPG

P1060548.JPG

P1060549.JPG

P1060550.JPG

P1060551.JPG

P1060552.JPG

P1060553.JPG

P1060554.JPG

P1060555.JPG

P1060556.JPG

P1060557.JPG

P1060558.JPG

P1060559.JPG

P1060560.JPG

P1060561.JPG

P1060562.JPG

P1060563.JPG

P1060564.JPG

P1060565.JPG

P1060566.JPG

P1060567.JPG

P1060568.JPG

P1060569.JPG

P1060570.JPG

P1060571.JPG

P1060573.JPG

P1060574.JPG

P1060575.JPG

P1060576.JPG

P1060577.JPG

P1060578.JPG

P1060579.JPG

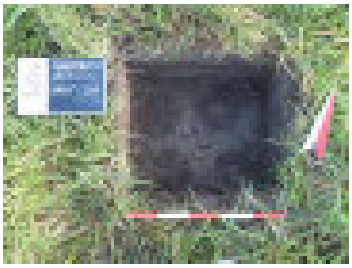
P1060580.JPG

P1060581.JPG

P1060582.JPG

P1060583.JPG

P1060584.JPG


P1060585.JPG

P1060586.JPG

P1060587.JPG

P1060588.JPG

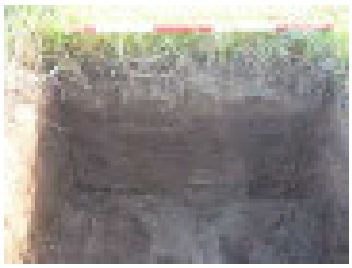
P1060589.JPG

P1060590.JPG

P1060591.JPG

P1060592.JPG

P1060593.JPG


P1060594.JPG

P1060595.JPG

P1060596.JPG

P1060597.JPG

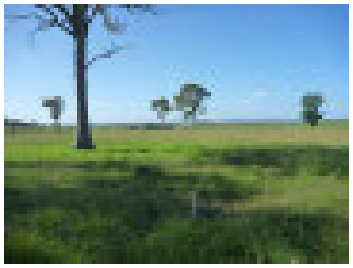
P1060598.JPG

P1060599.JPG

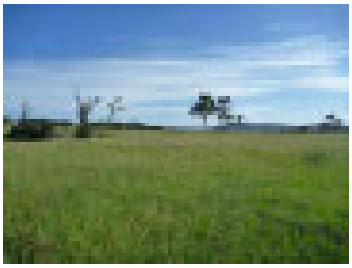
P1060600.JPG

P1060601.JPG

P1060602.JPG


P1060603.JPG

P1060604.JPG

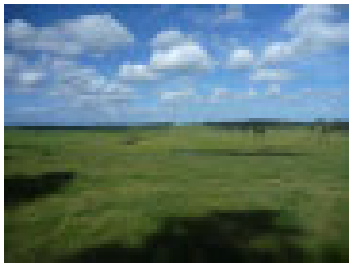

P1060605.JPG

P1060606.JPG

P1060607.JPG

P1060608.JPG

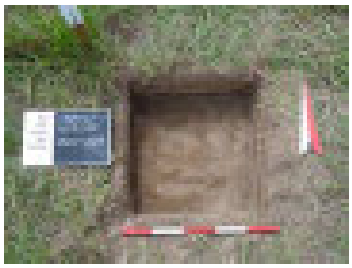
P1060609.JPG


P1060610.JPG

P1060611.JPG

P1060612.JPG

P1060613.JPG


P1060614.JPG

P1060615.JPG

P1060616.JPG

P1060617.JPG

P1060618.JPG

P1060619.JPG

P1060620.JPG

P1060621.JPG

P1060622.JPG

P1060623.JPG

P1060624.JPG

P1060625.JPG

P1060626.JPG

P1060627.JPG

P1060628.JPG

P1060629.JPG

P1060630.JPG

P1060631.JPG

P1060632.JPG

P1060633.JPG

P1060634.JPG

P1060635.JPG

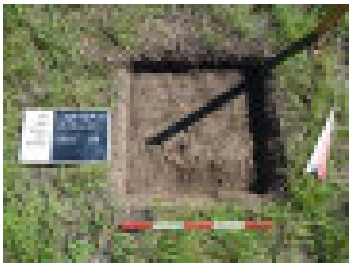
P1060636.JPG

P1060637.JPG

P1060638.JPG

P1060639.JPG

P1060640.JPG


P1060641.JPG

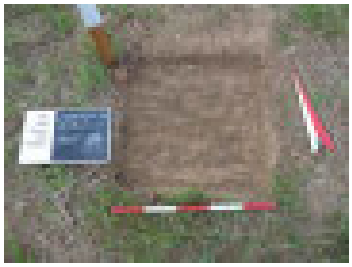
P1060642.JPG

P1060643.JPG

P1060644.JPG

P1060645.JPG

P1060646.JPG


P1060647.JPG

P1060648.JPG

P1060649.JPG

P1060650.JPG

P1060651.JPG

P1060652.JPG

P1060653.JPG

P1060654.JPG

P1060655.JPG

P1060656.JPG

P1060657.JPG

P1060658.JPG

P1060659.JPG

P1060660.JPG

P1060661.JPG

P1060662.JPG

P1060663.JPG

P1060664.JPG

P1060665.JPG

P1060666.JPG

P1060667.JPG

P1060668.JPG

P1060669.JPG

P1060670.JPG

P1060671.JPG

P1060672.JPG

P1060673.JPG

P1060674.JPG

P1060675.JPG

P1060676.JPG

P1060677.JPG

P1060678.JPG

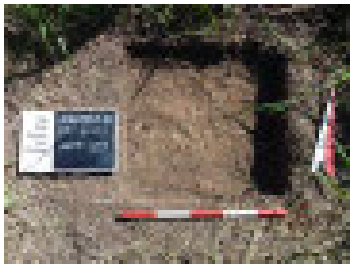
P1060679.JPG

P1060680.JPG

P1060681.JPG

P1060682.JPG

P1060683.JPG

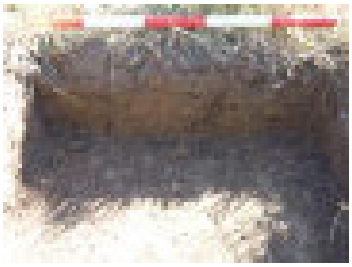

P1060684.JPG

P1060685.JPG

P1060686.JPG

P1060687.JPG

P1060688.JPG


P1060689.JPG

P1060690.JPG

P1060691.JPG

P1060694.JPG

P1060695.JPG

P1060696.JPG

P1060697.JPG

P1060698.JPG

P1060699.JPG

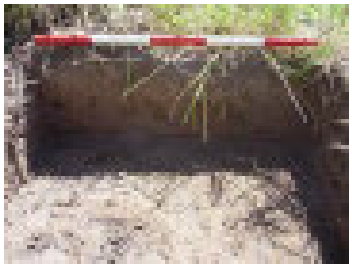
P1060700.JPG

P1060701.JPG

P1060702.JPG

P1060703.JPG

P1060704.JPG


P1060705.JPG

P1060706.JPG

P1060707.JPG

P1060708.JPG

P1060709.JPG

P1060711.JPG

P1060712.JPG

P1060713.JPG

P1060714.JPG

P1060716.JPG

P1060717.JPG

P1060718.JPG

P1060719.JPG

P1060720.JPG

P1060721.JPG

P1060722.JPG

P1060723.JPG

P1060724.JPG

P1060725.JPG

Appendix I

Artefact Analysis

baker archaeology

Analysis of Aboriginal Stone Artefacts

Anambah Test Excavations, Lower Hunter Valley, NSW

Report to GML Heritage for Stockland Developments

DRAFT version 1 June 2015

M 0428 378 939 **E** neville.baker@bakerarchaeology.com.au **A** PO Box 8225, Glenmore Park NSW 2745

Analysis of Aboriginal Stone Artefacts, Anambah Test Excavations, Lower Hunter Valley, NSW

Maitland, NSW

DRAFT version 1 Report to GML Heritage for Stockland Developments

June 2015

Prepared by Neville Baker, BA Hons MAACAI
Director - Archaeologist

Baker Archaeology Pty Ltd
ACN 162 289 321
PO Box 8225 Glenmore Park NSW 2745

DRAFT

This report has been prepared in accordance with the scope of services described in the contract or agreement between Baker Archaeology and the Client. The report relies upon data, surveys, measurements and results taken at or under the particular times and conditions specified herein. Any findings, conclusions or recommendations only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the Client. Furthermore, the report has been prepared solely for use by the Client and Baker Archaeology accepts no responsibility for its use by other parties

Table of Contents

1 Introduction 1

1.1 Scope of Work 1

1.1 Background 2

1.2 Local archaeology 3

2 Method 5

2.1 Principles of Aboriginal stone artefact identification 5

2.2 Research questions 7

2.3 Attributes recorded 9

2.4 Analyses 10

3 Assemblage structure 12

3.1 Artefact numbers 12

3.2 Raw Materials 12

3.3 Artefact Types 15

3.4 Artefact Size 15

3.5 Flakes 16

3.6 Cores and Retouched Artefacts 16

4 Spatial Patterning of Artefacts 19

4.1 Artefacts by Site 19

4.2 Variation with Depth 22

4.3 Northern, Middle and Southern Site-Groups 22

4.4 Landform 26

4.5 Soil Association 28

4.6 Raw Material Source Association 29

5 Research Design Questions 31

5.1 Introduction 31

5.2 Characteristics of archaeological deposits across the study area 31

5.2.1 Types and Densities of Archaeological Materials? 31

5.2.2 Variation with Depth? 31

5.2.3 Variation with Landform? 31

5.2.4 Variation within a Site? 31

5.2.5 Antiquity? 31

5.2.6 Stone Sources by Site? 31

5.3 Interpretation of the Assemblage 32

5.3.1 Evidence of Spatial Patterning? 32

5.3.2 Timeframe for creation of Spatial Pattern? 32

5.3.3 Hill Slope Shade Analysis and Seasonality of Evidence? 32

5.3.4 Evidence of Absence? 32

5.3.5 Differentiating Tool Types and Activity Areas 32

5.4 Can Landscape use be Interpreted? 32

DRAFT

5.4.1 Can the Archaeology inform views about Movement through the Valley? 32
5.4.2 Can Group Size be Identified through the Archaeology? 32
5.5 Interpretation in a Regional Context 32
5.5.1 Raw Material Origin? 33
5.5.2 Assemblage Antiquity in Regional Context? 33
5.5.3 Trade? 33
5.6 Areas for Conservation or Further Research? 33
5.6.1 Which Sites for Conservation? 33
5.6.2 Which Sites have Research Potential? 33
5.6.3 How should a Boundary be drawn around a Site? 33
5.6.4 Are Identifiable Places present within a Cultural Landscape? 33
6 Conclusions 34
Glossary 35
References 37
Appendix A – Provenance and Artefact Catalogue 38

DRAFT

List of Tables

Table 1. Artefact Raw Material Proportions (excluding shatter and gravel) 12
Table 2. Artefact Types by Raw Material 15
Table 3. Artefacts, Shatter and Silcrete Gravel by Site 19
Table 4. Artefact Densities for Sites and PADs 21
Table 5. Artefact Frequency within each Site Group 23
Table 6. Flake Cortex Comparison 24
Table 7. Weight of artefacts by Site Group 24
Table 8. Flake to Core Rations for each Site Group 25
Table 9. Core Body and Raw material differences between Site Groups 26
Table 10. Artefact Frequency by Landform Type 27
Table 11. Artefact Types by Landform 28
Table 12. Soil Landscape Site Artefact Density Statistics 29

List of Figures

Figure 1. Location of the Study Area 1
Figure 2. Sites, PADs and TU Locations 2
Figure 3. Location of Sites Mentioned 4
Figure 4. Key features of flakes 6
Figure 5. Artefact Size: Silcrete and IMT 16
Figure 6. Anambah Core Size by Raw Material 17
Figure 7. McKeachies Run Core Size by Raw Material 17
Figure 8. Artefact Densities by Site/PAD 22
Figure 9. Location of Site Groups displaying different artefact density characteristics 23
Figure 10. Northern Sites: Silcrete Artefacts, Sources and Gravel 30

Table of Photographs

Photograph 1. Silcrete cobbles from site SAC7 10
Photograph 2. Silcrete Artefacts and Gravel 13
Photograph 3. IMT Cores....13
Photograph 4. Quartz Cores 14
Photograph 5. Petrified Wood, Quartzite and Chert Artefacts 14
Photograph 6. Bondi Point backed artefacts and associated silcrete cores 18
Photograph 7. Primary Reduction Flaked Piece with smooth Terrestrial Cobble Cortex 25

DRAFT

1 Introduction

1.1 Scope of Work

Aboriginal stone artefacts were recovered in late 2012 and early 2013 from a series of 50 cm archaeological test pits excavated by GML Heritage archaeologists across a 325 ha area of land proposed for the Anambah residential subdivision, 10 km north west of Maitland (Figure 1). The study area is located in the Hunter Valley Central Lowlands at the upper reach of tidal influence, generally within 2 km of the Hunter River right bank[1]. Archaeological test excavation was conducted across a series of areas identified as archaeologically sensitive in an initial assessment.

Neville Baker was contacted by GML Heritage in early 2014 to prepare an artefact analysis report for the recovered Aboriginal artefacts. Artefacts in one brown cardboard and two plastic boxes were recorded and analysed. Provenance data from survey plans, artefact summary spreadsheets and archaeological plans were compiled into an ACCESS database for the purpose of exploring spatial patterning of artefacts.

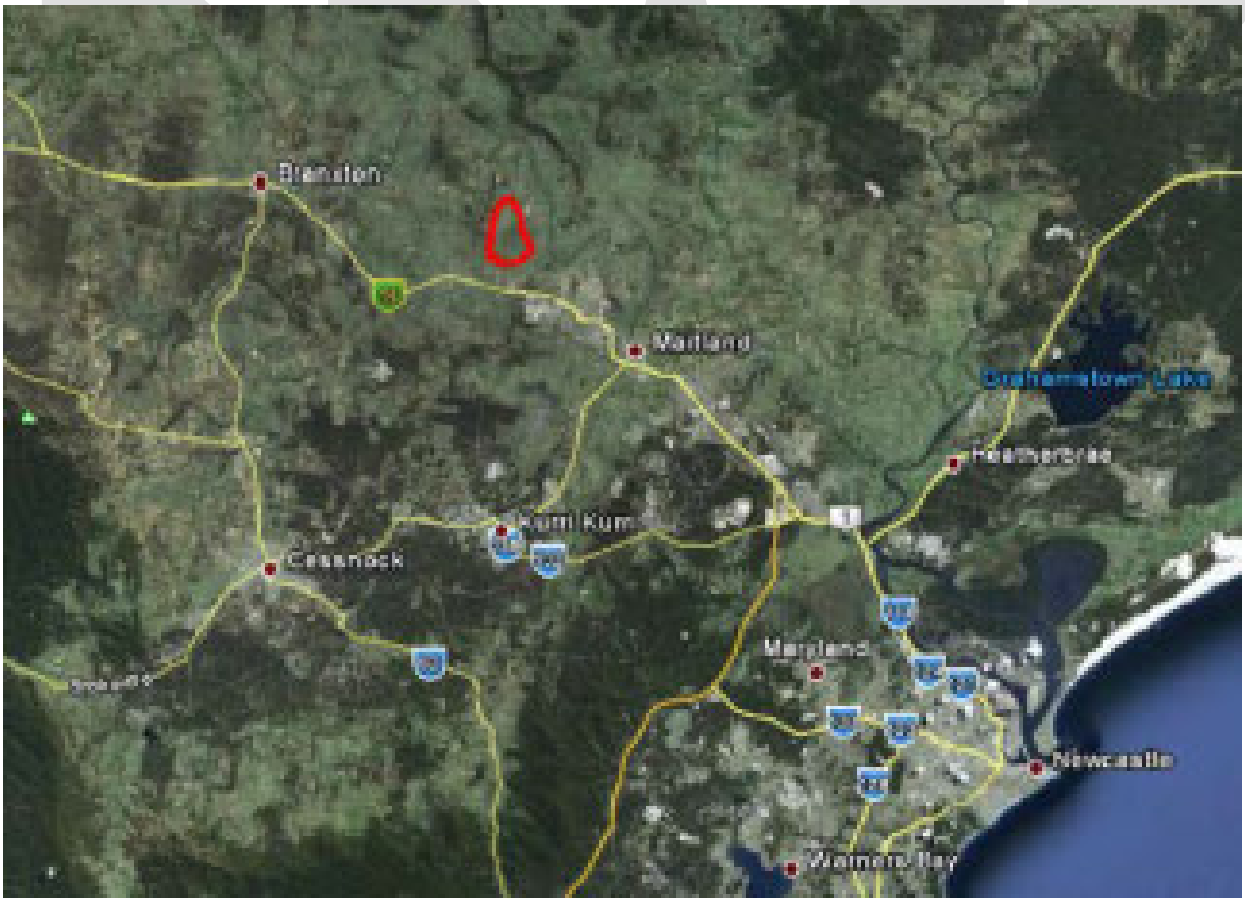


Figure 1. Location of the Study Area

Source: GML Excavation report

[1] "right bank" refers to the side of the river observed as one faces downstream.

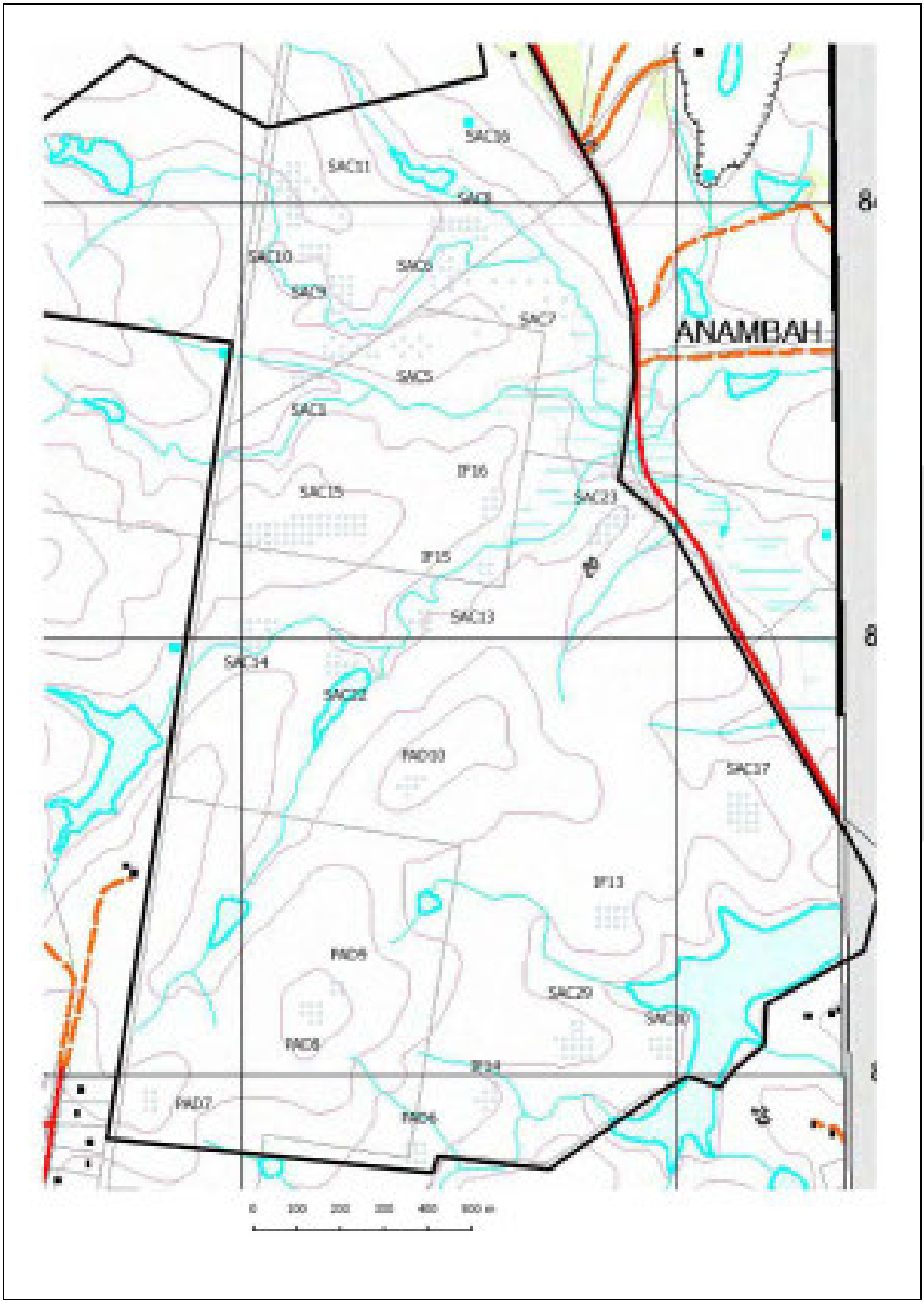


Figure 2. Sites, PADs and TU Locations

Source: LPI Greta 9132-1S second edition 1:25,000 topographic map base; GML survey Data

1.1 Background

GML Heritage was engaged by Stockland Developments in 2012 to conduct an Aboriginal heritage assessment of their proposed residential development area at Anambah for the purpose of obtaining an Aboriginal Heritage Impact Permit (AHIP) under section 90 of the *National Parks and Wildlife Act 1974*. Archaeological surveys identified 21 sites and 28 area of potential archaeological deposit (PAD). Test excavations were conducted in late 2012 and early 2013. The test excavations were conducted according to the *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (the Code DECCW 2010). A total of 316 test pits, referred to in this report as test units (TU) following GML Heritage's field nomenclature, were dug as 50 cm by 50 cm areal units dug in 10 cm spits. TUs were placed generally at intersections of a 20 m grid placed within and around the PAD areas as defined from initial survey results (Figure 2).

1.2 Local archaeology

The Hunter Valley has been subject to a significant degree of archaeological investigation associated with development. In the Maitland local government area, land development has seen a plethora of archaeological surveys and associated archaeological excavations over recent decades.

Aboriginal stone artefact assemblages in greater Maitland area are typical of those found in open stone artefact sites throughout the Hunter Valley. Artefacts are typically made of silcrete and Indurated Mudstone/Tuff (IMT) with minor proportions of quartz, igneous stone, quartzite, petrified wood and other raw materials. Assemblages are typically associated with Holocene backed artefacts and the flaking by-products of their manufacture. Knapping floors where backed artefacts were made are typical. Other flake tools are also common in a variety of retouched flake forms. The technology has been described as a mix of specialised flaking strategies associated with backed artefacts and opportunistic strategies for the simple creation of a functional sharp edge either on a core or as a sharp flake (Baker 1992). The only exception to this general character was found at the late Pleistocene sites of Moffats Swamp and Galloping Swamp on the Tomago sand plain 34 km to the east where technology relating to backed artefacts was entirely absent (Baker 1994).

Extensive subsurface distributions of Aboriginal flaked stone artefacts have been recorded in some development areas, but are curiously absent from others. For example extensive test excavations at Bolwarra Heights in 1996 identified artefacts within the topsoil in alluvium and duplex soils over a range of landforms, including evidence of primary flaking on a ridge top overlooking the Hunter River without immediately associated raw material source (Baker 1997a). Excavations at the McKeachies Run development area at Aberglasslyn found artefacts consistently across all areas excavated contrary to an initial test excavation by McCardle (2007). The author's recent 2014 analysis of McKeachies Run artefacts salvaged by GML provided evidence for primary reduction of a local silcrete source in the form of large silcrete flaked pieces with cortical surfaces typical of primary reduction of silcrete cobbles.

DRAFT

Figure 3. Location of Sites Mentioned

Source: SIX maps LPI base map

DRAFT

2 Method

2.1 Principles of Aboriginal stone artefact identification

Aboriginal flaked stone artefacts are identified by reference to morphology and context. These two characteristics are equally important in the accurate identification of a flaked stone object as an Aboriginal stone artefact. It should be acknowledged that stone can bear the evidence of flake removal through natural processes, such as river rolling, or through modern processes, such as machinery impact, hoofed animal impact or through modern people breaking stone intentionally. The original location of the flaked stone provides indictors of the likely cause of flaking. At a high level of description, flaked artefacts can be generally divided into objective pieces (e.g. cores and retouched flakes) and detached pieces (e.g. flakes and flaked pieces – Andrefsky 2005).

The morphological features of an Aboriginal flaked stone artefact reveal signs of controlled breakage usually, in Australia, through hard hammer percussion. This means that stone of appropriate characteristics, being highly siliceous, homogeneous, isotropic, hard and inert, rigid, elastic (Hiscock 1988:10), is impacted by another hard stone to cause breakage which can be controlled.

Controlled breakage of stone by Aboriginal people in the past occurred predominantly as conchoidal fracture (Figure 4). Conchoidal fracture is the breakage of stone by cracking from a small ring (a Hertzian initiation) on an outer surface. This leaves a distinctive fracture surface bearing some similarity to a bivalve shell, hence the term "conchoidal" after the Greek word for shell *konche*. In the application of controlled force to a stone to make a flaked stone artefact the detached piece is known as a "flake". The objective piece bears the negative scar of that flake removal. Important elements in understanding the formation of flakes and their resulting morphology include crack initiation, propagation and termination (Cotterall and Kamminga 1987).

In discussing initiations, reference is made to the "platform" of the flake, being the surface on which the rock is struck to remove a flake. A ringcrack or point of force application (PFA) indicates the area struck by the hammerstone and the commencement of the crack which passes through the stone to detach the flake. A cone of force results from the spread of the crack through the stone much like a stone dropped in still water results in expanding ripples. Sometime the force removes a thin secondary flake called an erraillure flake which appears scale-like on its own.

When the flaking action is well controlled, the crack exits the objective piece, or core, without deviation to produce a sharp crack termination, termed a feather termination. When the flaking action is angled incorrectly, or insufficient force is applied, the termination can form a hinge termination or the partially formed flake can snap off the core at a step termination. Because step terminations are essentially a snapping of the flake through an imbalance of outward force over downward force, they cannot be reliably distinguished from laterally snapped flakes.

DRAFT

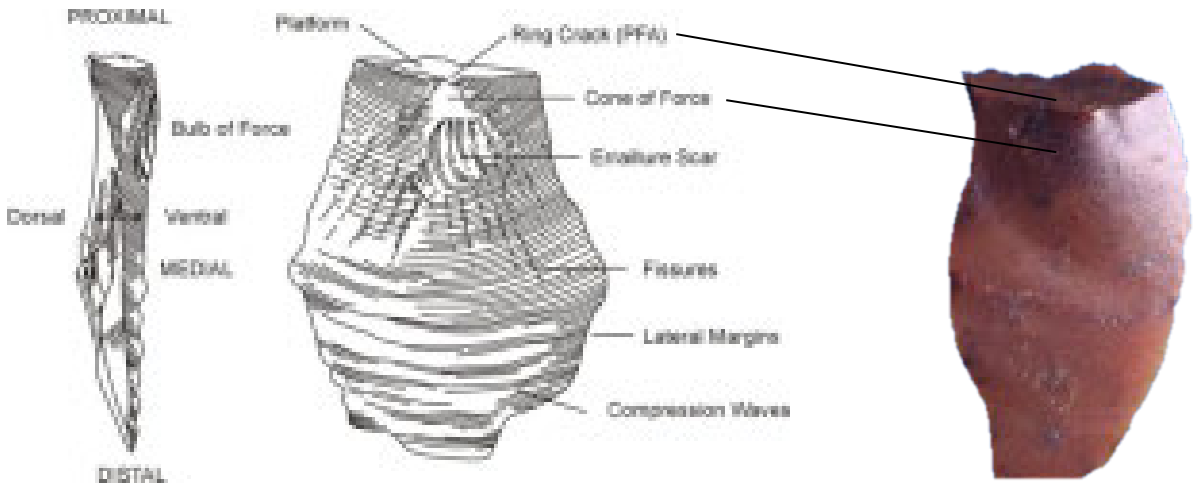


Figure 4. Key features of flakes

Source: Clarkson 2007 Fig 3.2 and Holdaway and Stern 2004 Fig 3.1.2 rotated

The above description provides an idealised technological distinction. In practice, flaked stone artefacts can be difficult to discern when found amidst naturally occurring broken stone of the same material. Quartz artefacts are notoriously difficult to distinguish due to the toughness of some quartz, its resistance to forming clear morphological evidence of human flaking and the typical abundance of natural quartz gravel co-occurring with quartz artefacts. A small proportion of artefacts in an assemblage typically comprised "flaked pieces" where fracture surfaces can be partially identified but there is an absence of clear initiations and terminations due to breakage or irregular fracture due to flaws in the rock or internal cracks. Whereas on the majority of flaked artefacts a sequence of flake removals leading up to the last fracture surface can be discerned, such irregularities renders it difficult to reconstruct the fracture sequence in some problematic artefacts. These "flaked pieces" are identified on the basis of partial fracture surfaces where the "last ventral surface" cannot be discerned.

Complications in Aboriginal stone artefact identification occur where silcrete occurs naturally and breaks down through weathering to angular fragments. The problems of differentiating natural silcrete gravel fragments from Aboriginal flaked stone artefacts has been discussed at length for Aboriginal sites located at silcrete cobble sources in the Cumberland Plain (Baker 1997b). That report identifies the heightened importance of considering context as well as identifying the above mentioned morphological features and taking a conservative approach to differentiating artefacts from gravel fragments. Naturally occurring silcrete within land subject to modern machinery impacts can also result in flaked fragments of silcrete, typically with fresh heavy impact scars and not associated with flaking debris exhibiting precision in force application.

2.2 Research questions

The research questions guiding the test excavation as set out in chapter four of the GML excavation report are provided here:

Objectives (and Research Questions)

The first objective of the archaeological test excavation for Anambah is to undertake excavation that allows for the clarification, characterisation, description and archaeological potential of soil horizons across the study area to be realised.

The second objective is to determine whether these soil profiles contain archaeological materials and to undertake an assessment of these materials, within a regional context. In order to achieve these two objectives, research questions have been established to guide the archaeological process and provide the basis for questioning the data collected. Relevant research questions include:

1. *What are the characteristics of soil horizons across the study area?*
    a. *How has the land use history impacted the study area and survival of soils and thus, archaeological material?*
    b. *Is there a difference in the soil landscape's integrity across the study area due to different ploughing regimes?*
    c. *At each location, is the deposit consistent? Or, does it possess characteristics that tell of different depositional events?*
    d. *Are there three soil landscapes (Hunter, Branxton and Rothbury) present? Are these found where they are mapped at the regional level? Does the archaeological deposit vary on each landscape? How do these soil landscapes interact and does the archaeological deposit vary by soil landscape?*
    e. *Is there alluvium present (other than that identified through field survey)? How deep is the alluvium and, what are its characteristics? Is there evidence for former alluvial terraces and 'ancient' modifications to the water courses? How does the alluvium interact with the associated soil landscape?*
    f. *Are buried sand sheets or buried alluvial terraces present within the study area? If so, is any archaeological material associated with them? Is stratigraphy present in alluvial deposits?*
2. *What are the characteristics of archaeological deposits across the study area?*
    a. *What types and densities of archaeological materials are present? What is the nature (type) of the deposit? Is the deposit stratified? Is the deposit associated with a particular flood event? Does the deposit have different degrees of archaeological potential with depth?*
    b. *What, if any, evidence other than stone is present for Aboriginal occupation of this region? Is it correct to infer that stone equates to Aboriginal use of a landform? Or were other landforms without stone used by Aboriginal people?*
    c. *How was stone used on site? Is there a relationship between artefact creation and use of landscape and/or landform?*
    d. *Are stone deposits spatially discrete within areas of PAD? Does this provide information in terms of Aboriginal social laws and patterning of site use?*

DRAFT

e. *Can deposits be dated? What is the antiquity of the evidence?*

f. *What is the source of the artefactual stone at any particular site? How does this correlate with the regional research into stone resources undertaken (Appendix D* [of the GML report]*)?*

3. *How can the deposit be interpreted?*

   a. *Is there evidence of archaeological spatial patterning of deposits on continuous landforms? How long has it taken for such evidence to be created?*

   b. *Does spatial patterning, if present, provide any evidence for Aboriginal social rules and laws?*

   c. *How do archaeological deposits relate to the hill slope shade analysis? Can this analysis be used to inform seasonal use of this landscape?*

   d. *If archaeological deposits are absent from a landform, in which they were expected to exist (i.e. soils have good condition and integrity), what does this mean in terms of Aboriginal landscape use?*

   e. *What are the physical attributes of the deposit (stone, carbon, clay or other)?*

   f. *For stone deposits, what are their physical characteristics and do they indicate a specialised use? Is there a difference in stone tool types between the different locations tested?*

4. *What does the archaeological deposit tell us about Aboriginal use of this specific landscape?*

   a. *How do long term patterns of Aboriginal population movement through this valley (as described by Aboriginal elders and early ethnographers) correlate with archaeological deposits?*

   b. *Was the study area used for large scale Aboriginal gatherings? Does landform use correlate with the number of people inhabiting the study area (i.e. if large groups gathered, then did they use the larger landforms for habitation)?*

5. *Can the archaeology be interpreted in a regional context?*

   a. *Where did raw stone materials originate from? Have they been brought into the study area? From how far away has the stone been brought?*

   b. *How old is the archaeological deposit and how does this relate to regional use of this landscape?*

   c. *What is the relationship of the archaeological material within the study area to the region; in particular, the Pleistocene/Holocene relationship with Stockton Bight and other sites of great antiquity in the region?*

   d. *Is there evidence of trade in connection to stone deposits?*

6. *Is the archaeological deposit culturally significant?*

   a. *What is the heritage value of the deposit, both scientifically and culturally?*

   b. *How does the Aboriginal community view and value the deposit identified?*

7. *Is there a deposit worthy of conservation or of future research?*

   a. *Where and what deposits should be conserved for future generations?*

DRAFT

b. *Which deposits should be subject to more extensive investigations?*

c. *How should a boundary be drawn around a site? Are identifiable places present within a cultural landscape?*

8. *Does the deposit provide a link between scientific hypotheses and Aboriginal cultural views?*

While some of the questions may be addressed by this analysis, a test excavation is better suited to identifying the *potential* of an archaeological site to answer questions if excavated more comprehensively. Questions relating to soils, social reconstruction and Aboriginal perspectives cannot be addressed by the analysis, but some other directions for further research may be indicated relating to the constant and spatial arrangement of archaeological materials.

2.3 Attributes recorded

The attributes recorded are consistent with major artefact analyses in the Hunter Valley. The artefacts are classified by technological type and by morphological implement form where applicable with reference to McCarthy 1974 and Holdaway and Stern 2004. Raw material, weight (to nearest gram) and maximum length width and thickness dimensions (to nearest mm) are recorded on all artefacts by digital instruments. Attributes identifying flaking pattern on cores are recorded on cores consistent with the recording of artefacts at Bolwarra Heights by Baker 1997a.

Definitions of attributes recorded are provided in the glossary.

Because of the high degree of inter-recorder variability, cortex is recorded by broad percentage classes sufficient to identify primary reduction and distinctive features. This is for two reasons. Firstly, the major reason for recording cortex is to identify the type of raw material source and its proximity and secondly to identify primary reduction from late stage reduction. Given that the Hunter River cobble source of raw material is well established in the Hunter Valley, this rationale is redundant. Aboriginal people in the past sourced silcrete from water rolled cobbles in river bed, terrace or ancient river channel contexts (as recently found at Farley: HWC 2014). Furthermore, three sources of terrestrial silcrete cobbles have been found within the study area.

DRAFT

Photograph 1. Silcrete cobbles from site SAC7

Source: GML 2012; GML excavation report Figure 3.15

2.4 Analyses

The challenge of artefact analysis is to make general observations from myriad complex data in a manner that is scientifically replicable. For this reason all available data was compiled in an ACCESS database to demonstrate the basis for all general interpretative statements made in this report. The database retains further interpretative value.

Provenance data was compiled from GML data, survey maps, survey coordinate spreadsheets and various GML field notes provided as data gaps were identified. A "Provenance" database was first established with each individual spit within each TU comprising a record with 14 fields. Some fields such as aspect had incomplete data reflecting the gaps in the field data.

DRAFT

Provenance

Field Name	Data Type	Description
Provenance_ID	AutoNumber	Index
TU	Number	Test Unit (TU) Test Pit
Spit	Text	Arbitary unit of excavation as per GML spreadsheet
Spit depth	Number	Depth in mm of spit from top of spit to base of spit as per GML spreadsheet
Area	Text	North Middle South
PAD name	Text	Name of PAD as per GML report
Site name	Text	Name of site for each PAD as per GML advice
Extension	Yes/No	Whether the TU was an extension of the originally mapped map or original excavation as mapped by GML
Dug	Yes/No	Whether the TU has been dug or not i.e just appears on plans or uncertain
Landform	Text	Terrain unit as per GML spreadsheet
Aspect	Text	as per GML spreadsheet
Date dug	Date/Time	Date commenced as per GML spreadsheet
Field count	Number	as per GML spreadsheet
Comment	Text	
Sensitivity	Text	

Figure 5. Provenance table fields

DRAFT

Additional tables were compiled with landform and soil landscape and MGA coordinates for each TU. All these data were compiled in the relational database to form 1,226 records, one for each spit excavated for each TU.

Each artefact was recorded with full provenance details as described above as well as basic attributes. The final compiled relational database comprises 1226 records with 23 attributes making 28,198 pieces of information. This manner of recording allowing fine-grained filtering across all attributes and cross tabulation to identify patterns in the data.

Artefact catalogue

Field Name	Data Type	Description
Artefact_ID	AutoNumber	Index and link field
Provenance_ID	Number	Link to Provenance table details for this artefact
Count	Number	1 per artefact for XTAB purposes
Length	Number	Maximum length in any plane to nearest mm
Width	Number	Maximum width perpendicular to length to nearest mm
Thickness	Number	Maximum thickness perpendicular to both length and width to nearest mm
Weight	Number	to nearest 0.1 gram
Raw material	Text	WIT (Indurated Mudstone/Tuff); Silcrete; quartz; Quartzite; Petrified Wood; Igneous; Metamorphic
Type	Text	Technological type distinct from implement typology
Implement	Text	Implement type generally following Holdaway & Stern
MLWR	Yes/No	Presence of macroscopically visible use wear or residue
Cortex	Text	10% class: 0-20%, 10-20%, on dorsal if flake or broken flake, or body if other artefact
Damage	Yes/No	presence of modern damage evident in fresh broken surface
Comment	Text	

Figure 6. Artefact catalogue table fields

Artefacts were recorded in an ACCESS database and trends in size and morphology were explored by cross-tabulation in ACCESS and EXCEL, modal trends and some basic descriptive statistics.

Non-artefactual stone fragments were common and were retained in clearly labelled bags without entry into the database with the exception of silcrete gravel due to its interpretative potential.

3 Assemblage structure

3.1 Artefact numbers

A total of 575 flaked stone artefacts were recovered from a total of 315 excavated Test Units (TU) test pits, each 50 cm by 50 cm dug in spits to the base of the A horizon soil. A total of 35 shattered fragments of artefact raw material were present. 29 silcrete fragments showed typically dimpled detachment surfaces indicative of heat initiated force from within the stone rather than from the margin of the stone. Six shattered fragments of IMT were present showing heat crazing cracks and twisted heat initiated fracture surfaces. A total of 15 silcrete natural gravel fragments were recovered alongside artefacts in several sites.

The spatial arrangement of artefacts is described in section 4.

3.2 Raw Materials

Silcrete is the dominant raw material at three quarters of the assemblage (Table 1). The significantly higher proportion by weight is due to a number of large silcrete artefacts in northern sites as well as the higher specific gravity of silcrete over some other raw materials such as IMT. IMT is less common, but ubiquitous indicative that it serves as a raw material of choice alongside silcrete, but probably less common due to more limited access to IMT cobbles.

Silcrete is a common raw material for Aboriginal artefact manufacture (Photograph 2). It is a highly siliceous metamorphosed sediment occurring within cobble beds of the Hunter River as well as in terrestrial cobble sources derived from older river beds either close to the Hunter River, such as at Anambah (Photograph 1), or more distant from the river, such as near Farley Waste Water Treatment Works in the Wentworth Swamp, 5 km south of the study area (HWC 2014).

Indurated mudstone/tuff (Photograph 3), a sedimentary rock so-called due to the lack of reliable distinction that can be made between the origins of the constituent grains (Hughes et.al. 2010), is a common raw material type throughout the Hunter Valley derived from river cobbles. Typically silcrete and IMT are co-dominant in Hunter Valley assemblages.

Quartz cores (Photograph 4) and detached pieces were present in many sites including bipolar cores made on quartz pebbles. Small numbers of quartzite, chert and petrified wood (Photograph 5) were also present, as is typical of Hunter Valley assemblages.

Table 1. Artefact Raw Material Proportions (excluding shatter and gravel)

Raw Material	Count	% Count	Total Weight (g)	% Weight
Silcrete	429	74.6%	4196.9	89.90%
IMT	128	22.3%	340.0	7.28%
Quartz	11	1.9%	101.3	2.17%
Quartzite	4	0.7%	28.4	0.61%
Chert	2	0.3%	1.6	0.03%
Petrified Wood	1	0.2%	0.3	0.01%
Grand Total	**575**	**100.0%**	**4668.5**	**100.00%**

DRAFT

Photograph 2. Silcrete Artefacts and Gravel
Source: TU 15 Spit 1; conjoins mid right (core and blade) and top right; gravel bottom left; Photo credit: Anna Baker

Photograph 3. IMT Cores
Source: Left to right:TU289 Spit 2, TU290 Spit 2, TU250 Spit 3; Photo credit: Anna Baker

Photograph 4. Quartz Cores
Source: TU229Spit 1; TU179 Spit 2: Photo credit: Anna Baker

Photograph 5. Petrified Wood, Quartzite and Chert Artefacts
Source: TU7, TU8, TU227; Photo credit: Anna Baker

DRAFT

3.3 Artefact Types

The classification of artefact types followed a classic technological approach (Holdaway and Stern 2004).

The assemblage is made up of flakes (262), flake fragments (222), flaked pieces (57), retouched artefacts (15), cores (19) and shattered fragments (35) (Table 2). A total of 13 backed artefacts are present including incomplete specimens in the process of manufacture and backed fragments representing manufacture errors, breakage during use or post depositional damage. Both the classic asymmetric "Bondi point" and symmetric "geometric" forms are present as well as specimens which cannot be so classified. The evidence is indicative of backed artefact manufacture on site. This is consistent with nearby sites and Holocene open stone artefact sites generally in the Hunter Valley. One end scraper retouched flake tool is present. There is no major distinction evident between silcrete and IMT use. Generally equivalent proportions of artefact types and implements are made on each.

Table 2. Artefact Types by Raw Material

	Raw material						
Type	**Implement**	**Silcrete**	**IMT**	**Quartz**	**Chert**	**Quartzite**	**Petrified Wood**	**Total**
Flake		184	69	5	1	3		**262**
Conesplit flake		13	4					**17**
Proximal flake		52	8			1		**61**
Medial flake		43	9		1			**53**
Distal flake		69	21	1				**91**
Core		11	5	3				**19**
Retouched flake		1						**1**
	Backed artefact	2						**2**
	Backed artefact - Bondi point	6						**6**
	Distal broken Bondi point		1					**1**
	Backed artefact fragment	1						**1**
	Geometric microlith		1					**1**
	Incomplete backed artefact	1						**1**
	Proximal backed artefact	1						**1**
	End scraper		1					**1**
Flaked piece		45	9	2			1	**57**
Shatter		29	6					**35**
Total		**458**	**134**	**11**	**2**	**4**	**1**	**610**

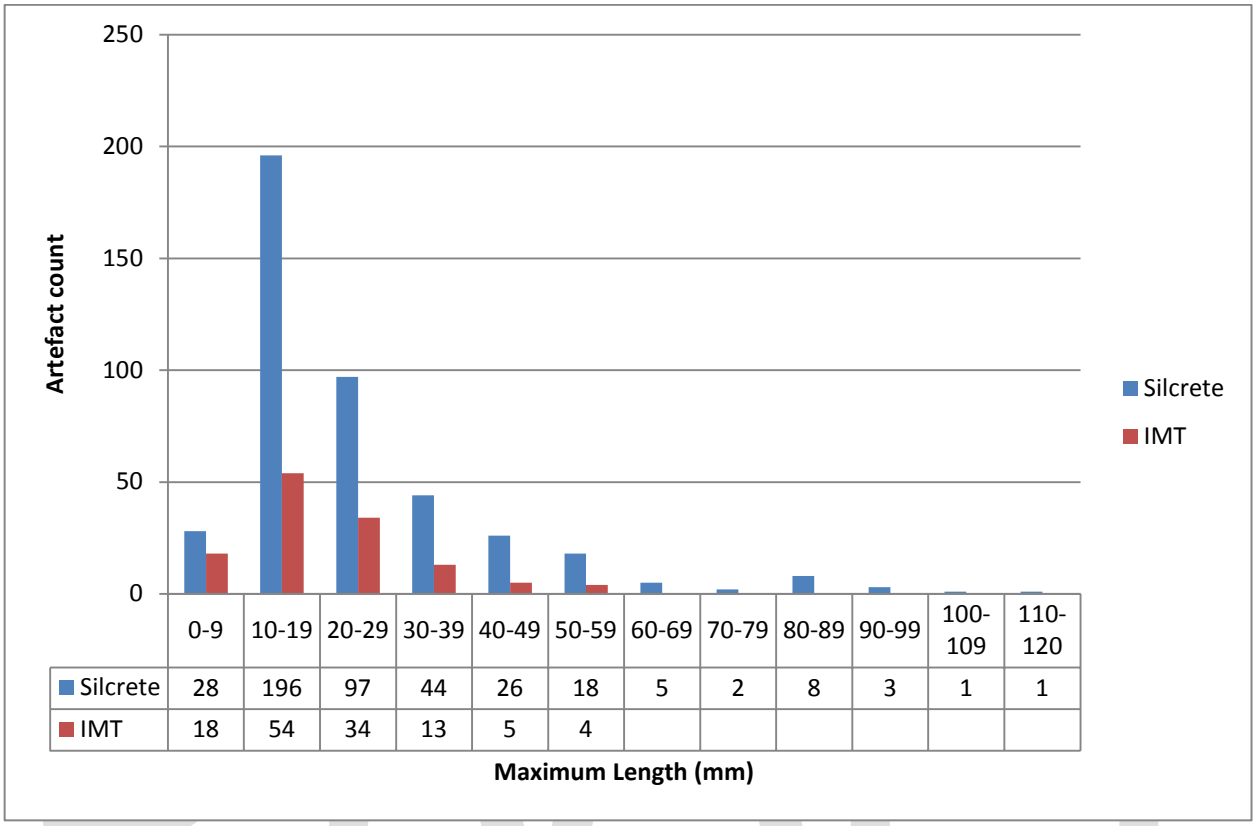
3.4 Artefact Size

Most artefacts were less than 30 mm in size (Figure 7). Fine debitage less than 10 mm was relatively rare. Figure 7 shows the size modal distribution for the two most common raw materials. There are proportionally a greater number of smaller silcrete than IMT artefacts, reflecting its greater brittleness and therefore greater propensity to break. Broken flake fragments make up 37% of the total number of silcrete artefacts compared to 19% for IMT. The larger artefacts more than 70 mm in size are all silcrete

DRAFT

which may be explained by the movement of local silcrete cobbles or cobble fragments to the site. Observations by the author suggest IMT cobbles of high flaking quality typically present in assemblages are less common than silcrete in Hunter Valley cobble beds, although no data have been collected.

Artefact characteristics are best explained by comparing between areas of the test excavation. This is described in section 4.



	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-120
Silcrete	28	196	97	44	26	18	5	2	8	3	1	1
IMT	18	54	34	13	5	4						

Figure 7. Artefact Size: Silcrete and IMT

3.5 Flakes

Flakes from a number of sites selected on the basis of abundance were subject to detailed recording and the results discussed in section 4. Analysis of flakes is less informative in a highly segmented test excavation sample and better suited to contiguous open area excavated samples. A qualitative observation was that several classic blade flakes with platform preparation were observed but that no concentrations of these could be observed.

3.6 Cores and Retouched Artefacts

A total of 34 objective pieces were identified, made up of 19 cores and 15 retouched artefacts, including broken fragments thereof.

Cores are relatively large compared with those recently analysed from McKeachies Run located in a similar landscape close to the Hunter River 3 km to the east. A key interpretive difference is the lack of exhaustive reduction at Anambah compared to McKeachies Run where silcrete was also locally accessible.

A conjoin set is identified SAC8 TU15 where a blade flake with overshot termination conjoins a blade core and two flakes conjoin (Photograph 2 above). The present of these conjoins and additional artefacts of the same silcrete the same test pit indicates a larger conjoin set present in the adjacent unexcavated ground.

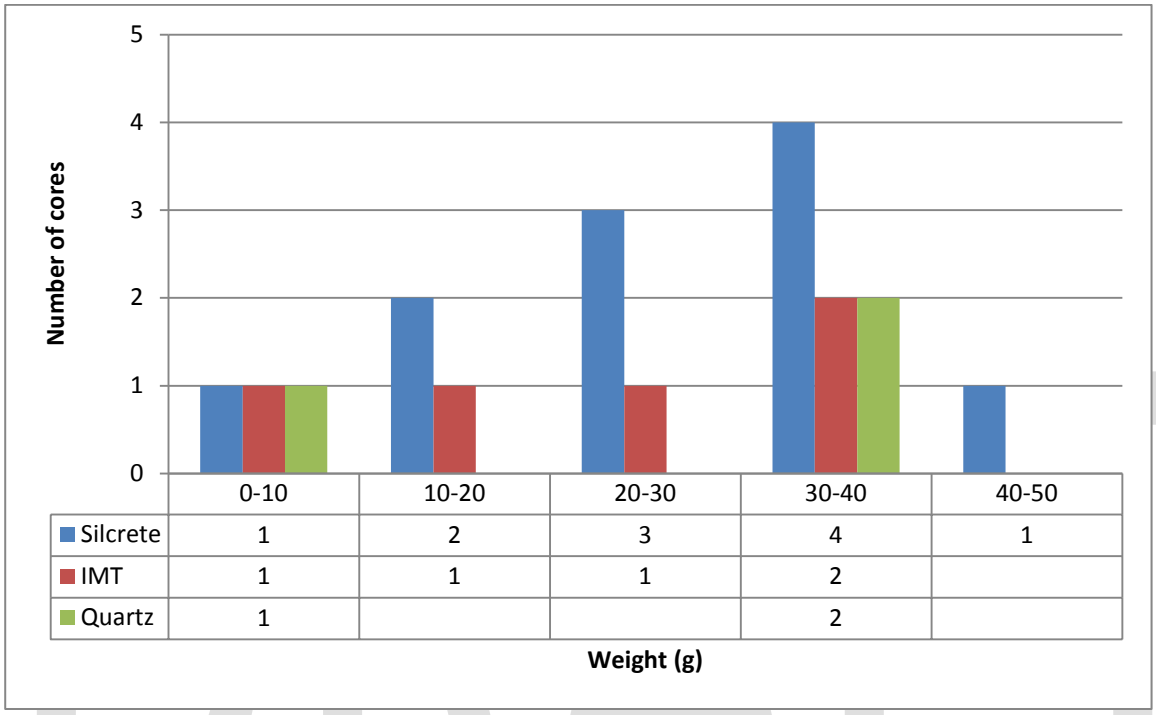


Figure 8. Anambah Core Size by Raw Material

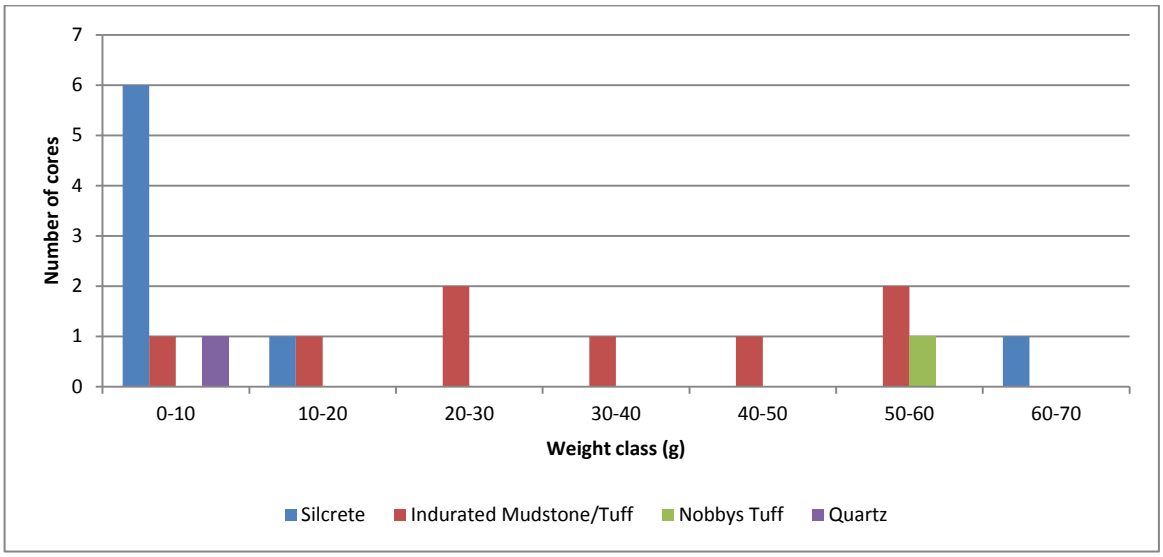


Figure 9. McKeachies Run Core Size by Raw Material

A total of 13 backed artefacts were identified in various stages of manufacture and completeness in the assemblage (Photograph 6). These included seven Bondi points, one geometric microlith and five backed artefacts where further detailed classification could not be achieved.

Photograph 6. Bondi Point backed artefacts and associated silcrete cores

Source: TU297 Spit 2; Backed artefact at top; Photo credit: Anna Baker

Two other retouched artefacts were identified including one end scraper and one non-descript retouched flake with two scars off the distal end of the ventral face of a rough flake.

4 Spatial Patterning of Artefacts

4.1 Artefacts by Site

Different numbers of test pits were dug at each PAD or site. The raw numbers of artefacts, shattered fragments and silcrete gravel fragments are given in Table 3 followed by a comparison of artefact densities across sites. These data show a greater number of recovered artefacts and greater densities of artefacts in the northern part of the study area. Artefacts are absent from several PADs in the south eastern part of the study area (Figure 10).

For the benefit of comparing with maps in the main report the PAD name and the site name are both referred to in the tables and chart below (Table 3, Table 4, Figure 11).

These data reveal the absence of artefact from several PADs in the south west (PADs 6,7,8,9,10) and low numbers surrounding sites. In contrast, high numbers of artefacts were recovered in the northern area.

Table 3. Artefacts, Shatter and Silcrete Gravel by Site

Site name	PAD name	Artefacts	Shatter	Silcrete Gravel
SAC17	PAD01	42	1	
IF13	PAD02	2		
SAC29	PAD03	5		
SAC30	PAD04	1	3	
IF14	PAD05	2		
PAD06	PAD06	0		
PAD07	PAD07	0		
PAD08	PAD08	0		
PAD09	PAD09	0		
PAD10	PAD10	0		
SAC22	PAD11	15	1	
SAC13	PAD12	5		
SAC23	PAD13	21	1	
IF15	PAD14	1		
SAC14	PAD15	14	1	
SAC15	PAD16	34	2	
IF16	PAD17	0	1	
SAC16	PAD18	2		
SAC07	PAD19	39	2	4
SAC05	PAD20	105	1	
SAC01	PAD21	13	2	
SAC06	PAD24	32	1	4
SAC09	PAD25	22	2	
SAC10	PAD26	16		2
SAC11	PAD27	137	10	1
SAC08	PAD28	67	6	4
Total		575	35	15

DRAFT

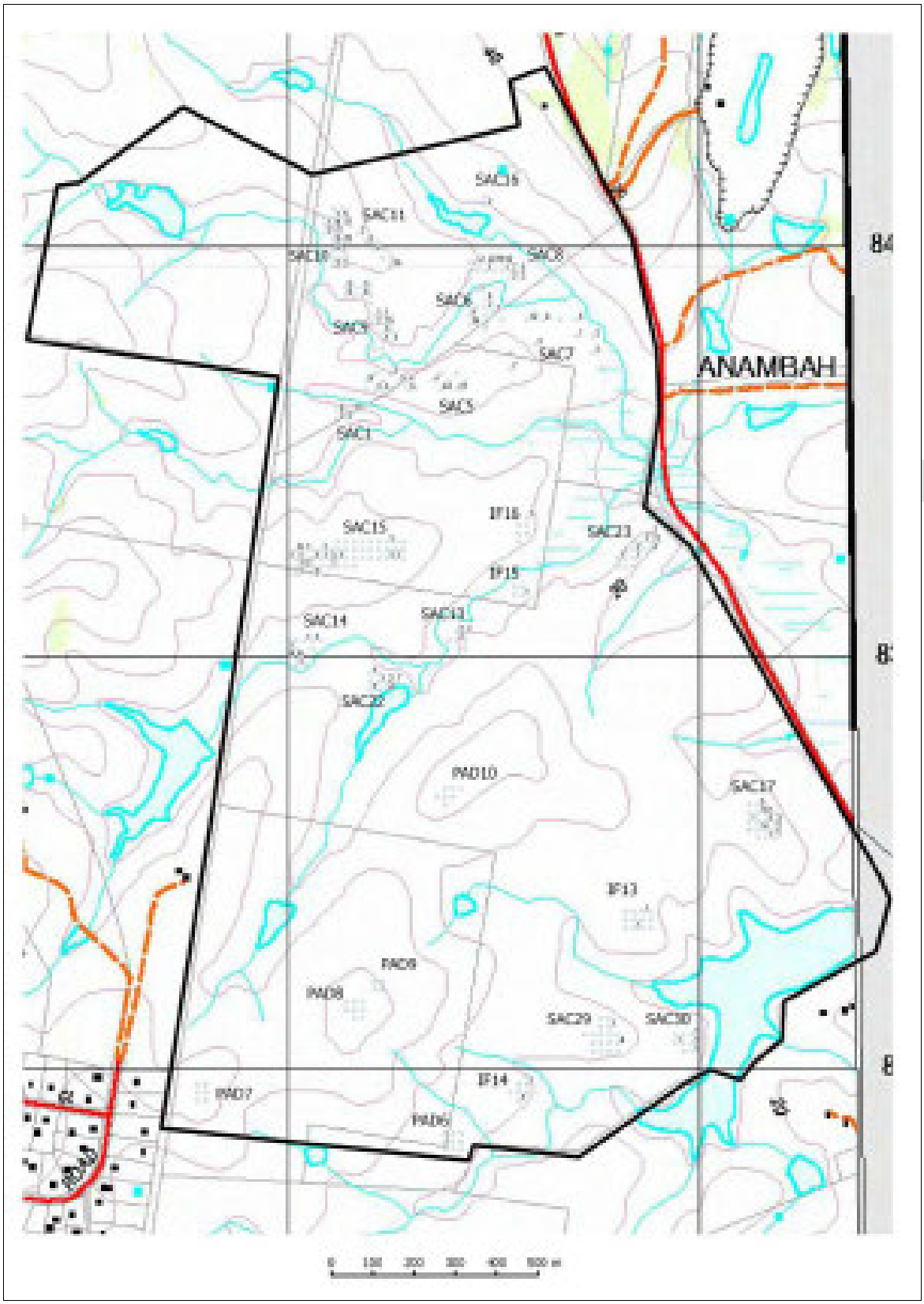


Figure 10. Artefact totals by Site

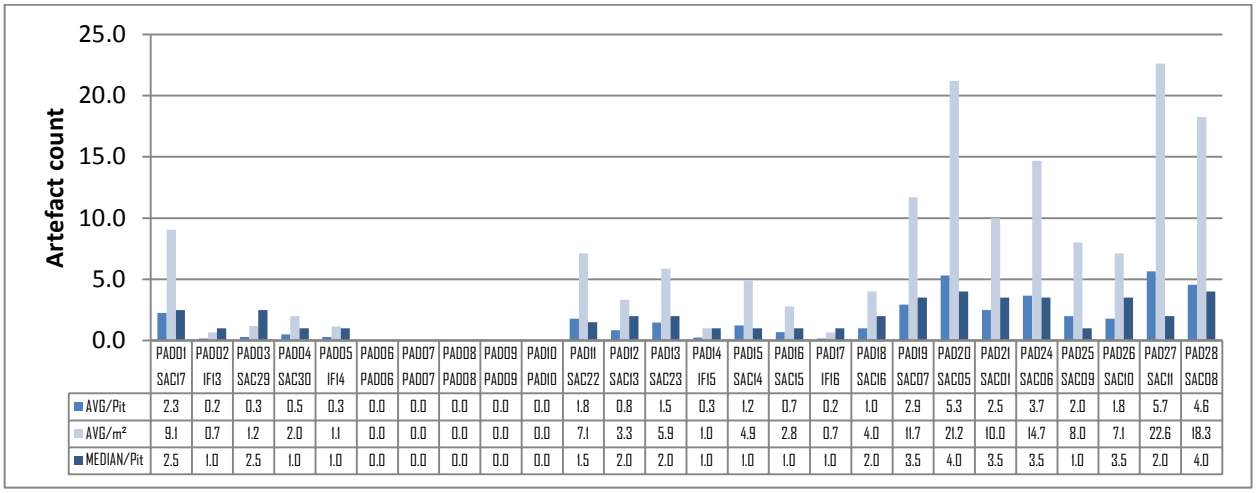
Higher numbers of artefacts are correlated with sites where more test pits were dug and a more appropriate comparative statistic to eliminate this bias is the measure of density per test pit (0.25 m²) and density per 1 m² (Table 4). This table provides counts of all artefacts and shattered artefactual raw material per pit.

The data reveals the greatest number of artefacts per pit occurs in the north of the study area, with 70 artefacts recovered from a single 0.25 m² pit in site SAC11, a site which also recorded the highest artefact density. An exception to this trend is site SAC17 located in the south east near a silcrete cobble source. However, high numbers of artefacts in a few pits can skew the average for a site that actually has a majority of pits with few artefacts. A median "middle" value can provide a better measure of central tendency. Median values are noticeably higher in the northern sites correlating with the higher densities. This indicates a higher likelihood of finding higher numbers of artefact in any one area excavated within the site.

Table 4. Artefact Densities for Sites and PADs

SITE	PAD	PITS	Area m²	ARTEFACTS (and shatter)	AVG/Pit	MEDIAN/ Pit	MAXIMUM/ Pit	AVG/m²
SAC17	PAD01	19	4.75	43	2.3	2.5	14	9.1
IF13	PAD02	12	3	2	0.2	1.0	1	0.7
SAC29	PAD03	17	4.25	5	0.3	2.5	4	1.2
SAC30	PAD04	8	2	4	0.5	1.0	1	2.0
IF14	PAD05	7	1.75	2	0.3	1.0	1	1.1
PAD06	PAD06	9	2.25	0	0.0	0.0	0	0.0
PAD07	PAD07	6	1.5	0	0.0	0.0	0	0.0
PAD08	PAD08	8	2	0	0.0	0.0	0	0.0
PAD09	PAD09	4	1	0	0.0	0.0	0	0.0
PAD10	PAD10	7	1.75	0	0.0	0.0	0	0.0
SAC22	PAD11	9	2.25	16	1.8	1.5	7	7.1
SAC13	PAD12	6	1.5	5	0.8	2.0	2	3.3
SAC23	PAD13	15	3.75	22	1.5	2.0	11	5.9
IF15	PAD14	4	1	1	0.3	1.0	1	1.0
SAC14	PAD15	13	3.25	16	1.2	1.0	6	4.9
SAC15	PAD16	52	13	36	0.7	1.0	11	2.8
IF16	PAD17	6	1.5	1	0.2	1.0	1	0.7
SAC16	PAD18	2	0.5	2	1.0	2.0	2	4.0
SAC07	PAD19	14	3.5	41	2.9	3.5	12	11.7
SAC05	PAD20	20	5	106	5.3	4.0	44	21.2
SAC01	PAD21	6	1.5	15	2.5	3.5	6	10.0
SAC06	PAD24	9	2.25	33	3.7	3.5	14	14.7
SAC09	PAD25	12	3	24	2.0	1.0	15	8.0
SAC10	PAD26	9	2.25	16	1.8	3.5	8	7.1
SAC11	PAD27	26	6.5	147	5.7	2.0	70	22.6
SAC08	PAD28	16	4	73	4.6	4.0	23	18.3

DRAFT



	PAD01 SAC17	PAD02 IF13	PAD03 SAC29	PAD04 SAC30	PAD05 IF14	PAD06 PAD06	PAD07 PAD07	PAD08 PAD08	PAD09 PAD09	PAD10 PAD10	PAD11 SAC22	PAD12 SAC13	PAD13 SAC23	PAD14 IF15	PAD15 SAC14	PAD16 SAC15	PAD17 IF16	PAD18 SAC16	PAD19 SAC07	PAD20 SAC05	PAD21 SAC01	PAD24 SAC06	PAD25 SAC09	PAD26 SAC10	PAD27 SAC11	PAD28 SAC08
AVG/Pit	2.3	0.2	0.3	0.5	0.3	0.0	0.0	0.0	0.0	0.0	1.8	0.8	1.5	0.3	1.2	0.7	0.2	1.0	2.9	5.3	2.5	3.7	2.0	1.8	5.7	4.6
AVG/m²	9.1	0.7	1.2	2.0	1.1	0.0	0.0	0.0	0.0	0.0	7.1	3.3	5.9	1.0	4.9	2.8	0.7	4.0	11.7	21.2	10.0	14.7	8.0	7.1	22.6	18.3
MEDIAN/Pit	2.5	1.0	2.5	1.0	1.0	0.0	0.0	0.0	0.0	0.0	1.5	2.0	2.0	1.0	1.0	1.0	1.0	2.0	3.5	4.0	3.5	3.5	1.0	3.5	2.0	4.0

Figure 11. Artefact Densities by Site/PAD

4.2 Variation with Depth

The vertical distribution of sites with more than 10 artefacts was analysed. The general pattern was for most artefacts to occur in spit two but some sites revealed an even vertical distribution and many site varied significantly from this trend. The degree of variation suggests wildly different trends which might be expected given the expectation for bioturbation and modern disturbance to create a single context topsoil deposit in Hunter Valley duplex soils (Dean Jones and Mitchell 1993).

4.3 Northern, Middle and Southern Site-Groups

Strong patterns of spatial differentiation emerge when comparing artefact frequencies and artefact types between different parts of the study area. The sites and PADs displayed in the Figure 11 chart above may be generally divided into three groups: northern, middle and southern along landscape lines, each following drainage lines and adjacent slopes and crests as follows (Figure 12):

- northern group: north of the SAC15 ridge comprising SAC16, SAC7, SAC5, SAC1, SAC6, SAC9, SAC10, SAC11 and SAC8;
- middle group: north of the PAD10 ridge and south of the SAC15 ridge comprising SAC22, SAC13, IF15, SAC14, SAC15 and IF16; and
- southern group: south east of the PAD10 ridge: SAC17, IF13, SAC29, SAC30, IF14 and PADs 6-10.

Comparable number of test pits were dug in each area, but the differences in artefact frequencies are significant with 75% of artefacts recovered from the northern area (Table 5).

DRAFT

Table 5. Artefact Frequency within each Site Group

Site group	Number of Test Pits	% of Test Pits	Number of Artefacts (and shatter)	% Artefacts (and shatter)
Northern	114	36%	457	75%
Middle	105	33%	97	16%
Southern	97	31%	56	9%

The comparable proportionate frequency of artefact types does not suggest any difference in toolkits. Retouched flakes and blade flakes occur in each area suggesting that backed artefact manufacturing is occurring in each site group. Activity in the southern area is most focused on site SAC17 located closest to a silcrete cobble raw material source, although the site lacks large primary reduction flakes. Similarly the northern group is also located close to a silcrete cobble raw material source (Figure 12).

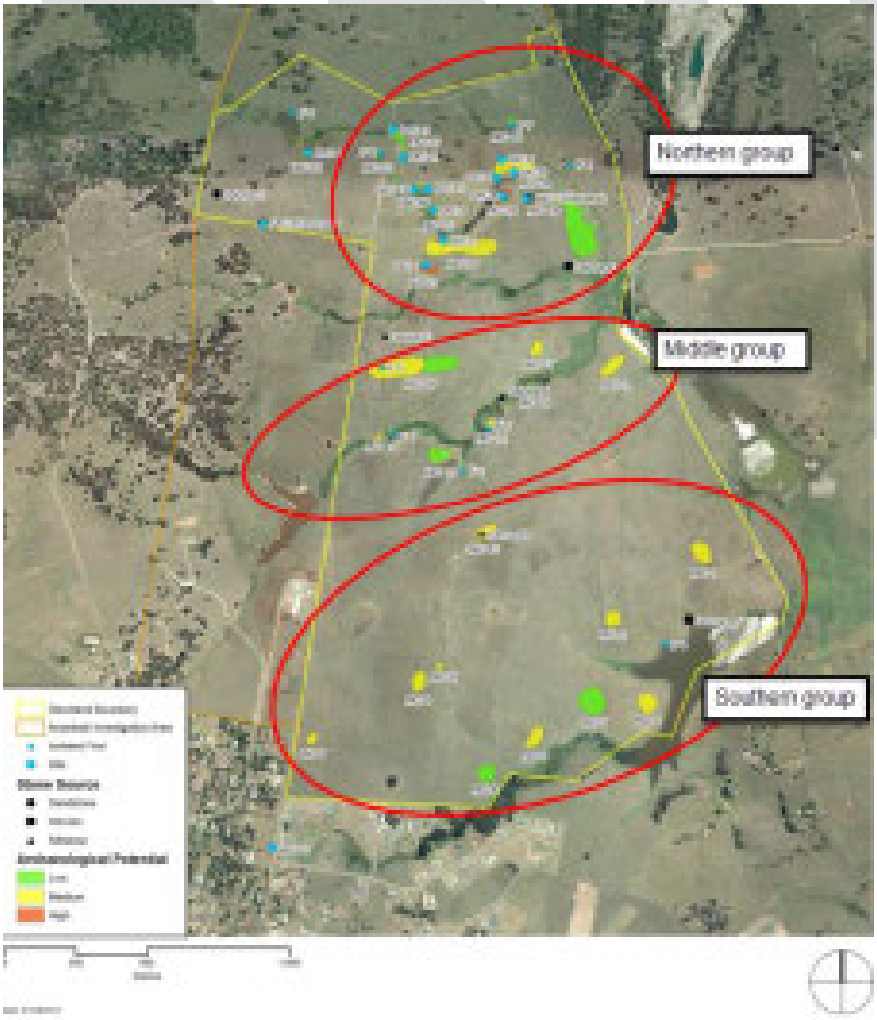


Figure 12. Location of Site Groups displaying different artefact density characteristics
Source: GML excavation report in preparation

No notable difference is found between the three group areas in the amount of cortex found on flakes (Table 6), which is counter intuitive, given that higher amount of artefacts in the northern sites might be linked to greater primary reduction of the artefact cobble source and therefore a higher proportion of cortical flakes (Photograph 7). Primary reduction is indicated in the weight statistics, with larger artefacts present in the north (Table 7) showing signs of heavy percussion reflecting the initial reduction stage of "quartering" the cobble to create manageable raw material pieces for use or further reduction.

Table 6. Flake Cortex Comparison

Cortex	Northern group	Middle group	Southern group	All Study Area
0%	84%	85%	86%	84%
1-25%	7%	1%	2%	5%
26-50%	2%	7%	6%	3%
51-75%	3%	3%	2%	3%
76-100%	5%	4%	4%	5%
Grand Total	100%	100%	100%	100%

Table 7. Weight of artefacts by Site Group

Weight class (g)	Northern group	Middle group	Southern group	Total
0-100 g	449	96	56	**601**
100-200 g	4	1		**5**
200-300 g	2			**2**
300-400 g	1			**1**
500-600 g	1			**1**
Total	**457**	**97**	**56**	**610**

DRAFT

Photograph 7. Primary Reduction Flaked Piece with smooth Terrestrial Cobble Cortex

Source: SAC5 TU108 Spit 1; Photo credit: Neville Baker

An analysis of flake to core ratios between the three areas also does not distinguish the northern area as having more intensive flaking of each core, although the small sample sizes do not make for robust results.

Table 8. Flake to Core Rations for each Site Group

	Northern group	Middle group	Southern group
Cores	14	2	3
***Flakes**	271	57	27
Core: Flake Ratio	19.4	28.5	9.0

*Note: "Flakes" for this table includes whole flakes, proximal flak fragments, conesplit flakes and retouched flakes.

The cores themselves do differ between areas, although again the samples are not large and hence the results are not robust. The southern group of sites does not include any silcrete cores and only has quartz and IMT cores made on pebble. In contrast the northern group of sites includes many larger

silcrete and IMT cores made on flakes, pebbles and heavily worked pieces where the original core body form cannot be determined.

Table 9. Core Body and Raw material differences between Site Groups

Raw Material and Core Body	Northern group	Middle group	Southern group	Total
IMT	4	1	1	**6**
Flake	2			**2**
Indeterminate	1			**1**
Pebble	1	1	1	**3**
Quartz		1	1	**2**
Indeterminate		1		**1**
Pebble			1	**1**
Silcrete	10	1		**11**
Flake	5			**5**
Indeterminate	3	1		**4**
Shatter	2			**2**
Total	**14**	**3**	**2**	**19**

4.4 Landform

Assigning landform attributes for the purpose of distinguishing landscape variation is fraught with difficulty is not completed in the field in accordance with the Australian standard methodology (Speight 2009). Each site was attributed a very basic morphological type in the database: crest, slope, drainage line based on interpretation of supplied coordinate data against a topographic map and the "Landform Type" mapped in the GML excavation report. This was necessary due to the gaps in landform field data supplied for the analysis. A general "Ridge" attribute was used where "Crest" had been mapped as many test pits extended across both, and the used of "Ridge" generally indicated elevated landform.

The research question was "are there differences between landforms?" The analyses to investigate this question depend on what the analyst thinks the answers should look like. This analysis assumes that a difference might be seen in preference for one landform over another reflecting greater numbers of artefacts (Table 10) or proportions of difference artefact types (Table 11). Sites within each landform unit are listed to show the great variation in the data.

More sites with higher artefact densities occur on slopes. A series of PADs (PADs 7-10) in the southern groups of sites were excavated on ridges with no artefacts found, although sites on ridges closer to major confluences had higher densities. An inspection of the actual location of sites with average densities over 5/m² indicate that are all on elevated ground close to confluences and that these landform characteristics are not reliably translated in to broad categories based on desktop attribution of specific morphological type attributes.

Comparison of artefact types by landform (Table 11) is unreliable due to the disproportionately low number of test pits due very close to the drainage line. However, backed artefacts occur in each landform type and there is no apparent basis for reliably distinguishing Aboriginal activity at a general level between the identified landform divisions here.

DRAFT

Table 10. Artefact Frequency by Landform Type

Landform	Site name	PITS	Area m²	ARTEFACTS	AVG/Pit	MEDIAN/Pit	MAXIMUM/Pit	AVG/m²
Drainage line	IF15	4	1	1	0.3	1	1	1.0
	SAC01	6	1.5	15	2.5	3.5	6	10.0
	SAC13	6	1.5	5	0.8	2	2	3.3
	SAC14	13	3.25	16	1.2	1	6	4.9
	SAC16	2	0.5	2	1.0	2	2	4.0
Drainage line Total		**31**	**7.75**	**39**	**1.4**		**6.0**	**5.0**
Ridge	PAD07	6	1.5	0	0.0	0	0	0.0
	PAD08	8	2	0	0.0	0	0	0.0
	PAD09	4	1	0	0.0	0	0	0.0
	PAD10	7	1.75	0	0.0	0	0	0.0
	SAC05	20	5	106	5.3	4	44	21.2
	SAC15	52	13	36	0.7	1	11	2.8
	SAC17	19	4.75	43	2.3	2.5	14	9.1
	SAC23	15	3.75	22	1.5	2	11	5.9
	SAC29	17	4.25	5	0.3	2.5	4	1.2
Ridge Total		**148**	**37**	**212**	**1.4**		**44.0**	**5.7**
Slope	IF13	12	3	2	0.2	1	1	0.7
	IF14	7	1.75	2	0.3	1	1	1.1
	IF16	6	1.5	1	0.2	1	1	0.7
	PAD06	9	2.25	0	0.0	0	0	0.0
	SAC06	9	2.25	33	3.7	3.5	14	14.7
	SAC07	14	3.5	41	2.9	3.5	12	11.7
	SAC08	16	4	73	4.6	4	23	18.3
	SAC09	12	3	24	2.0	1	15	8.0
	SAC10	9	2.25	16	1.8	3.5	8	7.1
	SAC11	26	6.5	147	5.7	2	70	22.6
	SAC22	9	2.25	16	1.8	1.5	7	7.1
	SAC30	8	2	4	0.5	1	1	2.0
Slope Total		**137**	**34.25**	**359**	**2.6**		**70.0**	**10.5**

DRAFT

Table 11. Artefact Types by Landform

Type	Implement	Drainage line	Ridge	Slope
Conesplit flake			5	12
Core			5	14
Distal flake		3	41	47
Flake		17	88	157
Medial flake		2	24	27
Proximal flake		8	19	34
Retouched flake				1
	Backed artefact	1		
	Backed artefact - Bondi point			1
	Backed artefact Bondi		1	
	Backed artefact fragment			1
	backed flake			1
	Bondi point		1	3
	Distal broken Bondi point	1		
	End scraper	1		
	Geometric microlith		1	
	Incomplete backed artefact			1
	Proximal backed artefact		1	
Shatter		4	5	26
Flaked piece		2	21	34
Gravel				15
Total		**39**	**212**	**374**

DRAFT

4.5 Soil Association

The Anambah test excavations were conducted across the boundaries of three soil landscapes: Hunter in the lower-lying areas of the south east, Branxton through the central north-south spine, and Rothbury in the north western portion of the study area. Soil landscapes were assigned to each site in the database on the basis of GIS mapping of an OEH soil landscape shapefile over the TU plots.

On the basis of test pits excavated in total, the Rothbury soil landscape has a rounded average of 17 artefacts per 1 m² compared to 3 per 1 m² and 5 per 1 m² for Branxton and Hunter soil landscapes respectively (Table 12).

These data show a strong association of high density sites with the Rothbury Soil landscape. The Rothbury soil landscape generally correlates with the northern group of sites discussed in section 4.2 as intuitively determined from comparative site density data.

Table 12. Soil Landscape Site Artefact Density Statistics

Soil Landscape	Site name	PITS	Area m²	ARTEFACTS	AVG/Pit	MEDIAN/Pit	MAXIMUM/Pit	AVG/m²
Rothbury	SAC01	6	1.5	15	2.5	3.5	6	10.0
	SAC05	20	5	106	5.3	4	44	21.2
	SAC06	9	2.25	33	3.7	3.5	14	14.7
	SAC08	16	4	73	4.6	4	23	18.3
	SAC09	12	3	24	2.0	1	15	8.0
	SAC10	9	2.25	16	1.8	3.5	8	7.1
	SAC11	26	6.5	147	5.7	2	70	22.6
	SAC16	2	0.5	2	1.0	2	2	4.0
Rothbury Total		**100**	**25**	**416**	**4.2**		**70.0**	**16.6**
Branxton	IF13	12	3	2	0.2	1	1	0.7
	IF14	7	1.75	2	0.3	1	1	1.1
	IF15	4	1	1	0.3	1	1	1.0
	IF16	6	1.5	1	0.2	1	1	0.7
	PAD06	9	2.25	0	0.0	0	0	0.0
	PAD07	6	1.5	0	0.0	0	0	0.0
	PAD08	8	2	0	0.0	0	0	0.0
	PAD09	4	1	0	0.0	0	0	0.0
	PAD10	7	1.75	0	0.0	0	0	0.0
	SAC07	14	3.5	41	2.9	3.5	12	11.7
	SAC13	6	1.5	5	0.8	2	2	3.3
	SAC14	13	3.25	16	1.2	1	6	4.9
	SAC15	52	13	36	0.7	1	11	2.8
	SAC22	9	2.25	16	1.8	1.5	7	7.1
Branxton Total		**157**	**39.25**	**120**	**0.8**		**12.0**	**3.1**
Hunter	SAC17	19	4.75	43	2.3	2.5	14	9.1
	SAC23	15	3.75	22	1.5	2	11	5.9
	SAC29	17	4.25	5	0.3	2.5	4	1.2
	SAC30	8	2	4	0.5	1	1	2.0
Hunter Total		**59**	**14.75**	**74**	**1.3**		**14.0**	**5.0**

DRAFT

4.6 Raw Material Source Association

Three areas with visible silcrete cobbles were identified in the archaeological survey of the Anambah study area by GML archaeologists. The test excavations also revealed natural silcrete gravel fragments across the northern group of sites in the northern indicative of a more widely spread raw material source (Figure 13). This supports the view that higher artefact densities in the northern group of sites are associated with the natural occurrence of silcrete cobbles. No test pits were excavated within 200 m of the southern cobble source "A". The nearby site SAC17 does not show evidence of primary reduction nor have a predominance of silcrete artefacts.

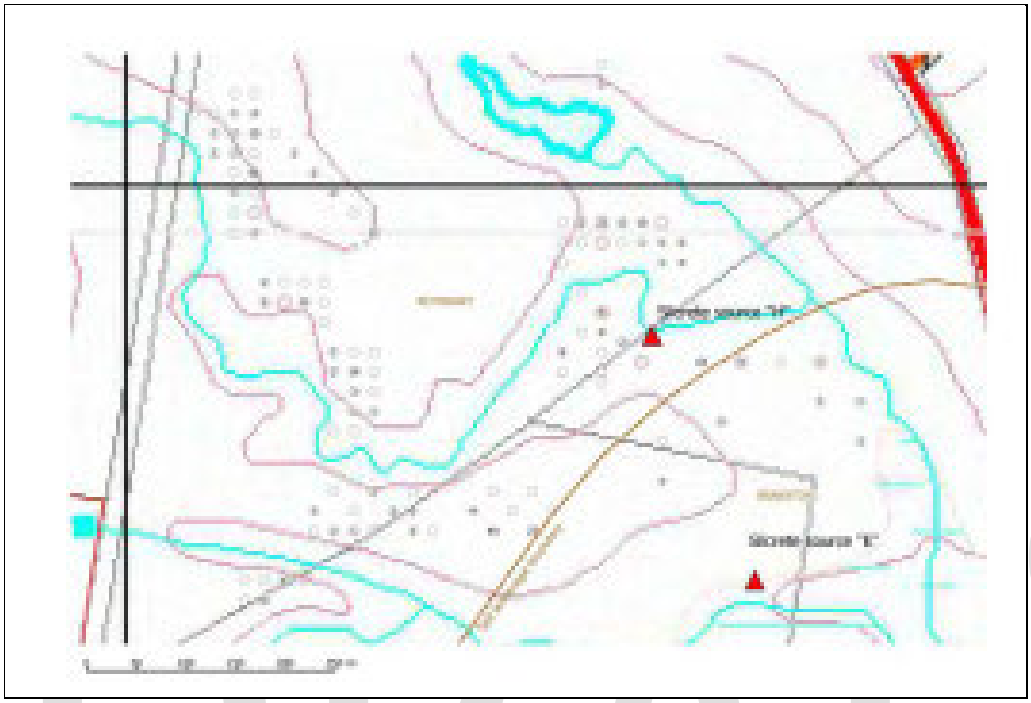


Figure 13. Northern Sites: Silcrete Artefacts, Sources and Gravel

Notes: LPI Greta 9132-1S second edition 1:25,000 topographic map base; Silcrete artefact frequency data shown at each TU location; Silcrete gravel TUs encircled in red; Silcrete source locations based on GML report Figure 3.2; OEH Soil landscape digital data

DRAFT

5 Research Design Questions

5.1 Introduction

The section succinctly answers the research design questions posed by GML based on the data and discussion presented above. The answers are based on the aggregated data, presented about, based on very small test pits widely spaced. The data and sampling is not well suited to providing definitive answers, but rather suggests where there might be potential for further investigation. The observations under each subheading below are made in light of Isaac's caution against "unrealistic attempts to squeeze too much blood from stone alone" (Isaac 1977:11).

5.2 Characteristics of archaeological deposits across the study area

5.2.1 Types and Densities of Archaeological Materials?

The study area is comprised of a typical Hunter Valley assemblage of predominantly silcrete and IMT flaked stone artefacts with the addition of a small proportion of large primary reduction flakes. Typical backed artefacts and associated manufacturing debitage occurs in all parts of the study area.

No artefacts were found in excavated areas in the south west, with artefact densities highest in the northern groups of sites associated with the Rothbury soil landscape and greater availability of silcrete raw material.

5.2.2 Variation with Depth?

Variation in artefact numbers between excavated spits is highly variable. At a very general level, about a third of artefacts occur in the upper 10 cm, half in the 10 to 20 cm level and the remainder below that within the A unit soil. However variation between site and test pits that this could be considered an entirely artificial construct from aggregated data.

5.2.3 Variation with Landform?

Artefacts and all artefact types recorded occur in all landforms.

5.2.4 Variation within a Site?

The basic plotting of artefact counts within demonstrates constant variation between test pits within the sites as designated by GML and across the landscape. The use of the term "site" to describe groups of pits particularly in the northern groups of sites is fraught with difficulty given that the continuous distribution of artefacts can be anticipated.

5.2.5 Antiquity?

The presence of backed artefacts suggests a Holocene antiquity.

5.2.6 Stone Sources by Site?

Stone sources cannot be determined by site.

DRAFT

5.3 Interpretation of the Assemblage

5.3.1 Evidence of Spatial Patterning?

A pattern of higher density artefact distribution in the northern group of sites contrasting with an absence of artefact in the south west has been identified. Within sites there is strong variation in artefact numbers, with knapping floor concentrations evident in the north.

5.3.2 Timeframe for creation of Spatial Pattern?

Present evidence does not assist in distinguishing a timeframe for creation of the spatial patterning. Individual activity events in any one place may be days, months or centuries apart and develop over thousands of years.

5.3.3 Hill Slope Shade Analysis and Seasonality of Evidence?

The data may not be suited to reliable hill slope shade analysis results, however the data compiled for this study might be evaluated used by a GIS expert. A total coverage of the study area with test pits might be required for reliable results.

5.3.4 Evidence of Absence?

A consistent absence or paucity of evidence in the south western part of the study area indicates very rare use and more favoured activity locations amidst the network of creek junctions in the northern part of the study area.

5.3.5 Differentiating Tool Types and Activity Areas

Significant stone artefact concentrations occur in the northern groups of sites. The data suggest that many more will occur in unexcavated parts of this area. The test excavation sample cannot be used to distinguish where such activity may or may not occur apart from indicating that it occurs in the northern group of sites.

5.4 Can Landscape use be Interpreted?

5.4.1 Can the Archaeology inform views about Movement through the Valley?

Present evidence does not assist in distinguishing movement through the valley.

5.4.2 Can Group Size be Identified through the Archaeology?

Present evidence does not assist in distinguishing group size.

5.5 Interpretation in a Regional Context

The evidence contributes to an emerging picture of Aboriginal silcrete raw material source utilisation at the tidal limits of the Hunter River complementing the recent finds at McKeachies Run Aberglasslyn and Farley.

DRAFT

5.5.1 Raw Material Origin?

Silcrete originated most probably from local sources, although there is no way to distinguish local from nearby river gravel bed sources on the present evidence. IMT, quartz and other raw materials would likely have derived from local Hunter River gravel bed sources.

5.5.2 Assemblage Antiquity in Regional Context?

The evidence for Holocene activity is entirely consistent with regional archaeology.

5.5.3 Trade?

Present evidence does not suggest trade.

5.6 Areas for Conservation or Further Research?

5.6.1 Which Sites for Conservation?

Conservation may be warranted for those sites with high significance. While recommendations for conservation based on a range of cultural values is beyond the scope of this stone artefact analysis report, particular attention should be paid to the northern group of sites to determine if any warrant such a recommendation.

5.6.2 Which Sites have Research Potential?

Sites with research potential include SAC1, SAC5, SAC 6, SAC 7, SAC 8, SAC 9, SAC 10 and SAC 11.

The sites which occur in the north of the study area within or on the boundary of the Rothbury soil landscape, include evidence of primary reduction and high knapping concentrations indicative of a full range of reduction stages.

5.6.3 How should a Boundary be drawn around a Site?

The data point toward broader distributions of artefacts within and between the “sites” identified by GML. Density varies, but extensive artefact occurrence within 200 m of reliable water sources is anticipated.

5.6.4 Are Identifiable Places present within a Cultural Landscape?

Present evidence does not assist in distinguishing identifiable places within a cultural landscape.

DRAFT

6 Conclusions

Test pits have identified a contrast between a south western area with no archaeological evidence and a northern group of sites mainly associated with Rothbury soil landscape where there is abundant archaeological evidence of primary extraction of local terrestrial silcrete cobble sources and associated backed artefact manufacture. The test excavation evidence points to extensive artefact distributions in the middle to northern areas with artefact density highest in the northern area.

The northern group of sites offers the greatest conservation and research potential owing to the presence of relatively uncommon evidence of primary silcrete reduction. While no one site has distinctive archaeological quarrying evidence, the silcrete cobble sources should be considered quarry sites following the definition of Hiscock and Mitchell 1993 and any recommendation for site conservation should consider their inclusion with associated archaeological evidence.

The interpretation of the study area's archaeology should be approached cautiously at this stage, mindful of the nature of the original test excavation sample and aggregated data used in this analysis. While the general conclusions about the nature of the archaeology in the above paragraphs hold, any further interpretation to address the specific research design questions should be undertaken with caution. Interpretation may benefit from larger samples obtained in open area excavations during salvage.

DRAFT

Glossary

assemblage - the name given to encompass the entire collection of artefacts recovered by archaeologists, typically classified into diagnostic items used to describe the material culture.

backed - when one margin of a flake is retouched at a steep angle, and that margin is opposite a sharp edge. The steep margin is formed by bi-polar or hammer and anvil knapping.

backed artefact - a class of artefact employed by archaeologists to describe artefacts which are backed. Sometimes divided into *Elouera*, *Bondi point*, and *geometric microlith* implement forms.

bipolar - a flaking technique where the object to be reduced is rested on an anvil and struck. This process is identified by flakes with platform angles close to 90 degrees as well as apparent initiation from both ends. Some crushing may also be visible.

chert - a cryptocrystalline siliceous sedimentary stone.

conjoin analysis - the process of physically (re-)fitting artefacts back together.

core - an artefact which has technologically diagnostic features. Generally this class of artefact has only negative scars from flake removal, and thus no ventral surface, however, for the purposes of this research, core has been employed to encompass those artefacts which were technically flakes but served the function of a core i.e. the provider of flakes.

cortex - the weathered outer portion of a stone, often somewhat discoloured and coarser compared with the unweathered raw material.

Detached piece a piece of stone removed from another piece of stone (the "objective piece"). A term used in reference to artefacts derived from flaking processes and can include such types as flakes and flaked pieces.

flake - an artefact which has technologically diagnostic features and a ventral surface.

flaked piece - an artefact which has technologically diagnostic features but has no discernible ventral or dorsal surface and hence is unidentifiable as either a flake or a core.

heat shatter - stone which has been reduced by exposure to heat. This stone can be identified by a number of features which include among others discolouration, texture changes and pot-lidding.

indurated mudstone/tuff an sedimentary stone indurated with silica to form a siliceous stone suitable for flaking. Since Hughes et.al. 2011 the IMT is now the appropriate term for the characteristic stone with brown cortex available from Hunter River cobble beds as common in stone artefact sites throughout the Hunter Valley. The terms indurated mudstone and tuff have been used separately to describe this distinctive stone type present throughout the Hunter Valley stone.

knapping floor - a concentrated identifiable area where flaking (reduction) has taken place (also referred to as a reduction floor).

DRAFT

manuport -	an object which has been carried by humans to a site.
objective piece	a piece of stone from which another piece of stone has been detached – used in relation to artefacts, grouping together such types as cores and retouched flakes.
primary flake	the initial flake removals detached from a cobble, evident in the high proportion of cortex on the detached pieces.
quartz -	a crystalline form of silica.
raw material -	the kind of stone the artefacts were manufactured from.
reduction -	the process of removing stone flakes from another piece of stone. Generally this is performed by striking (hard hammer percussion) one rock with another to remove a flake.
retouch -	retouch is when a flake is removed after the manufacture of the original flake. This sequence can be observed when a flake scar is present and encroaches over the ventral surface and thus must have been made after the initial flake removal. Recorded whether retouch was absent or present on the artefact.
silcrete -	a silicified sedimentary stone, often with fine inclusions or grains in a cryptocrystalline matrix.
spit -	an excavation of fixed depth dug within a soil horizon or archaeological layer. For the present project the spit depth was 100 mm. The lower-most spit within the topsoil was terminated when clay was reached.
technology -	a form of artefact analysis which is based upon the knapping/ manufacturing process, commonly used to subsequently infer behaviour patterns, cultural-selection and responses to raw material or the environment.

DRAFT

References

Andrefsky, W. 2005 **Lithics: Macroscopic Approaches to Analysis** Second Edition, Cambridge University Press Cambridge

Baker, N. 1994 *Moffats Swamp Dune: Final Report on Archaeological Site Salvage, Testing and Artefact Analysis* Report to RZM Pty Ltd

Baker, N. 1997a *Archaeological Test Excavations at Landcom Project 12163.001, Bolwarra Heights Hunter Valley, NSW* Report to Atkinson and Tattersall Pty Ltd for Landcom (AMBS)

Baker, N. 1997b "Problems in Silcrete Artefact Identification" in A. English and N. Baker *Cumberland Plain Regional Archaeological Study Stage 1* Report to NPWS: AMBS

Clarkson, C. 2007 **Lithics in the Land of the Lightning Brothers** *Terra Australis 25* ANU Press Canberra

Cotterell, B. and J. Kamminga 1987 "The Formation of Flakes" **American Antiquity** 52: 675-708

Dean-Jones, P. and Mitchell, P.B 1993 *Hunter Valley Aboriginal sites assessment project: Environmental modeling for archaeological site potential in the Central Lowlands of the Hunter Valley*. Unpublished Report to New South Wales National Parks and Wildlife Service

Hiscock, P. and S. Mitchell 1993 **Stone Artefact Quarries and Reduction Sites in Australia: Towards a Type Profile** Australian Heritage Commission: Canberra

Holdaway, S. and N. Stern 2004 **A Record in Stone: The Study of Australia's Flaked Stone Artefacts** Museum Victoria and AIATSIS: Canberra

Hughes, P.J., P. Hiscock and A.Watchman 2011 "Terminological Debate in the Upper Hunter Valley: Indurated Mudstone versus Tuff" **Australian Archaeology** 72: 45-46

Hunter Water Corporation (HWC) 2014 *Aboriginal Heritage Impact Permit #1131144 Report: Aberglasslyn Stage 2 Wastewater Transport System Upgrade & Stage 3a Farley Wastewater Treatment Works Upgrade* Report to OEH

Isaac, G. 1977 "Squeezing Blood from Stones" in R.V.S. Wright (ed) **Stone Tools as Cultural Markers: Change, Evolution and Complexity** AIAS: Canberra

Mary Dallas Consulting Archaeologists (MDCA) 2004 *Aboriginal Archaeological Assessment Lots 80 and 81 I DP 611238, 11 in DP 1042562 and Portion 2 in DP 160043, Aberglasslyn, NSW* Report to Stockland Development Pty Ltd

MDCA 2008 P*artial Salvage of AB Campsite 1 (AHIMS #38-8-0866) at Oakhampton Road, Aberglasslyn, NSW* Report to Pulver Cooper and Blackley for Stockland Developments

McCarthy, F.D. 1976 **Australian Aboriginal Stone Implements** (2nd edition) Australian Museum Trust: Sydney

Speight, J.G. 2009 "Landform" in **Australian Soil and Land Survey Field Handbook** (3rd Edn) National Committee on Soil and Terrain, CSIRO Publishing: Melbourne

Steele, D. and M. Dallas 2003 *Aboriginal Archaeological Test Excavation of an Area of Potential Archaeological Deposit [NPWS 38-4-0677] within Lot 51 DP 840643* Aberglasslyn Road, Aberglasslyn Report to United Pacific Properties

DRAFT

Appendix A – Provenance and Artefact Catalogue

DRAFT

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
7	3	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	8	12	7	4	0.3	Petrified Wood	xFlaked piece		FALSE	0%	FALSE	
7	3	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	9	17	15	2	0.6	Silcrete	Flake		FALSE	0%	FALSE	
7	3	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	10	13	9	3	0.4	Silcrete	Proximal flake		FALSE	0%	FALSE	
7	3	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	11	14	9	2	0.3	ZQuartzite	Flake		FALSE	0%	FALSE	
7	3	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	12	14	8	2	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
13	1	358440	6383960.03		North	PAD28	SAC08	Rothbury	Slope	Medium												
13	2	358440	6383960.03		North	PAD28	SAC08	Rothbury	Slope	Medium												
13	3	358440	6383960.03		North	PAD28	SAC08	Rothbury	Slope	Medium												
13	4	358440	6383960.03		North	PAD28	SAC08	Rothbury	Slope	Medium												
14	1	358459.97	6383959.98		North	PAD28	SAC08	Rothbury	Slope	Medium												
14	2	358459.97	6383959.98		North	PAD28	SAC08	Rothbury	Slope	Medium												
14	3	358459.97	6383959.98	1	North	PAD28	SAC08	Rothbury	Slope	Medium	24	84	40	20	55.4	Silcrete	Flake		FALSE	76-100%	FALSE	
14	3	358459.97	6383959.98	1	North	PAD28	SAC08	Rothbury	Slope	Medium	25	70	59	50	174.7	Silcrete	Conesplit flake		FALSE	76-100%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	26	81	61	44	242.9	Silcrete	xFlaked piece		FALSE	26-50%	FALSE	amorphous lump with some fresh surfaces
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	27	46	38	27	48.3	Silcrete	xFlaked piece		FALSE	0%	FALSE	amorphous lump with some fresh surfaces
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	28	45	37	20	29.2	Silcrete	Core		FALSE	0%	FALSE	part of potentially conjoinable set which follows this record
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	29	51	34	10	22.1	Silcrete	Core		FALSE	0%	FALSE	part of potentially conjoinable set which follows this record
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	30	37	19	15	11.5	Silcrete	Core		FALSE	0%	FALSE	Conjoins to flake #31
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	31	47	14	10	4.7	Silcrete	Flake		FALSE	0%	FALSE	Conjoins to core #30
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	32	28	19	6	3.4	Silcrete	Flake		FALSE	0%	FALSE	Conjoins to flake #33
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	33	35	16	4	2.7	Silcrete	Flake		FALSE	0%	FALSE	Conjoins to flake #32
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	34	25	15	4	3	Silcrete	Flake		FALSE	0%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	35	30	18	3	2.4	Silcrete	Flake		FALSE	0%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	36	29	17	4	1.7	Silcrete	Distal flake		FALSE	0%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	37	31	17	4	2	Silcrete	Flake		FALSE	0%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	38	24	15	7	2	Silcrete	Proximal flake		FALSE	0%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	39	31	10	4	1.4	Silcrete	Distal flake		FALSE	0%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	40	20	11	7	1.4	Silcrete	Proximal flake		FALSE	0%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	41	24	17	3	0.9	Silcrete	Flake		FALSE	0%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	42	24	19	7	2.2	Silcrete	Distal flake		FALSE	26-50%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	43	24	11	7	1.5	Silcrete	Proximal flake		FALSE	1-25%	FALSE	step termination
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	44	21	10	3	0.6	Silcrete	Flake		FALSE	0%	FALSE	
15	1	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	45	16	14	3	0.5	Silcrete	Proximal flake		FALSE	0%	FALSE	step termination
15	2	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	46	73	53	32	122.4	Silcrete	Gravel		FALSE	26-50%	FALSE	
15	2	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	47	51	47	13	27.4	Silcrete	xFlaked piece		FALSE	26-50%	FALSE	
15	2	358480.05	6383960.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	48	46	39	20	29.3	Silcrete	xFlaked piece		FALSE	1-25%	FALSE	
15	3	358480.05	6383960.04		North	PAD28	SAC08	Rothbury	Slope	Medium												
16	1	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	49	55	42	18	43.7	Silcrete	xFlaked piece		FALSE	0%	FALSE	possibly gravel but fresh surfaces
16	1	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	51	41	27	11	9	IMT	Flake		FALSE	1-25%	FALSE	
16	1	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	52	30	14	9	3.1	Silcrete	Shatter		FALSE	0%	FALSE	
16	1	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	53	47	45	21	30.2	Silcrete	Shatter		FALSE	0%	FALSE	
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	54	83	57	11	67.2	Silcrete	Flake		FALSE	0%	FALSE	
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	55	47	25	18	23	IMT	Conesplit flake		FALSE	26-50%	FALSE	
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	56	47	28	6	6.58	Silcrete	Flake		FALSE	0%	FALSE	
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	57	37	24	8	6.3	Silcrete	Flake		FALSE	0%	FALSE	
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	58	20	17	3	0.8	Silcrete	Shatter		FALSE	0%	FALSE	potlid
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	59	19	9	3	0.4	Silcrete	Flake		FALSE	0%	FALSE	
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	60	17	6	3	0.2	Silcrete	Flake		FALSE	0%	FALSE	
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	61	17	10	4	0.5	Silcrete	Shatter		FALSE	0%	FALSE	potlid
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	62	10	6	2	0.1	IMT	Flake		FALSE	0%	FALSE	
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	63	8	5	2	0.1	IMT	Flake		FALSE	0%	FALSE	
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	64	13	6	3	0.2	IMT	Flake		FALSE	0%	FALSE	
16	2	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	65	7	6	3	0.1	Silcrete	Medial flake		FALSE	0%	FALSE	
16	3	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	66	16	12	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
16	3	358500.02	6383959.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	67	11	8	1	0.1	Silcrete	Flake		FALSE	0%	FALSE	
17	1	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	68	39	31	25	30.4	IMT	Core		FALSE	0%	FALSE	
17	1	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	69	60	36	12	27.2	Silcrete	Flake		FALSE	0%	FALSE	
17	1	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	70	31	21	5	3.3	IMT	Flake		FALSE	0%	FALSE	
17	1	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	71	35	17	10	4.1	Silcrete	Conesplit flake		FALSE	0%	FALSE	

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
17	1	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	72	27	12	6	1.1	Silcrete	Conesplit flake		FALSE	0%	FALSE	
17	1	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	73	19	9	3	0.6	Silcrete	Flake		FALSE	0%	FALSE	
17	1	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	74	19	9	2	0.4	Silcrete	Flake		FALSE	0%	FALSE	
17	2	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	75	24	15	2	0.8	Silcrete	Flake		FALSE	0%	FALSE	
17	2	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	76	21	14	3	0.6	Silcrete	Distal flake		FALSE	0%	FALSE	
17	2	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	77	14	10	4	0.5	Silcrete	Distal flake		FALSE	0%	FALSE	
17	2	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	78	17	14	2	0.4	Silcrete	Distal flake		FALSE	0%	FALSE	
17	2	358520	6383959.94	1	North	PAD28	SAC08	Rothbury	Slope	Medium	79	16	11	3	0.6	Silcrete	Distal flake		FALSE	0%	FALSE	
18	1	358539.98	6383960.01	1	North	PAD28	SAC08	Rothbury	Slope	Medium	80	87	78	24	160.7	Silcrete	Gravel		FALSE	76-100%	FALSE	
18	2	358539.98	6383960.01		North	PAD28	SAC08	Rothbury	Slope	Medium												
18	3	358539.98	6383960.01		North	PAD28	SAC08	Rothbury	Slope	Medium												
19	1	358559.96	6383940		North	PAD28	SAC08	Rothbury	Slope	Medium												
20	1	358559.96	6383920.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	86	12	9	3	0.3	Silcrete	Proximal flake		FALSE	0%	FALSE	
20	1	358559.96	6383920.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	87	54	34	11	18.1	Silcrete	Flake		FALSE	51-75%	TRUE	
20	2	358559.96	6383920.04	1	North	PAD28	SAC08	Rothbury	Slope	Medium	88	28	23	20	8.5	Silcrete	Shatter		FALSE	0%	FALSE	
21	1	358539.98	6383919.98	1	North	PAD28	SAC08	Rothbury	Slope	Medium	89	51	39	20	22.4	IMT	Flake		FALSE	51-75%	FALSE	
21	1	358539.98	6383919.98	1	North	PAD28	SAC08	Rothbury	Slope	Medium	90	54	53	24	50.1	Silcrete	Flake		FALSE	1-25%	FALSE	typical water-rolled cobble cortex
21	2	358539.98	6383919.98		North	PAD28	SAC08	Rothbury	Slope	Medium												
21	3	358539.98	6383919.98		North	PAD28	SAC08	Rothbury	Slope	Medium												
22	1	358539.98	6383940.05		North	PAD28	SAC08	Rothbury	Slope	Medium												
22	2	358539.98	6383940.05	1	North	PAD28	SAC08	Rothbury	Slope	Medium	91	37	28	22	23.5	Silcrete	Core		FALSE	1-25%	FALSE	
22	2	358539.98	6383940.05	1	North	PAD28	SAC08	Rothbury	Slope	Medium	92	21	16	5	1.8	Silcrete	Conesplit flake		FALSE	0%	FALSE	
22	2	358539.98	6383940.05	1	North	PAD28	SAC08	Rothbury	Slope	Medium	93	22	20	8	2.6	Silcrete	Flake		FALSE	0%	FALSE	
22	2	358539.98	6383940.05	1	North	PAD28	SAC08	Rothbury	Slope	Medium	94	14	12	9	0.7	IMT	Flake		FALSE	0%	FALSE	
22	2	358539.98	6383940.05	1	North	PAD28	SAC08	Rothbury	Slope	Medium	95	18	13	9	1.6	Silcrete	Distal flake		FALSE	0%	FALSE	
22	2	358539.98	6383940.05	1	North	PAD28	SAC08	Rothbury	Slope	Medium	96	19	7	4	0.5	Silcrete	xFlaked piece		FALSE	0%	FALSE	
22	2	358539.98	6383940.05	1	North	PAD28	SAC08	Rothbury	Slope	Medium	97	23	13	7	1.6	IMT	Shatter		FALSE	0%	FALSE	
23	1	358520	6383939.99	1	North	PAD28	SAC08	Rothbury	Slope	Medium	98	18	14	4	0.8	Silcrete	Distal flake		FALSE	0%	FALSE	
23	2	358520	6383939.99		North	PAD28	SAC08	Rothbury	Slope	Medium												
24	1	358500.03	6383940.04		North	PAD28	SAC08	Rothbury	Slope	Medium												
24	3	358500.03	6383940.04		North	PAD28	SAC08	Rothbury	Slope	Medium												
25	1	358480.05	6383939.97	1	North	PAD28	SAC08	Rothbury	Slope	Medium	99	58	37	34	62.8	Silcrete	Gravel		FALSE	0%	FALSE	heat crazing
25	1	358480.05	6383939.97	1	North	PAD28	SAC08	Rothbury	Slope	Medium	100	59	40	21	36.2	Silcrete	Gravel		FALSE	0%	FALSE	heat shatter surfaces
25	1	358480.05	6383939.97	1	North	PAD28	SAC08	Rothbury	Slope	Medium	101	28	20	6	2.4	IMT	Flake		FALSE	1-25%	FALSE	
25	2	358480.05	6383939.97		North	PAD28	SAC08	Rothbury	Slope	Medium												
25	3	358480.05	6383939.97		North	PAD28	SAC08	Rothbury	Slope	Medium												
26	1	358459.98	6383940.02		North	PAD28	SAC08	Rothbury	Slope	Medium												
26	2	358459.98	6383940.02		North	PAD28	SAC08	Rothbury	Slope	Medium												
26	3	358459.98	6383940.02		North	PAD28	SAC08	Rothbury	Slope	Medium												
27	1	358440	6383939.96		North	PAD28	SAC08	Rothbury	Slope	Medium												
28	1	358440	6383919.99		North	PAD28	SAC08	Rothbury	Slope	Medium												
30	1	358460.03	6383849.98		North	PAD24	SAC06	Rothbury	Slope	High												
30	2	358460.03	6383849.98		North	PAD24	SAC06	Rothbury	Slope	High												
30	3	358460.03	6383849.98		North	PAD24	SAC06	Rothbury	Slope	High												
30	4	358460.03	6383849.98		North	PAD24	SAC06	Rothbury	Slope	High												
30	5	358460.03	6383849.98		North	PAD24	SAC06	Rothbury	Slope	High												
30	6	358460.03	6383849.98		North	PAD24	SAC06	Rothbury	Slope	High												
32	1	358439.97	6383829.95	1	North	PAD24	SAC06	Rothbury	Slope	High	102	49	17	7	4.8	Silcrete	Distal flake		FALSE	0%	TRUE	excavation damage 3 fragments
32	1	358439.97	6383829.95	1	North	PAD24	SAC06	Rothbury	Slope	High	103	26	12	6	1.6	Silcrete	Medial flake		FALSE	0%	FALSE	
32	1	358439.97	6383829.95	1	North	PAD24	SAC06	Rothbury	Slope	High	104	27	13	8	1.7	Silcrete	Medial flake		FALSE	0%	FALSE	
32	1	358439.97	6383829.95	1	North	PAD24	SAC06	Rothbury	Slope	High	105	32	17	12	2.7	Silcrete	xFlaked piece		FALSE	0%	FALSE	
32	1	358439.97	6383829.95	1	North	PAD24	SAC06	Rothbury	Slope	High	106	20	7	4	0.5	Silcrete	Distal flake		FALSE	0%	FALSE	
32	1	358439.97	6383829.95	1	North	PAD24	SAC06	Rothbury	Slope	High	107	20	10	4	0.8	Silcrete	Proximal flake		FALSE	0%	FALSE	
32	1	358439.97	6383829.95	1	North	PAD24	SAC06	Rothbury	Slope	High	108	19	14	3	0.8	Silcrete	xFlaked piece		FALSE	0%	FALSE	
32	1	358439.97	6383829.95	1	North	PAD24	SAC06	Rothbury	Slope	High	109	38	18	8	5.4	Silcrete	xFlaked piece		FALSE	0%	FALSE	
32	2	358439.97	6383829.95	1	North	PAD24	SAC06	Rothbury	Slope	High	110	60	26	10	14.3	Silcrete	Medial flake		FALSE	26-50%	FALSE	
40	1	358659.95	6383819.99		North	PAD19	SAC07	Branxton	Slope	Low												
40	2	358659.95	6383819.99		North	PAD19	SAC07	Branxton	Slope	Low												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
40	3	358659.95	6383819.99		North	PAD19	SAC07	Branxton	Slope	Low												
40	4	358659.95	6383819.99		North	PAD19	SAC07	Branxton	Slope	Low												
43	1	358700	6383820.01		North	PAD19	SAC07	Branxton	Slope	Low												
43	2	358700	6383820.01	1	North	PAD19	SAC07	Branxton	Slope	Low	111	52	44	21	44.5	Silcrete	Gravel		FALSE	0%	FALSE	
43	2	358700	6383820.01	1	North	PAD19	SAC07	Branxton	Slope	Low	112	42	24	13	14.2	Silcrete	Flake		FALSE	1-25%	FALSE	
43	2	358700	6383820.01	1	North	PAD19	SAC07	Branxton	Slope	Low	113	36	23	9	7.9	Silcrete	Proximal flake		FALSE	0%	TRUE	
43	2	358700	6383820.01	1	North	PAD19	SAC07	Branxton	Slope	Low	114	23	14	4	1.2	IMT	Flake		FALSE	0%	FALSE	
43	2	358700	6383820.01	1	North	PAD19	SAC07	Branxton	Slope	Low	115	20	12	3	0.6	Silcrete	Flake		FALSE	0%	FALSE	
43	2	358700	6383820.01	1	North	PAD19	SAC07	Branxton	Slope	Low	116	24	13	3	0.8	Silcrete	Medial flake		FALSE	0%	FALSE	
43	2	358700	6383820.01	1	North	PAD19	SAC07	Branxton	Slope	Low	117	14	10	2	0.3	Silcrete	Proximal flake		FALSE	0%	FALSE	
43	2	358700	6383820.01	1	North	PAD19	SAC07	Branxton	Slope	Low	118	21	13	6	1.5	Silcrete	Conesplit flake		FALSE	0%	FALSE	
43	2	358700	6383820.01	1	North	PAD19	SAC07	Branxton	Slope	Low	119	30	12	6	2.1	Silcrete	Flake		FALSE	0%	FALSE	
43	3	358700	6383820.01		North	PAD19	SAC07	Branxton	Slope	Low												
48	1	358700.01	6383779.98		North	PAD19	SAC07	Branxton	Slope	Low												
48	2	358700.01	6383779.98		North	PAD19	SAC07	Branxton	Slope	Low												
48	3	358700.01	6383779.98	1	North	PAD19	SAC07	Branxton	Slope	Low	123	13	7	3	0.2	Silcrete	Distal flake		FALSE	0%	FALSE	
50	1	358739.96	6383779.99	1	North	PAD19	SAC07	Branxton	Slope	Low	120	50	31	16	22.3	IMT	Core		FALSE	51-75%	FALSE	
50	1	358739.96	6383779.99	1	North	PAD19	SAC07	Branxton	Slope	Low	121	21	17	7	2.5	IMT	Flake		FALSE	51-75%	FALSE	
50	1	358739.96	6383779.99	1	North	PAD19	SAC07	Branxton	Slope	Low	122	25	18	11	3.4	Silcrete	Flake		FALSE	0%	FALSE	
50	2	358739.96	6383779.99		North	PAD19	SAC07	Branxton	Slope	Low												
57	1	358739.97	6383739.96		North	PAD19	SAC07	Branxton	Slope	Low												
57	2	358739.97	6383739.96	1	North	PAD19	SAC07	Branxton	Slope	Low	124	34	22	20	13.7	Silcrete	Core		FALSE	0%	FALSE	
57	2	358739.97	6383739.96	1	North	PAD19	SAC07	Branxton	Slope	Low	125	34	22	9	5.6	Silcrete	Flake		FALSE	0%	FALSE	
57	2	358739.97	6383739.96	1	North	PAD19	SAC07	Branxton	Slope	Low	126	19	10	5	1.2	Silcrete	Flake		FALSE	0%	FALSE	
68	1	358760.04	6383699.99		North	PAD19	SAC07	Branxton	Slope	Low												
82	1	358160.04	6383879.97	1	North	PAD26	SAC10	Rothbury	Slope	Medium	127	58	23	15	19.9	Silcrete	Gravel		FALSE	0%	FALSE	
82	1	358160.04	6383879.97	1	North	PAD26	SAC10	Rothbury	Slope	Medium	128	28	17	10	3.7	Silcrete	Gravel		FALSE	0%	FALSE	
83	1	358180.02	6383880.03	1	North	PAD26	SAC10	Rothbury	Slope	Medium	129	87	54	22	84.6	Silcrete	xFlaked piece		FALSE	0%	FALSE	
83	1	358180.02	6383880.03	1	North	PAD26	SAC10	Rothbury	Slope	Medium	130	13	12	7	0.6	Silcrete	xFlaked piece		FALSE	0%	FALSE	
83	2	358180.02	6383880.03	1	North	PAD26	SAC10	Rothbury	Slope	Medium	131	35	15	8	2.9	Silcrete	Flake		FALSE	0%	FALSE	
83	2	358180.02	6383880.03	1	North	PAD26	SAC10	Rothbury	Slope	Medium	132	17	12	4	1	Silcrete	Distal flake		FALSE	0%	FALSE	
83	2	358180.02	6383880.03	1	North	PAD26	SAC10	Rothbury	Slope	Medium	133	21	15	4	1	Silcrete	Flake		FALSE	0%	FALSE	
83	2	358180.02	6383880.03	1	North	PAD26	SAC10	Rothbury	Slope	Medium	134	11	9	2	0.2	Silcrete	Distal flake		FALSE	0%	FALSE	
83	2	358180.02	6383880.03	1	North	PAD26	SAC10	Rothbury	Slope	Medium	135	15	12	1	0.3	Silcrete	Medial flake		FALSE	0%	FALSE	
83	3	358180.02	6383880.03	1	North	PAD26	SAC10	Rothbury	Slope	Medium	136	56	30	18	23.7	Silcrete	Proximal flake		FALSE	0%	FALSE	
321	1	358229.98	6383750		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
321	2	358229.98	6383750		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
321	3	358229.98	6383750		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
322	1	358210.01	6383750.05		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
328	1	358140.03	6383580.05	1	North	PAD21	SAC01	Rothbury	Drainage line	(not mapped)	413	28	18	7	3	Silcrete	Flake		FALSE	76-100%	FALSE	
328	1	358140.03	6383580.05	1	North	PAD21	SAC01	Rothbury	Drainage line	(not mapped)	414	13	6	3	0.3	Silcrete	Proximal flake		FALSE	1-25%	FALSE	
328	1	358140.03	6383580.05	1	North	PAD21	SAC01	Rothbury	Drainage line	(not mapped)	415	9	9	1	0.1	Silcrete	Flake		FALSE	0%	FALSE	
328	2	358140.03	6383580.05		North	PAD21	SAC01	Rothbury	Drainage line	(not mapped)												
329	1	358119.96	6383579.98	1	North	PAD21	SAC01	Rothbury	Drainage line	(not mapped)	416	33	19	10	4.6	Quartz	Flake		FALSE	51-75%	FALSE	
329	1	358119.96	6383579.98	1	North	PAD21	SAC01	Rothbury	Drainage line	(not mapped)	417	20	17	7	1.4	Quartz	Distal flake		FALSE	76-100%	FALSE	
329	2	358119.96	6383579.98		North	PAD21	SAC01	Rothbury	Drainage line	(not mapped)												
330	1	358460.02	6383890.01		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
330	2	358460.02	6383890.01		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
330	3	358460.02	6383890.01	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	418	20	11	2	0.5	IMT	Flake		FALSE	1-25%	FALSE	
330	4	358460.02	6383890.01		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
330	5	358460.02	6383890.01		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
332	1	358439.97	6383810		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	419	43	31	11	13.9	Quartz	Flake		FALSE	0%	TRUE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	420	20	14	2	0.6	IMT	Flake		FALSE	0%	FALSE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	421	35	12	9	2.7	IMT	Flake		FALSE	0%	FALSE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	422	10	8	3	0.2	IMT	Flake		FALSE	0%	FALSE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	423	12	8	3	0.3	IMT	Flake		FALSE	76-100%	FALSE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	424	9	6	2	0.1	IMT	Flake		FALSE	0%	FALSE	

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	425	28	23	5	2.9	IMT	Distal flake		FALSE	76-100%	TRUE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	426	11	8	2	0.2	IMT	Proximal flake		FALSE	0%	FALSE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	427	11	10	3	0.3	IMT	Medial flake		FALSE	0%	TRUE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	428	13	12	3	0.5	IMT	Distal flake		FALSE	76-100%	TRUE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	429	19	8	3	0.3	IMT	Distal flake		FALSE	76-100%	FALSE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	430	15	9	2	0.3	IMT	Medial flake		FALSE	0%	TRUE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	431	9	7	1	0.03	IMT	Distal flake		FALSE	0%	TRUE	
332	2	358439.97	6383810	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	432	11	10	2	0.2	IMT	Shatter		FALSE	1-25%	FALSE	Potlid
333	1	358480.01	6383870	1	North	PAD24	SAC06	Rothbury	Slope	High	433	75	58	50	225.6	Silcrete	Gravel		FALSE	0%	FALSE	round chunk; no distinct patina
333	1	358480.01	6383870	1	North	PAD24	SAC06	Rothbury	Slope	High	434	27	18	6	2.4	Silcrete	xFlaked piece		FALSE	0%	FALSE	
333	1	358480.01	6383870	1	North	PAD24	SAC06	Rothbury	Slope	High	435	21	8	4	0.5	Silcrete	Gravel		FALSE	0%	FALSE	
333	1	358480.01	6383870	1	North	PAD24	SAC06	Rothbury	Slope	High	436	10	6	2	0.1	Silcrete	Distal flake		FALSE	0%	FALSE	
333	2	358480.01	6383870	1	North	PAD24	SAC06	Rothbury	Slope	High	437	17	9	2	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
333	2	358480.01	6383870	1	North	PAD24	SAC06	Rothbury	Slope	High	438	18	12	3	0.5	IMT	Flake		FALSE	0%	FALSE	
333	2	358480.01	6383870	1	North	PAD24	SAC06	Rothbury	Slope	High	439	22	19	7	2.5	Silcrete	Gravel		FALSE	0%	FALSE	
333	2	358480.01	6383870	1	North	PAD24	SAC06	Rothbury	Slope	High	440	26	16	15	3.8	Silcrete	Gravel		FALSE	1-25%	FALSE	
333	3	358480.01	6383870		North	PAD24	SAC06	Rothbury	Slope	High												
334	1	358480.01	6383850.04		North	PAD24	SAC06	Rothbury	Slope	High												
334	2	358480.01	6383850.04	1	North	PAD24	SAC06	Rothbury	Slope	High	441	18	12	4	0.8	Silcrete	Distal flake		FALSE	0%	FALSE	neg potlid scar on ventral
334	3	358480.01	6383850.04	1	North	PAD24	SAC06	Rothbury	Slope	High	442	42	39	12	17.9	Silcrete	Flake		FALSE	76-100%	TRUE	
334	4	358480.01	6383850.04		North	PAD24	SAC06	Rothbury	Slope	High												
335	1	358480.01	6383829.97		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
335	2	358480.01	6383829.97		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
335	3	358480.01	6383829.97		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
336	1	358480.02	6383810.01		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
336	2	358480.02	6383810.01		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
336	3	358480.02	6383810.01		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
336	4	358480.02	6383810.01		North	PAD24	SAC06	Rothbury	Slope	(not mapped)												
338	1	358520.02	6383820	1	North	PAD19	SAC07	Branxton	Slope	Medium	443	47	36	30	46.8	Silcrete	Gravel		FALSE	1-25%	FALSE	shatter surfaces
338	1	358520.02	6383820	1	North	PAD19	SAC07	Branxton	Slope	Medium	444	47	39	23	35	Silcrete	Gravel		FALSE	0%	FALSE	shatter surfaces
338	2	358520.02	6383820		North	PAD19	SAC07	Branxton	Slope	Medium												
341	1	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	445	24	13	5	1.3	Silcrete	Flake		FALSE	0%	FALSE	
341	1	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	446	19	8	3	0.5	Silcrete	Proximal flake		FALSE	0%	FALSE	
341	1	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	447	13	9	1	0.2	Silcrete	Flake		FALSE	0%	FALSE	
341	1	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	448	12	9	3	0.2	Silcrete	Flake		FALSE	0%	FALSE	
341	2	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	449	39	28	7	6.6	Silcrete	Flake		FALSE	0%	FALSE	
341	2	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	450	39	21	8	3.7	Silcrete	Flake		FALSE	26-50%	FALSE	
341	2	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	451	28	19	6	3	Silcrete	Flake		FALSE	0%	FALSE	
341	2	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	452	23	14	5	1.7	ZQuartzite	Flake		FALSE	0%	FALSE	
341	2	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	453	18	12	3	0.5	Silcrete	Flake		FALSE	0%	FALSE	
341	2	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	454	18	12	4	0.6	IMT	Flake		FALSE	0%	FALSE	
341	2	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	455	17	10	4	0.7	Silcrete	Flake		FALSE	51-75%	FALSE	
341	2	358580.04	6383819.96	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	456	14	10	3	0.4	Silcrete	Flake		FALSE	0%	FALSE	
343	1	358620	6383819.98	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	457	111	91	56	514.2	Silcrete	xFlaked piece		FALSE	51-75%	FALSE	possible a natural broken silcrete fragment
343	1	358620	6383819.98	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	458	68	58	39	172.7	Silcrete	Gravel		FALSE	0%	FALSE	
343	1	358620	6383819.98	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	459	32	16	8	4.1	Silcrete	Flake		FALSE	0%	FALSE	
343	2	358620	6383819.98	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	460	22	7	3	0.4	Silcrete	Retouched flake	Bondi point	FALSE	0%	FALSE	whole
343	2	358620	6383819.98	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	461	50	23	10	10.8	Silcrete	Flake		FALSE	0%	FALSE	
348	1	358540.01	6383740		North	PAD19	SAC07	Branxton	Slope	(not mapped)												
348	2	358540.01	6383740		North	PAD19	SAC07	Branxton	Slope	(not mapped)												
350	1	358540.02	6383699.97	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	462	83	75	61	348.5	Silcrete	xFlaked piece		FALSE	26-50%	FALSE	heat crazing; shatter surfaces
350	1	358540.02	6383699.97	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	463	19	14	7	1.8	Silcrete	xFlaked piece		FALSE	0%	TRUE	
350	2	358540.02	6383699.97	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	464	57	39	14	33	Silcrete	Flake		FALSE	1-25%	FALSE	
350	2	358540.02	6383699.97	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	465	39	24	9	9.7	Silcrete	Flake		FALSE	0%	FALSE	
350	2	358540.02	6383699.97	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	466	31	16	9	4.2	Silcrete	Flake		FALSE	0%	FALSE	
350	2	358540.02	6383699.97	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	467	53	37	20	37	Silcrete	Shatter		FALSE	51-75%	FALSE	
350	2	358540.02	6383699.97	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	468	45	27	19	27	Silcrete	Shatter		FALSE	0%	FALSE	
357	1	358600.03	6383760.04	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	469	21	6	3	0.4	Silcrete	Medial flake		FALSE	0%	FALSE	

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
357	1	358600.03	6383760.04	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	470	17	11	2	0.5	Silcrete	Flake		FALSE	0%	FALSE	
357	1	358600.03	6383760.04	1	North	PAD19	SAC07	Branxton	Slope	(not mapped)	471	15	6	5	0.3	Silcrete	Conesplit flake		FALSE	0%	FALSE	
357	2	358600.03	6383760.04		North	PAD19	SAC07	Branxton	Slope	(not mapped)												
358	2	358500.04	6383840.01		North	PAD19	SAC07	Branxton	Slope	(not mapped)												
363	1	358479.97	6383800.03		North	PAD19	SAC07	Branxton	Slope	(not mapped)												
363	2	358479.97	6383800.03		North	PAD19	SAC07	Branxton	Slope	(not mapped)												
365	1	358799.96	6383240.02		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
365	2	358799.96	6383240.02	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	600	34	19	10	4.5	IMT	Conesplit flake		FALSE	76-100%	FALSE	
365	3	358799.96	6383240.02		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
366	1	358840.01	6383219.96		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
366	2	358840.01	6383219.96		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
367	1	358569.97	6383150.03		Middle	PAD14	IF15	Branxton	Drainage line	Low												
367	2	358569.97	6383150.03	1	Middle	PAD14	IF15	Branxton	Drainage line	Low	601	17	12	4	0.7	Silcrete	Flake		FALSE	0%	FALSE	
367	3	358569.97	6383150.03		Middle	PAD14	IF15	Branxton	Drainage line	Low												
368	1	358559.96	6383279.96		Middle	PAD17	IF16	Branxton	Slope	Medium												
368	2	358559.96	6383279.96		Middle	PAD17	IF16	Branxton	Slope	Medium												
368	3	358559.96	6383279.96		Middle	PAD17	IF16	Branxton	Slope	Medium												
369	1	358559.96	6383319.99		Middle	PAD17	IF16	Branxton	Slope	Medium												
369	2	358559.96	6383319.99		Middle	PAD17	IF16	Branxton	Slope	Medium												
369	3	358559.96	6383319.99		Middle	PAD17	IF16	Branxton	Slope	Medium												
370	1	358580.02	6383340.02		Middle	PAD17	IF16	Branxton	Slope	Medium												
370	2	358580.02	6383340.02	1	Middle	PAD17	IF16	Branxton	Slope	Medium	602	28	18	9	3.2	Silcrete	Shatter		FALSE	0%	FALSE	
371	1	358080.02	6383040.03		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
371	2	358080.02	6383040.03		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
371	3	358080.02	6383040.03		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
372	1	358060.04	6383039.97	1	Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)	603	19	16	5	1.4	Silcrete	Proximal flake		FALSE	0%	FALSE	
372	2	358060.04	6383039.97		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
372	3	358060.04	6383039.97		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
373	1	358039.97	6383040.01		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
373	2	358039.97	6383040.01	1	Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)	604	22	20	3	1.1	IMT	Flake		FALSE	0%	FALSE	
373	3	358039.97	6383040.01		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
374	1	358019.99	6383039.95		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
374	2	358019.99	6383039.95		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
374	3	358019.99	6383039.95		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
375	1	358000.02	6383040		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
375	2	358000.02	6383040		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
375	3	358000.02	6383040		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
376	1	358020	6383020		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
376	2	358020	6383020		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
376	3	358020	6383020		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
377	1	358000.02	6383020.04		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
377	2	358000.02	6383020.04		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
377	3	358000.02	6383020.04	1	Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)	605	18	12	4	0.7	IMT	Proximal flake		FALSE	26-50%	FALSE	
377	4	358000.02	6383020.04		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
378	1	358000.03	6382999.97	1	Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)	606	29	18	12	5.5	Silcrete	Proximal flake		FALSE	0%	FALSE	
378	1	358000.03	6382999.97	1	Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)	607	17	11	4	0.8	Silcrete	Proximal flake		FALSE	0%	FALSE	
378	1	358000.03	6382999.97	1	Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)	608	12	11	2	0.3	Silcrete	Proximal flake		FALSE	0%	FALSE	
378	1	358000.03	6382999.97	1	Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)	609	15	8	2	0.3	Silcrete	Medial flake		FALSE	0%	FALSE	
378	1	358000.03	6382999.97	1	Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)	610	19	6	3	0.4	IMT	Retouched flake	Distal broken Bondi point	FALSE	0%	FALSE	
378	1	358000.03	6382999.97	1	Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)	611	16	16	9	1.8	Silcrete	Shatter		FALSE	0%	FALSE	
379	1	358039.98	6382999.98		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
379	2	358039.98	6382999.98		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
379	3	358039.98	6382999.98		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
380	1	358039.98	6382980.02		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
380	2	358039.98	6382980.02		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
380	3	358039.98	6382980.02		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
380	4	358039.98	6382980.02		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
381	1	358020.01	6382979.95	1	Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)	612	14	11	4	0.4	Silcrete	Shatter		FALSE	0%	FALSE	
381	4	358020.01	6382979.95		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
382	1	358430.01	6383059.99		Middle	PAD12	SAC13	Branxton	Drainage line	(not mapped)												
382	2	358430.01	6383059.99	1	Middle	PAD12	SAC13	Branxton	Drainage line	(not mapped)	613	9	5	2	0.1	Silcrete	Flake		FALSE	1-25%	FALSE	
382	3	358430.01	6383059.99		Middle	PAD12	SAC13	Branxton	Drainage line	(not mapped)												
383	1	358430.02	6383019.96		Middle	PAD12	SAC13	Branxton	Drainage line	(not mapped)												
383	2	358430.02	6383019.96		Middle	PAD12	SAC13	Branxton	Drainage line	(not mapped)												
388	1	358879.97	6382379.96		South	PAD02	IF13	Branxton	Slope	(not mapped)												
388	2	358879.97	6382379.96		South	PAD02	IF13	Branxton	Slope	(not mapped)												
389	1	358879.98	6382360		South	PAD02	IF13	Branxton	Slope	(not mapped)												
389	2	358879.98	6382360		South	PAD02	IF13	Branxton	Slope	(not mapped)												
389	3	358879.98	6382360		South	PAD02	IF13	Branxton	Slope	(not mapped)												
390	1	358879.98	6382340.03		South	PAD02	IF13	Branxton	Slope	(not mapped)												
390	2	358879.98	6382340.03		South	PAD02	IF13	Branxton	Slope	(not mapped)												
390	3	358879.98	6382340.03		South	PAD02	IF13	Branxton	Slope	(not mapped)												
391	1	358819.96	6382380		South	PAD02	IF13	Branxton	Slope	Medium												
391	2	358819.96	6382380		South	PAD02	IF13	Branxton	Slope	Medium												
392	1	357779.97	6381959.97		South	PAD07	PAD07	Branxton	Ridge	Medium												
392	2	357779.97	6381959.97		South	PAD07	PAD07	Branxton	Ridge	Medium												
392	3	357779.97	6381959.97		South	PAD07	PAD07	Branxton	Ridge	Medium												
393	1	357799.95	6381939.96		South	PAD07	PAD07	Branxton	Ridge	Medium												
393	2	357799.95	6381939.96		South	PAD07	PAD07	Branxton	Ridge	Medium												
394	1	357799.96	6381920		South	PAD07	PAD07	Branxton	Ridge	Medium												
394	2	357799.96	6381920		South	PAD07	PAD07	Branxton	Ridge	Medium												
394	3	357799.96	6381920		South	PAD07	PAD07	Branxton	Ridge	Medium												
395	1	358140.03	6382159.95		South	PAD08	PAD08	Branxton	Ridge	Medium												
395	2	358140.03	6382159.95		South	PAD08	PAD08	Branxton	Ridge	Medium												
395	3	358140.03	6382159.95		South	PAD08	PAD08	Branxton	Ridge	Medium												
395	4	358140.03	6382159.95		South	PAD08	PAD08	Branxton	Ridge	Medium												
396	1	358179.98	6382120.05		South	PAD08	PAD08	Branxton	Ridge	Medium												
396	2	358179.98	6382120.05		South	PAD08	PAD08	Branxton	Ridge	Medium												
396	3	358179.98	6382120.05		South	PAD08	PAD08	Branxton	Ridge	Medium												
397	1	358210.02	6382209.96		South	PAD09	PAD09	Branxton	Ridge	(not mapped)												
397	2	358210.02	6382209.96		South	PAD09	PAD09	Branxton	Ridge	(not mapped)												
398	1	358210.02	6382190		South	PAD09	PAD09	Branxton	Ridge	(not mapped)												
398	2	358210.02	6382190		South	PAD09	PAD09	Branxton	Ridge	(not mapped)												
398	3	358210.02	6382190		South	PAD09	PAD09	Branxton	Ridge	(not mapped)												
500	1	359119.99	6382580.04		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
500	2	359119.99	6382580.04		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
500	3	359119.99	6382580.04		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
500	4	359119.99	6382580.04		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
19	2	358559.96	6383940	1	North	PAD28	SAC08	Rothbury	Slope	Medium	81	24	6	4	0.6	Silcrete	Retouched flake	Bondi point	FALSE	0%	FALSE	Very tip missing
19	2	358559.96	6383940	1	North	PAD28	SAC08	Rothbury	Slope	Medium	82	18	14	3	0.9	Silcrete	Flake		FALSE	0%	FALSE	
19	2	358559.96	6383940	1	North	PAD28	SAC08	Rothbury	Slope	Medium	83	12	9	3	0.3	Silcrete	Proximal flake		FALSE	0%	FALSE	Step termination
19	2	358559.96	6383940	1	North	PAD28	SAC08	Rothbury	Slope	Medium	84	12	6	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
19	2	358559.96	6383940	1	North	PAD28	SAC08	Rothbury	Slope	Medium	85	12	6	2	0.2	Silcrete	Medial flake		FALSE	0%	FALSE	
19	3	358559.96	6383940		North	PAD28	SAC08	Rothbury	Slope	Medium												
24	2	358500.03	6383940.04		North	PAD28	SAC08	Rothbury	Slope	Medium												
68	2	358760.04	6383699.99		North	PAD19	SAC07	Branxton	Slope	Low												
82	2	358160.04	6383879.97		North	PAD26	SAC10	Rothbury	Slope	Medium												
82	3	358160.04	6383879.97		North	PAD26	SAC10	Rothbury	Slope	Medium												
84	1	358209.99	6383810.05		North	PAD25	SAC09	Rothbury	Slope	Medium												
84	2	358209.99	6383810.05	1	North	PAD25	SAC09	Rothbury	Slope	Medium	140	14	11	2	0.3	Silcrete	Flake		FALSE	0%	FALSE	
84	2	358209.99	6383810.05	1	North	PAD25	SAC09	Rothbury	Slope	Medium	141	14	5	2	0.1	Silcrete	Distal flake		FALSE	0%	FALSE	
84	3	358209.99	6383810.05		North	PAD25	SAC09	Rothbury	Slope	Medium												
84	4	358209.99	6383810.05		North	PAD25	SAC09	Rothbury	Slope	Medium												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
84	5	358209.99	6383810.05		North	PAD25	SAC09	Rothbury	Slope	Medium												
84	6	358209.99	6383810.05		North	PAD25	SAC09	Rothbury	Slope	Medium												
85	1	358229.97	6383790.04		North	PAD25	SAC09	Rothbury	Slope	Medium												
85	2	358229.97	6383790.04		North	PAD25	SAC09	Rothbury	Slope	Medium												
85	3	358229.97	6383790.04	1	North	PAD25	SAC09	Rothbury	Slope	Medium	142	28	20	4	1.7	Silcrete	Proximal flake		FALSE	0%	FALSE	
85	3	358229.97	6383790.04	1	North	PAD25	SAC09	Rothbury	Slope	Medium	143	16	10	3	0.5	Silcrete	xFlaked piece		FALSE	0%	FALSE	
85	3	358229.97	6383790.04	1	North	PAD25	SAC09	Rothbury	Slope	Medium	144	11	6	4	0.3	Silcrete	xFlaked piece		FALSE	0%	FALSE	
86	1	358229.98	6383769.96		North	PAD25	SAC09	Rothbury	Slope	Medium												
86	2	358229.98	6383769.96	1	North	PAD25	SAC09	Rothbury	Slope	Medium	145	84	40	12	38.9	Silcrete	Flake		FALSE	0%	FALSE	
86	3	358229.98	6383769.96		North	PAD25	SAC09	Rothbury	Slope	Medium												
87	1	358210.02	6383689.95		North	PAD20	SAC05	Rothbury	Ridge	High												
89	1	358249.97	6383689.96	1	North	PAD20	SAC05	Rothbury	Ridge	High	137	54	47	12	26.6	Silcrete	Flake		FALSE	0%	FALSE	
89	1	358249.97	6383689.96	1	North	PAD20	SAC05	Rothbury	Ridge	High	138	61	41	19	43.7	Silcrete	Distal flake		FALSE	0%	FALSE	
89	1	358249.97	6383689.96	1	North	PAD20	SAC05	Rothbury	Ridge	High	139	22	9	2	0.4	IMT	Flake		FALSE	0%	FALSE	
91	1	358290.02	6383689.98		North	PAD20	SAC05	Rothbury	Ridge	High												
92	1	358190.05	6383670.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	146	23	11	5	0.9	Silcrete	xFlaked piece		FALSE	1-25%	FALSE	
92	1	358190.05	6383670.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	147	25	15	5	1.8	IMT	Flake		FALSE	51-75%	FALSE	
92	1	358190.05	6383670.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	148	12	8	3	0.2	IMT	Flake		FALSE	0%	FALSE	
92	2	358190.05	6383670.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	149	87	52	27	89.1	Silcrete	Flake		FALSE	51-75%	FALSE	
92	2	358190.05	6383670.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	150	18	11	3	0.5	Silcrete	Flake		FALSE	0%	FALSE	
92	2	358190.05	6383670.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	151	15	6	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
92	2	358190.05	6383670.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	152	11	6	1	0.1	Silcrete	Flake		FALSE	0%	FALSE	
92	3	358190.05	6383670.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	153	25	14	8	1.7	IMT	xFlaked piece		FALSE	0%	FALSE	
92	3	358190.05	6383670.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	154	13	10	4	0.4	IMT	Distal flake		FALSE	0%	FALSE	
94	1	358230	6383670.04		North	PAD20	SAC05	Rothbury	Ridge	Medium												
96	1	358269.96	6383669.95	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	155	19	10	5	0.8	Silcrete	Distal flake		FALSE	0%	FALSE	
96	1	358269.96	6383669.95	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	156	12	8	5	0.5	Quartz	xFlaked piece		FALSE	26-50%	FALSE	
96	1	358269.96	6383669.95	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	157	22	12	10	2.1	Silcrete	xFlaked piece		FALSE	0%	FALSE	
96	1	358269.96	6383669.95	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	158	17	10	3	0.4	Silcrete	Flake		FALSE	0%	FALSE	
96	1	358269.96	6383669.95	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	159	9	6	3	0.1	Quartz	Flake		FALSE	0%	FALSE	
97	1	358290.02	6383670.01	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	160	26	13	5	1.7	Silcrete	Medial flake		FALSE	0%	FALSE	
97	1	358290.02	6383670.01	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	161	24	19	4	1.6	IMT	Flake		FALSE	0%	FALSE	
97	2	358290.02	6383670.01	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	162	17	10	7	1.1	Quartz	Flake		FALSE	51-75%	FALSE	
97	2	358290.02	6383670.01	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	163	9	6	2	0.1	Silcrete	Flake		FALSE	0%	FALSE	
100	1	358349.96	6383669.98		North	PAD20	SAC05	Rothbury	Ridge	Medium												
100	2	358349.96	6383669.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	164	15	11	3	0.4	Silcrete	Medial flake		FALSE	0%	FALSE	
100	2	358349.96	6383669.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	165	12	5	2	0.1	Silcrete	Medial flake		FALSE	0%	FALSE	
100	2	358349.96	6383669.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	166	8	7	1	0.1	Silcrete	Medial flake		FALSE	0%	FALSE	
102	1	358390	6383669.99		North	PAD20	SAC05	Rothbury	Ridge	Medium												
102	2	358390	6383669.99		North	PAD20	SAC05	Rothbury	Ridge	Medium												
104	1	358429.96	6383670.01		North	PAD20	SAC05	Rothbury	Ridge	Medium												
104	2	358429.96	6383670.01		North	PAD20	SAC05	Rothbury	Ridge	Medium												
105	1	358409.98	6383690.02		North	PAD20	SAC05	Rothbury	Ridge	Medium												
107	1	358370.02	6383690.01		North	PAD20	SAC05	Rothbury	Ridge	Medium												
108	1	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	168	99	54	35	157	Silcrete	xFlaked piece		FALSE	1-25%	FALSE	Primary fragment; terrestrial cortex
108	1	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	169	49	27	9	10.4	Silcrete	Flake		FALSE	0%	FALSE	
108	1	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	170	22	13	4	0.9	Silcrete	Distal flake		FALSE	0%	FALSE	
108	1	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	171	21	5	6	1.6	Silcrete	xFlaked piece		FALSE	0%	FALSE	
108	1	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	172	20	12	4	1.1	Silcrete	Retouched flake	Proximal backed artefact	FALSE	0%	FALSE	
108	1	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	173	22	18	6	2.1	Silcrete	Proximal flake		FALSE	0%	FALSE	
108	1	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	174	15	12	3	0.4	Silcrete	Flake		FALSE	0%	FALSE	
108	1	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	175	11	9	2	0.2	Silcrete	Distal flake		FALSE	0%	FALSE	
108	1	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	176	13	7	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	177	41	34	12	11.1	Silcrete	Proximal flake		FALSE	1-25%	FALSE	Heavy impact cones
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	179	42	27	10	11.4	Silcrete	Proximal flake		FALSE	1-25%	FALSE	Heavy impact cones
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	180	37	25	7	5.5	Silcrete	Medial flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	181	36	27	6	5	Silcrete	Flake		FALSE	0%	FALSE	

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	182	37	16	7	5	Silcrete	Distal flake		FALSE	1-25%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	183	31	11	5	1.8	Silcrete	Flake		FALSE	1-25%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	184	24	19	5	2.1	Silcrete	Distal flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	185	36	17	6	4.1	Silcrete	Distal flake		FALSE	51-75%	TRUE	exc damage 3 fragments
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	186	17	13	5	0.8	Silcrete	Flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	187	19	16	3	0.7	Silcrete	Medial flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	188	20	13	3	0.6	Silcrete	Distal flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	189	15	11	4	0.5	Silcrete	Flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	190	12	11	2	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	191	15	12	2	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	192	11	10	3	0.3	Silcrete	Proximal flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	193	11	8	3	0.3	Silcrete	Proximal flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	194	20	9	4	0.6	Silcrete	Flake		FALSE	0%	FALSE	
108	2	358409.98	6383649.99	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	195	20	7	4	0.5	Silcrete	Retouched flake	Backed artefact Bondi	FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	196	82	81	25	126.1	Silcrete	Flake		FALSE	76-100%	FALSE	Classic primary flake terrestrial cortex PHOTO
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	197	60	38	25	45.3	Silcrete	Flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	198	52	47	8	25.8	Silcrete	Medial flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	199	42	41	29	42.5	Silcrete	Flake		FALSE	26-50%	FALSE	heavy percussion cones
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	200	56	26	14	18.5	Silcrete	xFlaked piece		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	201	47	27	15	14.9	Silcrete	Conesplit flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	202	46	31	16	16.6	Silcrete	Flake		FALSE	1-25%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	203	45	31	4	6.9	Silcrete	Medial flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	204	54	39	7	15.6	Silcrete	Medial flake		FALSE	76-100%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	205	35	23	7	6.4	Silcrete	Proximal flake		FALSE	1-25%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	206	30	23	9	5.7	Silcrete	Flake		FALSE	1-25%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	207	39	14	4	2.1	Silcrete	Medial flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	208	38	12	10	4	Silcrete	xFlaked piece		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	209	24	20	6	3.2	Silcrete	Flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	210	26	16	4	1.9	Silcrete	Proximal flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	211	19	17	4	1	Silcrete	Distal flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	212	23	14	6	1.8	Silcrete	Proximal flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	213	22	10	4	0.9	Silcrete	Distal flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	214	17	16	4	0.8	Silcrete	Medial flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	215	16	11	4	0.6	Silcrete	Distal flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	216	13	10	2	0.4	Silcrete	Flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	217	12	10	3	0.3	Silcrete	Flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	218	13	12	2	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	219	15	6	3	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
110	1	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	220	13	10	3	0.4	Silcrete	Flake		FALSE	0%	FALSE	
113	1	358310.01	6383650.01		North	PAD20	SAC05	Rothbury	Ridge	Medium												
114	1	358290.03	6383650.06		North	PAD20	SAC05	Rothbury	Ridge	Medium												
114	2	358290.03	6383650.06	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	240	42	22	10	8.3	Silcrete	Flake		FALSE	51-75%	FALSE	
114	2	358290.03	6383650.06	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	241	14	10	5	0.4	IMT	Flake		FALSE	1-25%	FALSE	
114	2	358290.03	6383650.06	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	242	12	9	2	0.2	IMT	Flake		FALSE	51-75%	FALSE	
116	1	358249.98	6383650.04		North	PAD20	SAC05	Rothbury	Ridge	Medium												
116	2	358249.98	6383650.04		North	PAD20	SAC05	Rothbury	Ridge	Medium												
117	1	358230.01	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	243	30	22	8	4	IMT	Proximal flake		FALSE	0%	FALSE	
117	1	358230.01	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	244	16	12	6	0.7	IMT	Conesplit flake		FALSE	76-100%	FALSE	
117	1	358230.01	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	245	11	10	2	0.2	IMT	Shatter		FALSE	0%	FALSE	
117	2	358230.01	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	246	21	13	7	1.3	Silcrete	Distal flake		FALSE	0%	FALSE	
118	1	358210.03	6383650.03		North	PAD20	SAC05	Rothbury	Ridge	Medium												
118	2	358210.03	6383650.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	247	22	9	6	0.7	Silcrete	Flake		FALSE	0%	FALSE	conjoins to 248
118	2	358210.03	6383650.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	248	27	14	11	2.6	Silcrete	Conesplit flake		FALSE	0%	FALSE	conjoins to 247
118	2	358210.03	6383650.03	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	249	12	11	2	0.2	IMT	Flake		FALSE	0%	FALSE	
118	3	358210.03	6383650.03		North	PAD20	SAC05	Rothbury	Ridge	Medium												
119	1	358189.96	6383649.96		North	PAD20	SAC05	Rothbury	Ridge	Medium												
119	2	358189.96	6383649.96		North	PAD20	SAC05	Rothbury	Ridge	Medium												
120	1	358120.05	6383599.95		North	PAD21	SAC01	Rothbury	Drainage line	High												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
120	2	358120.05	6383599.95	1	North	PAD21	SAC01	Rothbury	Drainage line	High	250	50	39	13	25.1	IMT	Retouched flake	End scraper	TRUE	0%	FALSE	patina all over
120	2	358120.05	6383599.95	1	North	PAD21	SAC01	Rothbury	Drainage line	High	251	56	43	12	23.3	IMT	Flake		FALSE	51-75%	FALSE	
120	2	358120.05	6383599.95	1	North	PAD21	SAC01	Rothbury	Drainage line	High	252	32	24	6	3.5	IMT	Flake		FALSE	0%	TRUE	patina all over
120	3	358120.05	6383599.95	1	North	PAD21	SAC01	Rothbury	Drainage line	High	253	27	12	6	1.7	IMT	Flake		FALSE	0%	FALSE	patina all over
121	1	358140.02	6383600.01		North	PAD21	SAC01	Rothbury	Drainage line	High												
121	2	358140.02	6383600.01		North	PAD21	SAC01	Rothbury	Drainage line	High												
121	3	358140.02	6383600.01		North	PAD21	SAC01	Rothbury	Drainage line	High												
122	1	358160	6383599.97		North	PAD21	SAC01	Rothbury	Drainage line	High												
122	2	358160	6383599.97	1	North	PAD21	SAC01	Rothbury	Drainage line	High	254	57	46	29	70.9	Silcrete	xFlaked piece		FALSE	0%	FALSE	heat shattered surfaces, detachments and crazing
122	2	358160	6383599.97	1	North	PAD21	SAC01	Rothbury	Drainage line	High	255	30	24	11	7.8	Silcrete	Flake		FALSE	0%	FALSE	
122	3	358160	6383599.97	1	North	PAD21	SAC01	Rothbury	Drainage line	High	256	22	14	2	0.9	Silcrete	Medial flake		FALSE	0%	FALSE	
122	3	358160	6383599.97	1	North	PAD21	SAC01	Rothbury	Drainage line	High	257	18	14	7	1.9	Silcrete	Flake		FALSE	0%	FALSE	
122	3	358160	6383599.97	1	North	PAD21	SAC01	Rothbury	Drainage line	High	258	28	14	8	2.2	Silcrete	Shatter		FALSE	0%	FALSE	
122	3	358160	6383599.97	1	North	PAD21	SAC01	Rothbury	Drainage line	High	259	22	13	5	1.6	Silcrete	Shatter		FALSE	0%	FALSE	
123	1	358179.98	6383600.03		North	PAD21	SAC01	Rothbury	Drainage line	High												
123	2	358179.98	6383600.03		North	PAD21	SAC01	Rothbury	Drainage line	High												
127	1	358580.03	6383319.95		Middle	PAD17	IF16	Branxton	Slope	Medium												
381	2	358020.01	6382979.95		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
381	3	358020.01	6382979.95		Middle	PAD15	SAC14	Branxton	Drainage line	(not mapped)												
501	1	359120.01	6382580.05		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
501	2	359120.01	6382580.05		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
501	3	359120.01	6382580.05		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
502	1	359139.99	6382560.04		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
502	2	359139.99	6382560.04		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
503	1	359120.01	6382640.01		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
503	2	359120.01	6382640.01		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
503	3	359120.01	6382640.01		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
503	4	359120.01	6382640.01		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
504	1	359139.99	6382639.96	1	South	PAD01	SAC17	Hunter	Ridge	(not mapped)	614	33	29	12	10.5	Silcrete	Flake		FALSE	0%	TRUE	2 frags
504	1	359139.99	6382639.96	1	South	PAD01	SAC17	Hunter	Ridge	(not mapped)	615	13	10	4	0.6	Silcrete	Proximal flake		FALSE	0%	FALSE	
504	1	359139.99	6382639.96	1	South	PAD01	SAC17	Hunter	Ridge	(not mapped)	616	11	8	4	0.3	Silcrete	Medial flake		FALSE	0%	FALSE	
504	1	359139.99	6382639.96	1	South	PAD01	SAC17	Hunter	Ridge	(not mapped)	617	10	9	4	0.2	IMT	Distal flake		FALSE	0%	FALSE	
504	2	359139.99	6382639.96	1	South	PAD01	SAC17	Hunter	Ridge	(not mapped)	618	15	14	4	0.6	Silcrete	Distal flake		FALSE	0%	FALSE	
505	1	359159.97	6382640.02		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
505	2	359159.97	6382640.02		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
506	1	359179.97	6382620.02		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
506	2	359179.97	6382620.02		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
506	3	359179.97	6382620.02		South	PAD01	SAC17	Hunter	Ridge	(not mapped)												
507	1	358019.96	6383200.05	1	Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)	619	21	15	5	1.7	Silcrete	Proximal flake		FALSE	0%	FALSE	
507	2	358019.96	6383200.05		Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)												
507	3	358019.96	6383200.05		Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)												
507	4	358019.96	6383200.05		Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)												
508	1	357999.98	6383200		Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)												
508	2	357999.98	6383200		Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)												
509	1	358060	6383200	1	Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)	620	24	18	7	3.1	IMT	Proximal flake		FALSE	26-50%	FALSE	
509	1	358060	6383200	1	Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)	621	15	5	3	0.3	Silcrete	Retouched flake	Bondi point	FALSE	0%	FALSE	tip missing
509	2	358060	6383200		Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)												
510	1	358060	6383240		Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)												
510	2	358060	6383240		Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)												
510	3	358060	6383240		Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)												
511	1	358040	6383220		Middle	PAD16	SAC15	Branxton	Ridge	(not mapped)												
512	1	358879.95	6383300	1	Middle	PAD13	SAC23	Hunter	Ridge	(not mapped)	622	46	38	10	14.5	Silcrete	Flake		FALSE	0%	FALSE	
512	2	358879.95	6383300	1	Middle	PAD13	SAC23	Hunter	Ridge	(not mapped)	623	14	5	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
513	1	358900	6383279.96		Middle	PAD13	SAC23	Hunter	Ridge	(not mapped)												
513	2	358900	6383279.96		Middle	PAD13	SAC23	Hunter	Ridge	(not mapped)												
514	1	358880	6383260.06	1	Middle	PAD13	SAC23	Hunter	Ridge	(not mapped)	624	20	14	4	1	IMT	Flake		FALSE	0%	FALSE	
514	1	358880	6383260.06	1	Middle	PAD13	SAC23	Hunter	Ridge	(not mapped)	625	10	7	3	0.1	Silcrete	Distal flake		FALSE	0%	FALSE	

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
514	2	358880	6383260.06	1	Middle	PAD13	SAC23	Hunter	Ridge	(not mapped)	626	8	7	2	0.1	IMT	Proximal flake		FALSE	76-100%	FALSE	
514	2	358880	6383260.06	1	Middle	PAD13	SAC23	Hunter	Ridge	(not mapped)	627	8	6	2	0.1	IMT	Flake		FALSE	0%	FALSE	
10	1	358070.01	6384069.97		North	PAD27	SAC11	Rothbury	Slope	Low												
10	2	358070.01	6384069.97		North	PAD27	SAC11	Rothbury	Slope	Low												
11	1	358480.02	6384119.95		North	PAD18	SAC16	Rothbury	Drainage line	Low												
11	2	358480.02	6384119.95		North	PAD18	SAC16	Rothbury	Drainage line	Low												
11	3	358480.02	6384119.95		North	PAD18	SAC16	Rothbury	Drainage line	Low												
11	4	358480.02	6384119.95		North	PAD18	SAC16	Rothbury	Drainage line	Low												
12	1	358480.02	6384100	1	North	PAD18	SAC16	Rothbury	Drainage line	Low	16	16	9	4	0.5	Silcrete	Flake		FALSE	0%	FALSE	
12	2	358480.02	6384100	1	North	PAD18	SAC16	Rothbury	Drainage line	Low	17	27	7	5	1.2	Silcrete	Retouched flake	Backed artefact	FALSE	0%	FALSE	Broken butt
12	3	358480.02	6384100		North	PAD18	SAC16	Rothbury	Drainage line	Low												
100	3	358349.96	6383669.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	167	22	12	4	0.8	Silcrete	Flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	221	90	76	29	149	Silcrete	Flake		FALSE	0%	FALSE	Heavy reduction flake
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	222	79	59	21	77.4	Silcrete	Flake		FALSE	0%	FALSE	Heavy reduction flake
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	223	49	41	19	22	Silcrete	Distal flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	224	58	35	15	27.7	Silcrete	Conesplit flake		FALSE	1-25%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	225	54	22	18	21.1	Silcrete	xFlaked piece		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	226	32	20	5	3.6	Silcrete	Flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	227	27	16	13	4.6	Silcrete	xFlaked piece		FALSE	1-25%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	228	22	17	6	2.3	Silcrete	Flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	229	21	15	3	1.3	Silcrete	Flake		FALSE	76-100%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	230	18	14	5	1.1	Silcrete	Distal flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	231	19	13	4	0.9	Silcrete	Distal flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	232	17	10	4	0.7	Silcrete	Medial flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	233	18	6	4	0.4	Silcrete	xFlaked piece		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	234	13	9	3	0.4	Silcrete	xFlaked piece		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	235	12	8	2	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	236	11	9	3	0.2	Silcrete	Flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	237	11	8	3	0.2	Silcrete	Flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	238	10	6	1	0.1	Silcrete	Distal flake		FALSE	0%	FALSE	
110	2	358370.03	6383649.98	1	North	PAD20	SAC05	Rothbury	Ridge	Medium	239	9	5	1	0.1	Silcrete	Flake		FALSE	0%	FALSE	
303	3	358189.98	6384010.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	369	15	10	2	0.3	Silcrete	Flake		FALSE	0%	FALSE	
303	3	358189.98	6384010.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	370	12	9	1	0.2	Silcrete	Flake		FALSE	0%	FALSE	
358	1	358500.04	6383840.01	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	472	28	13	5	1.5	Silcrete	Flake		FALSE	1-25%	FALSE	
358	1	358500.04	6383840.01	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	473	20	17	3	1.3	Silcrete	Proximal flake		FALSE	0%	FALSE	
358	1	358500.04	6383840.01	1	North	PAD24	SAC06	Rothbury	Slope	(not mapped)	474	23	9	7	1.2	IMT	xFlaked piece		FALSE	0%	FALSE	
5	1	358109.98	6383990.04	1	North	PAD27	SAC11	Rothbury	Slope	Low	1	10	8	1	0.1	IMT	Flake		FALSE	0%	FALSE	
5	1	358109.98	6383990.04	1	North	PAD27	SAC11	Rothbury	Slope	Low	2	10	6	1	0.1	Silcrete	Flake		FALSE	0%	FALSE	
5	2	358109.98	6383990.04		North	PAD27	SAC11	Rothbury	Slope	Low												
6	1	358109.98	6384009.99	1	North	PAD27	SAC11	Rothbury	Slope	Low	3	20	8	2	0.6	IMT	Shatter		FALSE	0%	TRUE	in 2 fragments
6	1	358109.98	6384009.99	1	North	PAD27	SAC11	Rothbury	Slope	Low	4	13	4	3	0.1	IMT	Distal flake		FALSE	0%	FALSE	
6	2	358109.98	6384009.99	1	North	PAD27	SAC11	Rothbury	Slope	Low	5	29	17	5	2	IMT	Flake		FALSE	1-25%	FALSE	
6	2	358109.98	6384009.99	1	North	PAD27	SAC11	Rothbury	Slope	Low	6	9	8	1	0.1	IMT	Flake		FALSE	1-25%	FALSE	
6	3	358109.98	6384009.99	1	North	PAD27	SAC11	Rothbury	Slope	Low	7	18	12	4	0.5	IMT	Flake		FALSE	0%	FALSE	
8	1	358089.99	6384030.01		North	PAD27	SAC11	Rothbury	Slope	Low												
8	2	358089.99	6384030.01	1	North	PAD27	SAC11	Rothbury	Slope	Low	13	24	19	7	2.8	ZQuartzite	Proximal flake		FALSE	0%	FALSE	
8	2	358089.99	6384030.01	1	North	PAD27	SAC11	Rothbury	Slope	Low	14	12	9	2	0.3	Silcrete	Flake		FALSE	0%	FALSE	
8	3	358089.99	6384030.01		North	PAD27	SAC11	Rothbury	Slope	Low												
9	1	358089.99	6384049.97	1	North	PAD27	SAC11	Rothbury	Slope	Low	15	26	18	3	1.8	Silcrete	Flake		FALSE	0%	FALSE	
9	2	358089.99	6384049.97		North	PAD27	SAC11	Rothbury	Slope	Low												
7	1	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	18	97	64	45	244.6	Silcrete	Distal flake		FALSE	76-100%	FALSE	heat crazing cracks
7	1	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	19	60	39	10	30.1	Silcrete	Conesplit flake		FALSE	0%	FALSE	
7	1	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	20	44	33	21	28.3	Silcrete	Conesplit flake		FALSE	0%	FALSE	
7	1	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	21	31	18	9	4.4	IMT	Flake		FALSE	1-25%	FALSE	
7	1	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	22	22	16	4	1.4	Silcrete	Flake		FALSE	0%	FALSE	
7	1	358109.97	6384029.96	1	North	PAD27	SAC11	Rothbury	Slope	Low	23	21	11	8	1	IMT	Conesplit flake		FALSE	76-100%	FALSE	
7	2	358109.97	6384029.96		North	PAD27	SAC11	Rothbury	Slope	Low												
94	2	358230	6383670.04		North	PAD20	SAC05	Rothbury	Ridge	Medium												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
127	2	358580.03	6383319.95		Middle	PAD17	IF16	Branxton	Slope	Medium												
128	1	358580.03	6383299.99		Middle	PAD17	IF16	Branxton	Slope	Medium												
128	2	358580.03	6383299.99		Middle	PAD17	IF16	Branxton	Slope	Medium												
129	1	358559.96	6383300.04		Middle	PAD17	IF16	Branxton	Slope	Medium												
129	2	358559.96	6383300.04		Middle	PAD17	IF16	Branxton	Slope	Medium												
130	1	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	475	43	32	23	34.2	Silcrete	Core		FALSE	0%	FALSE	
130	1	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	476	30	12	10	2.6	Silcrete	Flake		FALSE	0%	FALSE	
130	1	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	477	22	10	8	1.5	IMT	Shatter		FALSE	0%	FALSE	
130	1	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	478	15	6	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
130	1	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	479	11	9	2	0.2	Silcrete	Proximal flake		FALSE	0%	FALSE	
130	1	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	480	9	5	2	0.1	IMT	Flake		FALSE	0%	FALSE	
130	1	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	481	7	5	4	0.1	Quartz	xFlaked piece		FALSE	0%	FALSE	
130	1	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	482	7	5	1	0.04	Silcrete	Medial flake		FALSE	0%	FALSE	
130	1	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	483	6	7	1	0.02	IMT	Medial flake		FALSE	0%	FALSE	
130	2	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	484	20	12	3	0.9	Silcrete	Medial flake		FALSE	0%	FALSE	
130	2	358879.95	6383279.96	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	485	17	12	4	0.8	Silcrete	Flake		FALSE	0%	FALSE	
131	1	358859.98	6383280.01		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
132	1	358840	6383279.95		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
133	1	358859.98	6383260.06		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
133	3	358859.98	6383260.06		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
134	1	358840	6383259.99		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
134	2	358840	6383259.99	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	487	11	7	2	0.3	Silcrete	Proximal flake		FALSE	0%	FALSE	
134	2	358840	6383259.99	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	488	6	4	1	0.02	IMT	Flake		FALSE	0%	FALSE	
135	1	358820.03	6383260.04		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
135	2	358820.03	6383260.04		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
136	1	358840.01	6383240.03		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
136	2	358840.01	6383240.03	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	489	16	12	4	0.7	Silcrete	Flake		FALSE	0%	FALSE	
137	1	358820.03	6383239.97		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
137	2	358820.03	6383239.97		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
138	1	358820.03	6383220.01		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
138	2	358820.03	6383220.01		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
139	1	358799.97	6383219.95		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
139	2	358799.97	6383219.95		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
140	1	358569.97	6383170		Middle	PAD14	IF15	Branxton	Drainage line	Low												
140	2	358569.97	6383170		Middle	PAD14	IF15	Branxton	Drainage line	Low												
140	3	358569.97	6383170		Middle	PAD14	IF15	Branxton	Drainage line	Low												
140	4	358569.97	6383170		Middle	PAD14	IF15	Branxton	Drainage line	Low												
141	1	358550	6383149.97		Middle	PAD14	IF15	Branxton	Drainage line	Low												
141	2	358550	6383149.97		Middle	PAD14	IF15	Branxton	Drainage line	Low												
142	1	358549.99	6383170.04		Middle	PAD14	IF15	Branxton	Drainage line	Low												
142	2	358549.99	6383170.04		Middle	PAD14	IF15	Branxton	Drainage line	Low												
142	3	358549.99	6383170.04		Middle	PAD14	IF15	Branxton	Drainage line	Low												
143	1	358430.01	6383040.03		Middle	PAD12	SAC13	Branxton	Drainage line	Medium												
144	1	358410.04	6383039.97		Middle	PAD12	SAC13	Branxton	Drainage line	Medium												
144	2	358410.04	6383039.97	1	Middle	PAD12	SAC13	Branxton	Drainage line	Medium	490	12	7	2	0.2	IMT	Flake		FALSE	0%	FALSE	
144	3	358410.04	6383039.97	1	Middle	PAD12	SAC13	Branxton	Drainage line	Medium	491	16	12	5	0.6	IMT	Proximal flake		FALSE	0%	TRUE	
144	4	358410.04	6383039.97		Middle	PAD12	SAC13	Branxton	Drainage line	Medium												
145	1	358410.04	6383060.04	1	Middle	PAD12	SAC13	Branxton	Drainage line	Medium	492	45	27	13	13.3	Silcrete	Flake		FALSE	26-50%	FALSE	
145	1	358410.04	6383060.04	1	Middle	PAD12	SAC13	Branxton	Drainage line	Medium	493	18	11	7	1.6	Silcrete	Proximal flake		FALSE	0%	TRUE	
145	2	358410.04	6383060.04		Middle	PAD12	SAC13	Branxton	Drainage line	Medium												
146	1	358389.97	6383040.01		Middle	PAD12	SAC13	Branxton	Drainage line	Medium												
146	2	358389.97	6383040.01		Middle	PAD12	SAC13	Branxton	Drainage line	Medium												
146	3	358389.97	6383040.01		Middle	PAD12	SAC13	Branxton	Drainage line	Medium												
147	1	358280.01	6383279.97		Middle	PAD16	SAC15	Branxton	Ridge	Low												
148	1	358280.02	6383260.02		Middle	PAD16	SAC15	Branxton	Ridge	Low												
149	1	358280.02	6383240.05		Middle	PAD16	SAC15	Branxton	Ridge	Low												
131	2	358859.98	6383280.01	1	Middle	PAD13	SAC23	Hunter	Ridge	Medium	486	27	20	11	5.7	Silcrete	Flake		FALSE	0%	FALSE	

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
131	3	358859.98	6383280.01		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
133	2	358859.98	6383260.06		Middle	PAD13	SAC23	Hunter	Ridge	Medium												
149	2	358280.02	6383240.05		Middle	PAD16	SAC15	Branxton	Ridge	Low												
150	1	358260.05	6383239.99		Middle	PAD16	SAC15	Branxton	Ridge	Low												
150	2	358260.05	6383239.99	1	Middle	PAD16	SAC15	Branxton	Ridge	Low	494	29	23	6	3.8	Silcrete	Distal flake		FALSE	26-50%	TRUE	
151	1	358260.04	6383259.95		Middle	PAD16	SAC15	Branxton	Ridge	Low												
151	2	358260.04	6383259.95		Middle	PAD16	SAC15	Branxton	Ridge	Low												
152	1	358260.04	6383280.02		Middle	PAD16	SAC15	Branxton	Ridge	Low												
153	1	358239.97	6383279.95	1	Middle	PAD16	SAC15	Branxton	Ridge	Low	495	101	49	21	119.4	Silcrete	Flake		TRUE	0%	TRUE	Heavy cones; detached incipient flake during excavation = 2 pieces
153	2	358239.97	6383279.95		Middle	PAD16	SAC15	Branxton	Ridge	Low												
154	1	358239.97	6383260		Middle	PAD16	SAC15	Branxton	Ridge	Low												
154	2	358239.97	6383260		Middle	PAD16	SAC15	Branxton	Ridge	Low												
155	1	358239.98	6383240.03	1	Middle	PAD16	SAC15	Branxton	Ridge	Low	496	31	24	10	6.4	IMT	xFlaked piece		FALSE	0%	FALSE	
156	1	358220	6383239.97		Middle	PAD16	SAC15	Branxton	Ridge	Low												
157	1	358219.99	6383260.05		Middle	PAD16	SAC15	Branxton	Ridge	Low												
157	2	358219.99	6383260.05		Middle	PAD16	SAC15	Branxton	Ridge	Low												
158	1	358219.99	6383280		Middle	PAD16	SAC15	Branxton	Ridge	Low												
159	1	358200.01	6383280.05		Middle	PAD16	SAC15	Branxton	Ridge	Low												
160	1	358200.02	6383259.98		Middle	PAD16	SAC15	Branxton	Ridge	Low												
160	2	358200.02	6383259.98		Middle	PAD16	SAC15	Branxton	Ridge	Low												
161	1	358200.02	6383240.02		Middle	PAD16	SAC15	Branxton	Ridge	Low												
162	1	358180.05	6383239.96		Middle	PAD16	SAC15	Branxton	Ridge	Low												
163	1	358180.04	6383260.03		Middle	PAD16	SAC15	Branxton	Ridge	Low												
163	2	358180.04	6383260.03		Middle	PAD16	SAC15	Branxton	Ridge	Low												
164	1	358180.04	6383279.99		Middle	PAD16	SAC15	Branxton	Ridge	Low												
164	2	358180.04	6383279.99		Middle	PAD16	SAC15	Branxton	Ridge	Low												
165	1	358159.98	6383240		Middle	PAD16	SAC15	Branxton	Ridge	High												
165	2	358159.98	6383240		Middle	PAD16	SAC15	Branxton	Ridge	High												
166	1	358159.98	6383220.05		Middle	PAD16	SAC15	Branxton	Ridge	High												
166	2	358159.98	6383220.05		Middle	PAD16	SAC15	Branxton	Ridge	High												
167	1	358159.97	6383259.97		Middle	PAD16	SAC15	Branxton	Ridge	High												
167	2	358159.97	6383259.97		Middle	PAD16	SAC15	Branxton	Ridge	High												
168	1	358159.97	6383280.03		Middle	PAD16	SAC15	Branxton	Ridge	High												
168	2	358159.97	6383280.03		Middle	PAD16	SAC15	Branxton	Ridge	High												
169	1	358139.99	6383279.97		Middle	PAD16	SAC15	Branxton	Ridge	High												
170	1	358140	6383260.02		Middle	PAD16	SAC15	Branxton	Ridge	High												
171	1	358140	6383240.05		Middle	PAD16	SAC15	Branxton	Ridge	High												
171	2	358140	6383240.05		Middle	PAD16	SAC15	Branxton	Ridge	High												
172	1	358140	6383219.99		Middle	PAD16	SAC15	Branxton	Ridge	High												
172	2	358140	6383219.99		Middle	PAD16	SAC15	Branxton	Ridge	High												
173	1	358120.02	6383220.03		Middle	PAD16	SAC15	Branxton	Ridge	High												
173	2	358120.02	6383220.03		Middle	PAD16	SAC15	Branxton	Ridge	High												
174	1	358120.02	6383239.99		Middle	PAD16	SAC15	Branxton	Ridge	High												
174	2	358120.02	6383239.99	1	Middle	PAD16	SAC15	Branxton	Ridge	High	497	29	16	4	2.1	Silcrete	Distal flake		TRUE	0%	FALSE	fine end UW scars
175	1	358120.02	6383259.95		Middle	PAD16	SAC15	Branxton	Ridge	High												
175	2	358120.02	6383259.95		Middle	PAD16	SAC15	Branxton	Ridge	High												
176	1	358120.02	6383280.02		Middle	PAD16	SAC15	Branxton	Ridge	High												
176	2	358120.02	6383280.02		Middle	PAD16	SAC15	Branxton	Ridge	High												
177	1	358100.04	6383260		Middle	PAD16	SAC15	Branxton	Ridge	High												
178	1	358100.04	6383240.04	1	Middle	PAD16	SAC15	Branxton	Ridge	High	498	24	15	7	2.4	Silcrete	Flake		FALSE	0%	TRUE	
178	1	358100.04	6383240.04	1	Middle	PAD16	SAC15	Branxton	Ridge	High	499	20	19	9	2.4	Silcrete	xFlaked piece		FALSE	0%	TRUE	
178	2	358100.04	6383240.04	1	Middle	PAD16	SAC15	Branxton	Ridge	High	500	57	17	9	7.6	Silcrete	Flake		FALSE	0%	FALSE	classic triangular section blade flake
179	1	358099.95	6383219.97		Middle	PAD16	SAC15	Branxton	Ridge	High												
179	2	358099.95	6383219.97	1	Middle	PAD16	SAC15	Branxton	Ridge	High	501	43	34	22	30.8	Quartz	Core		FALSE	0%	FALSE	
180	1	358079.98	6383220.02		Middle	PAD16	SAC15	Branxton	Ridge	High												
180	2	358079.98	6383220.02		Middle	PAD16	SAC15	Branxton	Ridge	High												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
181	1	358079.97	6383239.97		Middle	PAD16	SAC15	Branxton	Ridge	High												
181	2	358079.97	6383239.97	1	Middle	PAD16	SAC15	Branxton	Ridge	High	502	23	15	7	2.5	Silcrete	xFlaked piece		FALSE	1-25%	FALSE	
182	1	358079.97	6383260.05		Middle	PAD16	SAC15	Branxton	Ridge	High												
182	2	358079.97	6383260.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	503	16	8	3	0.3	IMT	xFlaked piece		FALSE	0%	FALSE	
183	1	358059.99	6383259.98		Middle	PAD16	SAC15	Branxton	Ridge	High												
183	2	358059.99	6383259.98		Middle	PAD16	SAC15	Branxton	Ridge	High												
184	1	358060	6383240.02	1	Middle	PAD16	SAC15	Branxton	Ridge	High	504	18	11	3	0.8	Silcrete	Flake		FALSE	0%	FALSE	
184	2	358060	6383240.02		Middle	PAD16	SAC15	Branxton	Ridge	High												
185	1	358060	6383219.95		Middle	PAD16	SAC15	Branxton	Ridge	High												
185	2	358060	6383219.95		Middle	PAD16	SAC15	Branxton	Ridge	High												
185	3	358060	6383219.95		Middle	PAD16	SAC15	Branxton	Ridge	High												
186	1	358040.03	6383220	1	Middle	PAD16	SAC15	Branxton	Ridge	High	505	19	9	2	0.4	Silcrete	Proximal flake		FALSE	0%	FALSE	
186	1	358040.03	6383220	1	Middle	PAD16	SAC15	Branxton	Ridge	High	506	14	8	3	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
186	2	358040.03	6383220		Middle	PAD16	SAC15	Branxton	Ridge	High												
187	1	358040.02	6383239.96		Middle	PAD16	SAC15	Branxton	Ridge	High												
188	1	358040.02	6383260.03	1	Middle	PAD16	SAC15	Branxton	Ridge	High	507	17	9	4	0.8	Silcrete	xFlaked piece		FALSE	0%	FALSE	
188	2	358040.02	6383260.03		Middle	PAD16	SAC15	Branxton	Ridge	High												
189	1	358020.04	6383259.97	1	Middle	PAD16	SAC15	Branxton	Ridge	High	508	20	16	4	1.1	IMT	Flake		FALSE	0%	FALSE	
189	1	358020.04	6383259.97	1	Middle	PAD16	SAC15	Branxton	Ridge	High	509	16	11	4	0.9	Silcrete	xFlaked piece		FALSE	0%	FALSE	
189	1	358020.04	6383259.97	1	Middle	PAD16	SAC15	Branxton	Ridge	High	510	14	9	3	0.3	Silcrete	xFlaked piece		FALSE	0%	FALSE	
189	1	358020.04	6383259.97	1	Middle	PAD16	SAC15	Branxton	Ridge	High	511	12	10	2	0.2	Silcrete	Shatter		FALSE	0%	FALSE	potlid
189	1	358020.04	6383259.97	1	Middle	PAD16	SAC15	Branxton	Ridge	High	512	10	7	1	0.1	Silcrete	Medial flake		FALSE	0%	FALSE	
189	2	358020.04	6383259.97		Middle	PAD16	SAC15	Branxton	Ridge	High												
189	3	358020.04	6383259.97	1	Middle	PAD16	SAC15	Branxton	Ridge	High	513	20	15	11	2.5	Silcrete	xFlaked piece		FALSE	0%	FALSE	
189	4	358020.04	6383259.97		Middle	PAD16	SAC15	Branxton	Ridge	High												
189	5	358020.04	6383259.97		Middle	PAD16	SAC15	Branxton	Ridge	High												
190	1	358019.95	6383240		Middle	PAD16	SAC15	Branxton	Ridge	High												
190	2	358019.95	6383240		Middle	PAD16	SAC15	Branxton	Ridge	High												
190	3	358019.95	6383240		Middle	PAD16	SAC15	Branxton	Ridge	High												
190	4	358019.95	6383240	1	Middle	PAD16	SAC15	Branxton	Ridge	High	514	26	20	8	2.7	IMT	Flake		FALSE	76-100%	FALSE	
190	5	358019.95	6383240		Middle	PAD16	SAC15	Branxton	Ridge	High												
191	1	358019.96	6383220.05		Middle	PAD16	SAC15	Branxton	Ridge	High												
191	2	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	515	20	16	4	1.4	Silcrete	Flake		FALSE	0%	FALSE	
191	2	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	516	22	17	5	1.4	Silcrete	Flake		FALSE	0%	FALSE	
191	2	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	517	20	11	3	0.5	IMT	Flake		FALSE	0%	FALSE	
191	2	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	518	22	6	3	0.4	IMT	Distal flake		FALSE	26-50%	FALSE	
191	2	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	519	18	7	4	0.5	Silcrete	Flake		FALSE	0%	FALSE	
191	2	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	520	18	12	3	0.6	Silcrete	Flake		FALSE	0%	FALSE	
191	2	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	521	14	10	4	0.6	Silcrete	Flake		FALSE	0%	FALSE	
191	3	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	524	10	7	2	0.1	IMT	Flake		FALSE	0%	FALSE	
191	3	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	525	14	10	2	0.4	IMT	Distal flake		FALSE	0%	FALSE	
191	3	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	522	39	28	14	12.4	IMT	Flake		FALSE	51-75%	FALSE	
191	3	358019.96	6383220.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	523	32	29	22	18.3	Silcrete	Shatter		FALSE	0%	TRUE	shattered edge through exc impact; weight of all frags
191	4	358019.96	6383220.05		Middle	PAD16	SAC15	Branxton	Ridge	High												
192	1	357999.98	6383219.98		Middle	PAD16	SAC15	Branxton	Ridge	High												
192	2	357999.98	6383219.98		Middle	PAD16	SAC15	Branxton	Ridge	High												
192	3	357999.98	6383219.98		Middle	PAD16	SAC15	Branxton	Ridge	High												
193	1	357999.97	6383240.05	1	Middle	PAD16	SAC15	Branxton	Ridge	High	526	37	19	9	7.2	Silcrete	Distal flake		FALSE	0%	FALSE	
193	2	357999.97	6383240.05		Middle	PAD16	SAC15	Branxton	Ridge	High												
194	1	358060.04	6383020.01		Middle	PAD15	SAC14	Branxton	Drainage line	Medium												
194	2	358060.04	6383020.01		Middle	PAD15	SAC14	Branxton	Drainage line	Medium												
194	3	358060.04	6383020.01		Middle	PAD15	SAC14	Branxton	Drainage line	Medium												
194	4	358060.04	6383020.01		Middle	PAD15	SAC14	Branxton	Drainage line	Medium												
194	5	358060.04	6383020.01		Middle	PAD15	SAC14	Branxton	Drainage line	Medium												
195	1	358020	6383000.03	1	Middle	PAD15	SAC14	Branxton	Drainage line	Medium	527	49	28	14	14.7	IMT	Flake		FALSE	51-75%	FALSE	
195	1	358020	6383000.03	1	Middle	PAD15	SAC14	Branxton	Drainage line	Medium	528	31	12	5	1.9	IMT	Flake		FALSE	0%	FALSE	
195	1	358020	6383000.03	1	Middle	PAD15	SAC14	Branxton	Drainage line	Medium	529	25	15	6	1.6	IMT	xFlaked piece		FALSE	0%	FALSE	
195	1	358020	6383000.03	1	Middle	PAD15	SAC14	Branxton	Drainage line	Medium	530	22	7	2	0.3	IMT	Distal flake		FALSE	0%	FALSE	

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
195	1	358020	6383000.03	1	Middle	PAD15	SAC14	Branxton	Drainage line	Medium	531	13	7	3	0.3	IMT	Distal flake		FALSE	0%	TRUE	
195	1	358020	6383000.03	1	Middle	PAD15	SAC14	Branxton	Drainage line	Medium	532	12	7	3	0.2	IMT	Flake		FALSE	0%	FALSE	
196	1	358219.96	6382959.97		Middle	PAD11	SAC22	Branxton	Slope	Low												
196	2	358219.96	6382959.97		Middle	PAD11	SAC22	Branxton	Slope	Low												
196	3	358219.96	6382959.97		Middle	PAD11	SAC22	Branxton	Slope	Low												
197	1	358199.98	6382960.02	1	Middle	PAD11	SAC22	Branxton	Slope	Low	533	17	13	7	0.8	Silcrete	Shatter		FALSE	0%	FALSE	
197	2	358199.98	6382960.02		Middle	PAD11	SAC22	Branxton	Slope	Low												
198	1	358199.98	6382940.05		Middle	PAD11	SAC22	Branxton	Slope	Low												
198	2	358199.98	6382940.05		Middle	PAD11	SAC22	Branxton	Slope	Low												
198	3	358199.98	6382940.05		Middle	PAD11	SAC22	Branxton	Slope	Low												
199	1	358219.96	6382940	1	Middle	PAD11	SAC22	Branxton	Slope	Low	534	10	6	3	0.2	Silcrete	Medial flake		FALSE	0%	FALSE	
199	2	358219.96	6382940		Middle	PAD11	SAC22	Branxton	Slope	Low												
199	3	358219.96	6382940		Middle	PAD11	SAC22	Branxton	Slope	Low												
200	1	358240.03	6382939.96		Middle	PAD11	SAC22	Branxton	Slope	Low												
200	2	358240.03	6382939.96	1	Middle	PAD11	SAC22	Branxton	Slope	Low	535	12	7	4	0.3	IMT	Flake		FALSE	0%	FALSE	
200	2	358240.03	6382939.96	1	Middle	PAD11	SAC22	Branxton	Slope	Low	536	6	6	1	0.02	Silcrete	Flake		FALSE	0%	FALSE	
201	1	358260.01	6382940.02		Middle	PAD11	SAC22	Branxton	Slope	Low												
201	2	358260.01	6382940.02	1	Middle	PAD11	SAC22	Branxton	Slope	Low	537	11	9	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
201	2	358260.01	6382940.02	1	Middle	PAD11	SAC22	Branxton	Slope	Low	538	6	6	1	0.04	Silcrete	Flake		FALSE	0%	FALSE	
201	2	358260.01	6382940.02	1	Middle	PAD11	SAC22	Branxton	Slope	Low	539	10	4	2	1	IMT	Flake		FALSE	0%	FALSE	
201	2	358260.01	6382940.02	1	Middle	PAD11	SAC22	Branxton	Slope	Low	540	7	6	1	0.03	IMT	Distal flake		FALSE	0%	FALSE	
201	2	358260.01	6382940.02	1	Middle	PAD11	SAC22	Branxton	Slope	Low	541	9	7	4	0.2	IMT	xFlaked piece		FALSE	1-25%	FALSE	
201	2	358260.01	6382940.02	1	Middle	PAD11	SAC22	Branxton	Slope	Low	542	9	7	4	0.2	IMT	xFlaked piece		FALSE	1-25%	FALSE	
201	2	358260.01	6382940.02	1	Middle	PAD11	SAC22	Branxton	Slope	Low	543	6	4	3	0.1	IMT	xFlaked piece		FALSE	0%	FALSE	
202	1	358240.03	6382920	1	Middle	PAD11	SAC22	Branxton	Slope	Low	544	19	14	3	0.7	IMT	Flake		FALSE	0%	FALSE	
202	2	358240.03	6382920	1	Middle	PAD11	SAC22	Branxton	Slope	Low	545	25	15	6	1.3	Silcrete	xFlaked piece		FALSE	0%	FALSE	
202	2	358240.03	6382920	1	Middle	PAD11	SAC22	Branxton	Slope	Low	546	14	10	5	0.6	Silcrete	Proximal flake		FALSE	0%	FALSE	
202	2	358240.03	6382920	1	Middle	PAD11	SAC22	Branxton	Slope	Low	547	8	7	2	0.1	Silcrete	Medial flake		FALSE	0%	FALSE	
203	1	358219.96	6382920.05		Middle	PAD11	SAC22	Branxton	Slope	Low												
204	1	358199.98	6382919.99		Middle	PAD11	SAC22	Branxton	Slope	Low												
204	2	358199.98	6382919.99	1	Middle	PAD11	SAC22	Branxton	Slope	Low	548	11	9	3	0.2	Silcrete	Proximal flake		FALSE	0%	FALSE	
205	1	358420.04	6382680.04		South	PAD10	PAD10	Branxton	Ridge	Medium												
206	1	358399.97	6382679.98		South	PAD10	PAD10	Branxton	Ridge	Medium												
207	1	358380	6382680.03		South	PAD10	PAD10	Branxton	Ridge	Medium												
207	2	358380	6382680.03		South	PAD10	PAD10	Branxton	Ridge	Medium												
208	1	358380	6382659.95		South	PAD10	PAD10	Branxton	Ridge	Medium												
208	2	358380	6382659.95		South	PAD10	PAD10	Branxton	Ridge	Medium												
208	3	358380	6382659.95		South	PAD10	PAD10	Branxton	Ridge	Medium												
226	1	359120.01	6382600.05	1	South	PAD01	SAC17	Hunter	Ridge	Medium	570	11	9	1	0.2	Silcrete	Proximal flake		FALSE	0%	FALSE	
226	2	359120.01	6382600.05		South	PAD01	SAC17	Hunter	Ridge	Medium												
226	3	359120.01	6382600.05		South	PAD01	SAC17	Hunter	Ridge	Medium												
227	1	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	571	31	10	4	0.9	Chert	Flake		FALSE	0%	FALSE	
227	1	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	572	9	8	4	0.3	Silcrete	Distal flake		FALSE	1-25%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	573	18	14	6	1.5	Silcrete	Flake		FALSE	51-75%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	574	12	12	2	0.3	Silcrete	Flake		FALSE	0%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	575	13	10	4	0.5	Silcrete	Medial flake		FALSE	76-100%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	576	12	7	3	0.2	Silcrete	Distal flake		FALSE	0%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	577	11	9	3	0.4	Silcrete	Flake		FALSE	0%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	578	8	6	3	0.2	Silcrete	Medial flake		FALSE	26-50%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	579	11	7	4	0.3	Silcrete	Distal flake		FALSE	26-50%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	580	14	10	6	0.7	Chert	Medial flake		FALSE	0%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	581	13	9	3	0.2	IMT	Distal flake		FALSE	0%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	582	7	4	1	0.03	IMT	Medial flake		FALSE	0%	FALSE	
227	2	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	583	10	4	1	0.03	IMT	Distal flake		FALSE	0%	FALSE	
227	3	359139.99	6382580.04		South	PAD01	SAC17	Hunter	Ridge	Medium												
227	4	359139.99	6382580.04	1	South	PAD01	SAC17	Hunter	Ridge	Medium	584	14	8	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
227	5	359139.99	6382580.04		South	PAD01	SAC17	Hunter	Ridge	Medium												
228	1	359159.97	6382579.99		South	PAD01	SAC17	Hunter	Ridge	Medium												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
229	1	359180.04	6382580.05	1	South	PAD01	SAC17	Hunter	Ridge	Medium	585	34	28	14	9.8	Quartz	Core		FALSE	1-25%	FALSE	classic bipolar pebble core
229	1	359180.04	6382580.05	1	South	PAD01	SAC17	Hunter	Ridge	Medium	586	21	14	3	0.9	Silcrete	Flake		FALSE	0%	FALSE	
229	2	359180.04	6382580.05		South	PAD01	SAC17	Hunter	Ridge	Medium												
230	1	359180.04	6382559.98		South	PAD01	SAC17	Hunter	Ridge	Medium												
230	2	359180.04	6382559.98	1	South	PAD01	SAC17	Hunter	Ridge	Medium	587	14	8	2	0.2	Silcrete	Shatter		FALSE	0%	FALSE	
231	1	359159.97	6382560.03		South	PAD01	SAC17	Hunter	Ridge	Medium												
231	2	359159.97	6382560.03	1	South	PAD01	SAC17	Hunter	Ridge	Medium	588	9	6	1	0.1	Silcrete	Medial flake		FALSE	0%	FALSE	
232	1	358940.02	6382079.96		South	PAD04	SAC30	Hunter	Slope	Medium												
232	2	358940.02	6382079.96		South	PAD04	SAC30	Hunter	Slope	Medium												
233	1	358960	6382080.02		South	PAD04	SAC30	Hunter	Slope	Medium												
233	2	358960	6382080.02		South	PAD04	SAC30	Hunter	Slope	Medium												
233	3	358960	6382080.02		South	PAD04	SAC30	Hunter	Slope	Medium												
234	1	358979.97	6382079.97		South	PAD04	SAC30	Hunter	Slope	Medium												
234	2	358979.97	6382079.97		South	PAD04	SAC30	Hunter	Slope	Medium												
234	3	358979.97	6382079.97	1	South	PAD04	SAC30	Hunter	Slope	Medium	589	27	17	6	1.9	IMT	Shatter		FALSE	0%	FALSE	
234	4	358979.97	6382079.97		South	PAD04	SAC30	Hunter	Slope	Medium												
235	1	358979.97	6382060.01	1	South	PAD04	SAC30	Hunter	Slope	Medium	590	28	24	15	7.8	Silcrete	Shatter		FALSE	26-50%	FALSE	
235	2	358979.97	6382060.01		South	PAD04	SAC30	Hunter	Slope	Medium												
236	1	358960	6382059.95		South	PAD04	SAC30	Hunter	Slope	Medium												
236	2	358960	6382059.95		South	PAD04	SAC30	Hunter	Slope	Medium												
237	1	358940.02	6382060		South	PAD04	SAC30	Hunter	Slope	Medium												
237	2	358940.02	6382060	1	South	PAD04	SAC30	Hunter	Slope	Medium	591	25	12	10	2.4	Silcrete	Shatter		FALSE	1-25%	FALSE	
237	3	358940.02	6382060		South	PAD04	SAC30	Hunter	Slope	Medium												
238	1	358960	6382039.99		South	PAD04	SAC30	Hunter	Slope	Medium												
238	2	358960	6382039.99		South	PAD04	SAC30	Hunter	Slope	Medium												
239	1	358979.97	6382040.05	1	South	PAD04	SAC30	Hunter	Slope	Medium	592	13	8	1	0.2	Silcrete	Flake		FALSE	0%	FALSE	
240	1	358759.98	6382119.99		South	PAD03	SAC29	Hunter	Ridge	Low												
240	2	358759.98	6382119.99		South	PAD03	SAC29	Hunter	Ridge	Low												
240	3	358759.98	6382119.99		South	PAD03	SAC29	Hunter	Ridge	Low												
241	1	358780.04	6382120.05		South	PAD03	SAC29	Hunter	Ridge	Low												
241	2	358780.04	6382120.05		South	PAD03	SAC29	Hunter	Ridge	Low												
241	3	358780.04	6382120.05		South	PAD03	SAC29	Hunter	Ridge	Low												
242	1	358780.05	6382099.97		South	PAD03	SAC29	Hunter	Ridge	Low												
242	2	358780.05	6382099.97	1	South	PAD03	SAC29	Hunter	Ridge	Low	593	30	21	4	2.3	Silcrete	Distal flake		FALSE	0%	FALSE	
243	1	358759.98	6382100.02		South	PAD03	SAC29	Hunter	Ridge	Low												
243	2	358759.98	6382100.02		South	PAD03	SAC29	Hunter	Ridge	Low												
245	1	358740	6382080		South	PAD03	SAC29	Hunter	Ridge	Low												
245	2	358740	6382080		South	PAD03	SAC29	Hunter	Ridge	Low												
245	3	358740	6382080		South	PAD03	SAC29	Hunter	Ridge	Low												
245	4	358740	6382080		South	PAD03	SAC29	Hunter	Ridge	Low												
246	1	358720.03	6382080.05		South	PAD03	SAC29	Hunter	Ridge	Low												
246	2	358720.03	6382080.05		South	PAD03	SAC29	Hunter	Ridge	Low												
246	3	358720.03	6382080.05		South	PAD03	SAC29	Hunter	Ridge	Low												
246	4	358720.03	6382080.05		South	PAD03	SAC29	Hunter	Ridge	Low												
247	1	358740	6382060.04		South	PAD03	SAC29	Hunter	Ridge	Low												
247	2	358740	6382060.04		South	PAD03	SAC29	Hunter	Ridge	Low												
248	1	358759.98	6382059.99		South	PAD03	SAC29	Hunter	Ridge	Low												
248	2	358759.98	6382059.99		South	PAD03	SAC29	Hunter	Ridge	Low												
249	1	358779.96	6382060.05		South	PAD03	SAC29	Hunter	Ridge	Low												
249	2	358779.96	6382060.05		South	PAD03	SAC29	Hunter	Ridge	Low												
250	1	358800.03	6382060	1	South	PAD03	SAC29	Hunter	Ridge	Low	594	26	16	11	4.5	Silcrete	Proximal flake		FALSE	0%	FALSE	
250	2	358800.03	6382060		South	PAD03	SAC29	Hunter	Ridge	Low												
250	3	358800.03	6382060	1	South	PAD03	SAC29	Hunter	Ridge	Low	595	45	29	15	19.3	IMT	Core		FALSE	76-100%	FALSE	
250	4	358800.03	6382060	1	South	PAD03	SAC29	Hunter	Ridge	Low	596	28	13	6	1.9	Silcrete	Flake		FALSE	0%	FALSE	
250	4	358800.03	6382060	1	South	PAD03	SAC29	Hunter	Ridge	Low	597	12	8	3	0.2	IMT	Flake		FALSE	0%	FALSE	
251	1	358800.02	6382079.97		South	PAD03	SAC29	Hunter	Ridge	Low												
251	2	358800.02	6382079.97		South	PAD03	SAC29	Hunter	Ridge	Low												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
252	1	358779.96	6382080.02		South	PAD03	SAC29	Hunter	Ridge	Low												
209	1	358399.97	6382660.02		South	PAD10	PAD10	Branxton	Ridge	Medium												
209	2	358399.97	6382660.02		South	PAD10	PAD10	Branxton	Ridge	Medium												
209	3	358399.97	6382660.02		South	PAD10	PAD10	Branxton	Ridge	Medium												
210	1	358380.01	6382639.99		South	PAD10	PAD10	Branxton	Ridge	Medium												
210	2	358380.01	6382639.99		South	PAD10	PAD10	Branxton	Ridge	Medium												
211	1	358360.03	6382660		South	PAD10	PAD10	Branxton	Ridge	Medium												
211	2	358360.03	6382660		South	PAD10	PAD10	Branxton	Ridge	Medium												
212	1	358860	6382380.01	1	South	PAD02	IF13	Branxton	Slope	Medium	549	26	24	7	2.7	IMT	Medial flake		FALSE	0%	FALSE	
212	2	358860	6382380.01		South	PAD02	IF13	Branxton	Slope	Medium												
212	3	358860	6382380.01		South	PAD02	IF13	Branxton	Slope	Medium												
213	1	358860	6382360.05		South	PAD02	IF13	Branxton	Slope	Medium												
213	2	358860	6382360.05		South	PAD02	IF13	Branxton	Slope	Medium												
213	3	358860	6382360.05		South	PAD02	IF13	Branxton	Slope	Medium												
213	4	358860	6382360.05		South	PAD02	IF13	Branxton	Slope	Medium												
214	1	358840.03	6382340.02		South	PAD02	IF13	Branxton	Slope	Medium												
214	2	358840.03	6382340.02	1	South	PAD02	IF13	Branxton	Slope	Medium	550	9	6	2	0.1	IMT	Distal flake		FALSE	0%	FALSE	
215	1	358840.03	6382359.98		South	PAD02	IF13	Branxton	Slope	Medium												
215	2	358840.03	6382359.98		South	PAD02	IF13	Branxton	Slope	Medium												
215	3	358840.03	6382359.98		South	PAD02	IF13	Branxton	Slope	Medium												
215	4	358840.03	6382359.98		South	PAD02	IF13	Branxton	Slope	Medium												
216	1	358840.03	6382379.95		South	PAD02	IF13	Branxton	Slope	Medium												
216	2	358840.03	6382379.95		South	PAD02	IF13	Branxton	Slope	Medium												
216	3	358840.03	6382379.95		South	PAD02	IF13	Branxton	Slope	Medium												
216	4	358840.03	6382379.95		South	PAD02	IF13	Branxton	Slope	Medium												
217	1	358819.96	6382360.03		South	PAD02	IF13	Branxton	Slope	Medium												
217	2	358819.96	6382360.03		South	PAD02	IF13	Branxton	Slope	Medium												
217	3	358819.96	6382360.03		South	PAD02	IF13	Branxton	Slope	Medium												
217	4	358819.96	6382360.03		South	PAD02	IF13	Branxton	Slope	Medium												
218	1	358819.96	6382339.96		South	PAD02	IF13	Branxton	Slope	Medium												
218	2	358819.96	6382339.96		South	PAD02	IF13	Branxton	Slope	Medium												
218	3	358819.96	6382339.96		South	PAD02	IF13	Branxton	Slope	Medium												
218	4	358819.96	6382339.96		South	PAD02	IF13	Branxton	Slope	Medium												
219	1	358860.01	6382339.97		South	PAD02	IF13	Branxton	Slope	Medium												
219	2	358860.01	6382339.97		South	PAD02	IF13	Branxton	Slope	Medium												
219	3	358860.01	6382339.97		South	PAD02	IF13	Branxton	Slope	Medium												
219	4	358860.01	6382339.97		South	PAD02	IF13	Branxton	Slope	Medium												
220	1	359120.01	6382620.01		South	PAD01	SAC17	Hunter	Ridge	Medium												
220	2	359120.01	6382620.01		South	PAD01	SAC17	Hunter	Ridge	Medium												
220	3	359120.01	6382620.01		South	PAD01	SAC17	Hunter	Ridge	Medium												
220	4	359120.01	6382620.01		South	PAD01	SAC17	Hunter	Ridge	Medium												
221	1	359139.99	6382619.96		South	PAD01	SAC17	Hunter	Ridge	Medium												
221	2	359139.99	6382619.96	1	South	PAD01	SAC17	Hunter	Ridge	Medium	551	20	18	5	1.4	IMT	Flake		FALSE	0%	FALSE	
221	2	359139.99	6382619.96	1	South	PAD01	SAC17	Hunter	Ridge	Medium	552	19	13	4	0.8	IMT	Flake		FALSE	0%	FALSE	
221	2	359139.99	6382619.96	1	South	PAD01	SAC17	Hunter	Ridge	Medium	553	13	9	2	0.1	Silcrete	Distal flake		FALSE	0%	FALSE	
221	3	359139.99	6382619.96	1	South	PAD01	SAC17	Hunter	Ridge	Medium	554	28	18	3	1.3	IMT	Flake		FALSE	0%	TRUE	
221	3	359139.99	6382619.96	1	South	PAD01	SAC17	Hunter	Ridge	Medium	555	17	8	4	0.6	Silcrete	Flake		FALSE	0%	FALSE	
221	3	359139.99	6382619.96	1	South	PAD01	SAC17	Hunter	Ridge	Medium	556	9	7	3	0.2	Silcrete	Proximal flake		FALSE	0%	FALSE	
221	4	359139.99	6382619.96	1	South	PAD01	SAC17	Hunter	Ridge	Medium	557	12	8	4	0.3	IMT	Flake		FALSE	0%	FALSE	
221	4	359139.99	6382619.96	1	South	PAD01	SAC17	Hunter	Ridge	Medium	558	11	8	2	0.2	IMT	Flake		FALSE	0%	FALSE	
221	4	359139.99	6382619.96	1	South	PAD01	SAC17	Hunter	Ridge	Medium	559	10	7	2	0.2	IMT	Medial flake		FALSE	0%	FALSE	
221	4	359139.99	6382619.96	1	South	PAD01	SAC17	Hunter	Ridge	Medium	560	11	8	2	0.2	IMT	Distal flake		FALSE	0%	TRUE	
222	1	359159.97	6382620.02	1	South	PAD01	SAC17	Hunter	Ridge	Medium	561	20	14	5	1.1	IMT	Retouched flake	Geometric microlith	FALSE	0%	FALSE	
222	2	359159.97	6382620.02		South	PAD01	SAC17	Hunter	Ridge	Medium												
222	3	359159.97	6382620.02		South	PAD01	SAC17	Hunter	Ridge	Medium												
223	1	359180.04	6382600.01	1	South	PAD01	SAC17	Hunter	Ridge	Medium	562	13	8	1	0.2	IMT	Flake		FALSE	0%	FALSE	

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
223	1	359180.04	6382600.01	1	South	PAD01	SAC17	Hunter	Ridge	Medium	563	16	13	2	0.4	Silcrete	Flake		FALSE	0%	FALSE	
223	1	359180.04	6382600.01	1	South	PAD01	SAC17	Hunter	Ridge	Medium	564	14	10	3	0.3	IMT	Distal flake		FALSE	0%	FALSE	
223	2	359180.04	6382600.01		South	PAD01	SAC17	Hunter	Ridge	Medium												
223	3	359180.04	6382600.01		South	PAD01	SAC17	Hunter	Ridge	Medium												
224	1	359159.97	6382599.95		South	PAD01	SAC17	Hunter	Ridge	Medium												
224	2	359159.97	6382599.95		South	PAD01	SAC17	Hunter	Ridge	Medium												
224	3	359159.97	6382599.95	1	South	PAD01	SAC17	Hunter	Ridge	Medium	565	23	15	6	1.7	IMT	Flake		FALSE	26-50%	FALSE	
224	3	359159.97	6382599.95	1	South	PAD01	SAC17	Hunter	Ridge	Medium	566	32	19	6	2.8	IMT	Flake		FALSE	76-100%	TRUE	broken in 3 frags
224	4	359159.97	6382599.95	1	South	PAD01	SAC17	Hunter	Ridge	Medium	567	44	33	27	38.4	Quartz	Core		FALSE	1-25%	FALSE	
224	4	359159.97	6382599.95	1	South	PAD01	SAC17	Hunter	Ridge	Medium	568	10	6	2	0.1	IMT	Medial flake		FALSE	0%	FALSE	
224	4	359159.97	6382599.95	1	South	PAD01	SAC17	Hunter	Ridge	Medium	569	8	4	2	0.04	IMT	Distal flake		FALSE	0%	FALSE	
225	1	359139.99	6382600		South	PAD01	SAC17	Hunter	Ridge	Medium												
225	2	359139.99	6382600		South	PAD01	SAC17	Hunter	Ridge	Medium												
225	3	359139.99	6382600		South	PAD01	SAC17	Hunter	Ridge	Medium												
228	2	359159.97	6382579.99		South	PAD01	SAC17	Hunter	Ridge	Medium												
231	3	359159.97	6382560.03		South	PAD01	SAC17	Hunter	Ridge	Medium												
252	2	358779.96	6382080.02		South	PAD03	SAC29	Hunter	Ridge	Low												
253	1	358759.98	6382079.96		South	PAD03	SAC29	Hunter	Ridge	Low												
253	2	358759.98	6382079.96		South	PAD03	SAC29	Hunter	Ridge	Low												
254	1	358800.03	6382040.05		South	PAD03	SAC29	Hunter	Ridge	Low												
255	1	358779.96	6382039.99		South	PAD03	SAC29	Hunter	Ridge	Low												
255	4	358779.96	6382039.99		South	PAD03	SAC29	Hunter	Ridge	Low												
256	1	358759.98	6382040.04		South	PAD03	SAC29	Hunter	Ridge	Low												
255	2	358779.96	6382039.99		South	PAD03	SAC29	Hunter	Ridge	Low												
255	3	358779.96	6382039.99		South	PAD03	SAC29	Hunter	Ridge	Low												
256	2	358759.98	6382040.04		South	PAD03	SAC29	Hunter	Ridge	Low												
257	1	358740.01	6382039.97		South	PAD03	SAC29	Hunter	Ridge	Low												
257	2	358740.01	6382039.97		South	PAD03	SAC29	Hunter	Ridge	Low												
258	1	358580.04	6381980.03		South	PAD05	IF14	Branxton	Slope	Medium												
258	2	358580.04	6381980.03		South	PAD05	IF14	Branxton	Slope	Medium												
259	1	358580.04	6381959.96	1	South	PAD05	IF14	Branxton	Slope	Medium	598	17	12	2	0.5	Silcrete	Flake		FALSE	0%	FALSE	
259	2	358580.04	6381959.96		South	PAD05	IF14	Branxton	Slope	Medium												
260	1	358559.98	6381960		South	PAD05	IF14	Branxton	Slope	Medium												
260	2	358559.98	6381960		South	PAD05	IF14	Branxton	Slope	Medium												
260	3	358559.98	6381960		South	PAD05	IF14	Branxton	Slope	Medium												
261	1	358559.98	6381940.05		South	PAD05	IF14	Branxton	Slope	Medium												
261	2	358559.98	6381940.05		South	PAD05	IF14	Branxton	Slope	Medium												
262	1	358579.95	6381940		South	PAD05	IF14	Branxton	Slope	Medium												
262	2	358579.95	6381940		South	PAD05	IF14	Branxton	Slope	Medium												
263	1	358559.99	6381919.97	1	South	PAD05	IF14	Branxton	Slope	Medium	599	38	24	13	8.3	Silcrete	Flake		FALSE	0%	FALSE	
263	2	358559.99	6381919.97		South	PAD05	IF14	Branxton	Slope	Medium												
265	1	358540.01	6381939.99		South	PAD05	IF14	Branxton	Slope	Medium												
265	2	358540.01	6381939.99		South	PAD05	IF14	Branxton	Slope	Medium												
266	1	358420	6381840.03		South	PAD06	PAD06	Branxton	Slope	Low												
266	2	358420	6381840.03		South	PAD06	PAD06	Branxton	Slope	Low												
266	3	358420	6381840.03		South	PAD06	PAD06	Branxton	Slope	Low												
267	1	358400.03	6381839.96		South	PAD06	PAD06	Branxton	Slope	Low												
267	2	358400.03	6381839.96		South	PAD06	PAD06	Branxton	Slope	Low												
268	1	358379.96	6381840.01		South	PAD06	PAD06	Branxton	Slope	Low												
268	2	358379.96	6381840.01		South	PAD06	PAD06	Branxton	Slope	Low												
269	1	358379.96	6381820.05		South	PAD06	PAD06	Branxton	Slope	Low												
269	2	358379.96	6381820.05		South	PAD06	PAD06	Branxton	Slope	Low												
269	3	358379.96	6381820.05		South	PAD06	PAD06	Branxton	Slope	Low												
270	1	358400.03	6381820		South	PAD06	PAD06	Branxton	Slope	Low												
270	2	358400.03	6381820		South	PAD06	PAD06	Branxton	Slope	Low												
271	1	358420	6381819.95		South	PAD06	PAD06	Branxton	Slope	Low												
271	2	358420	6381819.95		South	PAD06	PAD06	Branxton	Slope	Low												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
271	3	358420	6381819.95		South	PAD06	PAD06	Branxton	Slope	Low												
272	1	358420.01	6381799.99		South	PAD06	PAD06	Branxton	Slope	Low												
272	2	358420.01	6381799.99		South	PAD06	PAD06	Branxton	Slope	Low												
273	1	358400.03	6381800.03		South	PAD06	PAD06	Branxton	Slope	Low												
273	2	358400.03	6381800.03		South	PAD06	PAD06	Branxton	Slope	Low												
273	3	358400.03	6381800.03		South	PAD06	PAD06	Branxton	Slope	Low												
273	4	358400.03	6381800.03		South	PAD06	PAD06	Branxton	Slope	Low												
274	1	358379.97	6381799.97		South	PAD06	PAD06	Branxton	Slope	Low												
274	2	358379.97	6381799.97		South	PAD06	PAD06	Branxton	Slope	Low												
274	3	358379.97	6381799.97		South	PAD06	PAD06	Branxton	Slope	Low												
275	1	358230	6382189.95		South	PAD09	PAD09	Branxton	Ridge	Medium												
275	2	358230	6382189.95		South	PAD09	PAD09	Branxton	Ridge	Medium												
276	1	358229.99	6382210.03		South	PAD09	PAD09	Branxton	Ridge	Medium												
276	2	358229.99	6382210.03		South	PAD09	PAD09	Branxton	Ridge	Medium												
276	3	358229.99	6382210.03		South	PAD09	PAD09	Branxton	Ridge	Medium												
277	1	358179.97	6382159.97		South	PAD08	PAD08	Branxton	Ridge	Medium												
277	2	358179.97	6382159.97		South	PAD08	PAD08	Branxton	Ridge	Medium												
278	1	358160	6382160.01		South	PAD08	PAD08	Branxton	Ridge	Medium												
278	2	358160	6382160.01		South	PAD08	PAD08	Branxton	Ridge	Medium												
278	3	358160	6382160.01		South	PAD08	PAD08	Branxton	Ridge	Medium												
279	1	358140.03	6382139.99		South	PAD08	PAD08	Branxton	Ridge	Medium												
279	2	358140.03	6382139.99		South	PAD08	PAD08	Branxton	Ridge	Medium												
279	3	358140.03	6382139.99		South	PAD08	PAD08	Branxton	Ridge	Medium												
280	1	358160	6382140.05		South	PAD08	PAD08	Branxton	Ridge	Medium												
281	1	358179.98	6382140		South	PAD08	PAD08	Branxton	Ridge	Medium												
281	2	358179.98	6382140		South	PAD08	PAD08	Branxton	Ridge	Medium												
282	1	358160.01	6382119.98		South	PAD08	PAD08	Branxton	Ridge	Medium												
282	2	358160.01	6382119.98		South	PAD08	PAD08	Branxton	Ridge	Medium												
284	1	357800.04	6381960.03		South	PAD07	PAD07	Branxton	Ridge	Medium												
284	2	357800.04	6381960.03		South	PAD07	PAD07	Branxton	Ridge	Medium												
285	1	357779.98	6381940.01		South	PAD07	PAD07	Branxton	Ridge	Medium												
285	2	357779.98	6381940.01		South	PAD07	PAD07	Branxton	Ridge	Medium												
286	1	357779.98	6381920.05		South	PAD07	PAD07	Branxton	Ridge	Medium												
286	2	357779.98	6381920.05		South	PAD07	PAD07	Branxton	Ridge	Medium												
287	1	358089.98	6384070.04		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
287	2	358089.98	6384070.04		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
287	3	358089.98	6384070.04		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
288	1	358109.99	6383969.96		North	PAD27	SAC11	Rothbury	Slope	Low												
288	2	358109.99	6383969.96		North	PAD27	SAC11	Rothbury	Slope	Low												
288	3	358109.99	6383969.96		North	PAD27	SAC11	Rothbury	Slope	Low												
289	1	358109.99	6383950.01		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
289	2	358109.99	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	260	33	23	7	5.8	IMT	Core		FALSE	0%	FALSE	exquisite blade core on flake body
289	2	358109.99	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	261	11	6	2	0.1	IMT	Medial flake		FALSE	0%	FALSE	
289	3	358109.99	6383950.01		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
290	1	358109.97	6384050.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	262	11	6	2	0.1	Silcrete	Medial flake		FALSE	0%	FALSE	
290	2	358109.97	6384050.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	263	43	36	21	31.2	IMT	Core		FALSE	76-100%	FALSE	Pebble body
290	2	358109.97	6384050.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	264	25	18	4	1.7	Silcrete	Flake		FALSE	0%	FALSE	
290	2	358109.97	6384050.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	265	21	15	10	2.9	Silcrete	Conesplit flake		FALSE	0%	FALSE	shatter surface
290	3	358109.97	6384050.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	266	32	15	3	1.6	IMT	Flake		FALSE	0%	FALSE	
290	3	358109.97	6384050.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	267	19	16	4	1.1	Silcrete	Proximal flake		FALSE	0%	FALSE	
290	3	358109.97	6384050.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	268	19	11	5	0.8	Silcrete	Shatter		FALSE	0%	FALSE	
290	3	358109.97	6384050.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	269	21	6	2	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
290	3	358109.97	6384050.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	270	17	12	4	0.6	Silcrete	Proximal flake		FALSE	0%	FALSE	
291	1	358109.96	6384069.99		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
291	2	358109.96	6384069.99	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	271	22	11	3	0.6	Silcrete	Flake		FALSE	0%	FALSE	
292	1	358109.96	6384089.95		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
292	2	358109.96	6384089.95		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
292	3	358109.96	6384089.95		North	PAD27	SACII	Rothbury	Slope	(not mapped)												
292	4	358109.96	6384089.95		North	PAD27	SACII	Rothbury	Slope	(not mapped)												
293	1	358130.03	6384090.02		North	PAD27	SACII	Rothbury	Slope	(not mapped)												
293	2	358130.03	6384090.02		North	PAD27	SACII	Rothbury	Slope	(not mapped)												
294	1	358130.03	6384069.94	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	272	48	34	28	40.7	Silcrete	Core		FALSE	26-50%	FALSE	classic blade core on flake body large initiation evident
294	1	358130.03	6384069.94	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	273	24	7	3	0.5	Silcrete	Retouched flake	Incomplete backed artefact	FALSE	0%	FALSE	distal backing traces and tip snap before abandonment
294	1	358130.03	6384069.94	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	274	19	9	4	0.9	Silcrete	Proximal flake		FALSE	0%	FALSE	
294	1	358130.03	6384069.94	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	275	12	9	2	0.2	Silcrete	Medial flake		FALSE	0%	FALSE	
294	2	358130.03	6384069.94	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	276	16	9	7	0.6	IMT	xFlaked piece		FALSE	0%	FALSE	
295	1	358130.04	6384049.99		North	PAD27	SACII	Rothbury	Slope	(not mapped)												
295	2	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	277	31	19	3	2.3	Silcrete	Proximal flake		FALSE	0%	FALSE	classic blade with prepared platform
295	2	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	278	36	24	8	4.4	Silcrete	Flake		FALSE	0%	FALSE	
295	2	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	279	25	19	4	1.1	IMT	Proximal flake		FALSE	0%	FALSE	
295	2	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	280	20	16	5	1.4	IMT	Distal flake		FALSE	76-100%	FALSE	
295	2	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	281	15	13	4	0.6	Silcrete	Proximal flake		FALSE	0%	FALSE	
295	2	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	282	21	10	3	0.6	Silcrete	Proximal flake		FALSE	0%	TRUE	in 2 fragments
295	2	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	283	14	9	3	0.4	IMT	Flake		FALSE	0%	FALSE	
295	2	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	284	13	8	1	0.1	IMT	Distal flake		FALSE	0%	FALSE	
295	3	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	285	22	11	3	0.6	IMT	Flake		FALSE	0%	FALSE	
295	3	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	286	13	7	1	0.1	Silcrete	Distal flake		FALSE	0%	FALSE	
295	3	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	287	21	15	6	1.7	IMT	Distal flake		FALSE	0%	TRUE	
295	3	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	288	13	8	2	0.2	Silcrete	Proximal flake		FALSE	0%	FALSE	
295	3	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	289	8	8	3	0.2	Silcrete	Flake		FALSE	0%	FALSE	
295	3	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	290	9	6	3	0.2	Silcrete	Flake		FALSE	0%	FALSE	
295	3	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	291	13	6	3	0.2	Silcrete	Flake		FALSE	0%	FALSE	
295	3	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	292	13	8	3	0.3	Silcrete	Proximal flake		FALSE	0%	FALSE	
295	3	358130.04	6384049.99	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	293	11	7	2	0.1	IMT	Flake		FALSE	0%	FALSE	
296	1	358130.04	6384030.02		North	PAD27	SACII	Rothbury	Slope	(not mapped)												
296	2	358130.04	6384030.02		North	PAD27	SACII	Rothbury	Slope	(not mapped)												
296	3	358130.04	6384030.02		North	PAD27	SACII	Rothbury	Slope	(not mapped)												
297	1	358129.95	6384009.95		North	PAD27	SACII	Rothbury	Slope	(not mapped)												
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	294	49	28	26	38.5	Silcrete	Core		FALSE	1-25%	FALSE	Blade core
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	295	56	35	16	39.7	Silcrete	Core		FALSE	0%	FALSE	Blade core
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	296	46	38	21	33.1	Silcrete	Core		FALSE	1-25%	FALSE	potlid scars across flake scars
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	297	39	25	15	17.4	Silcrete	xFlaked piece		FALSE	1-25%	FALSE	indistinct flake scars
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	298	41	33	18	19.8	Silcrete	Retouched flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	299	30	21	8	4.9	Silcrete	Flake		FALSE	0%	FALSE	course inclusions
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	300	29	21	10	4.6	Silcrete	xFlaked piece		FALSE	0%	FALSE	heat shatter surfaces
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	301	30	27	19	6.1	Silcrete	Flake		FALSE	76-100%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	302	20	7	2	0.3	IMT	Flake		FALSE	0%	FALSE	blade
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	303	26	14	3	1.1	Silcrete	Flake		FALSE	1-25%	FALSE	potlid scar on dorsal
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	304	24	14	6	1.9	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	305	21	19	8	2.7	Silcrete	Medial flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	306	18	13	5	1	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	307	20	13	3	0.8	Silcrete	Shatter		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	308	17	12	3	0.6	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	309	21	11	5	0.9	Silcrete	Shatter		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	310	16	11	2	0.4	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	311	18	11	6	0.8	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	312	19	11	5	0.9	Silcrete	Flake		FALSE	0%	FALSE	potlid scar on ventral
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	313	16	12	3	0.7	Silcrete	Distal flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	314	21	12	3	0.6	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	315	22	15	4	1.1	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	316	22	11	2	0.5	Silcrete	Medial flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	317	18	12	2	0.5	Silcrete	Distal flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	318	21	10	2	0.6	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	319	17	10	4	0.5	Silcrete	xFlaked piece		FALSE	0%	FALSE	potlid scar
297	2	358129.95	6384009.95	1	North	PAD27	SACII	Rothbury	Slope	(not mapped)	320	17	10	4	0.6	Silcrete	Shatter		FALSE	0%	FALSE	

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	321	13	10	3	0.4	Silcrete	Proximal flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	322	9	6	2	0.1	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	323	13	8	4	0.4	Silcrete	Proximal flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	324	17	10	2	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	325	17	10	8	1	Silcrete	xFlaked piece		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	326	11	7	3	0.2	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	327	14	9	3	0.4	Silcrete	Medial flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	328	10	7	1	0.1	Silcrete	Distal flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	329	13	13	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	330	16	13	3	0.5	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	331	13	9	4	0.3	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	332	17	5	4	0.3	Silcrete	xFlaked piece		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	333	17	11	7	1.2	Silcrete	xFlaked piece		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	334	12	5	5	0.3	Silcrete	Flake		FALSE	0%	FALSE	gross backing flake - backing "mistake" where impact point too far into body
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	335	19	10	6	0.8	Silcrete	Retouched flake	backed flake	FALSE	0%	FALSE	BA fragment
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	336	13	10	4	0.5	Silcrete	Shatter		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	337	12	10	3	0.3	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	338	12	7	2	0.2	IMT	Medial flake		FALSE	76-100%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	339	13	8	1	0.1	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	340	14	6	1	0.2	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	341	13	9	3	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	342	10	5	3	0.1	Silcrete	Distal flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	343	15	6	2	0.2	Silcrete	xFlaked piece		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	344	12	9	2	0.3	Silcrete	Shatter		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	345	6	5	1	0.1	Silcrete	Distal flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	346	12	7	3	0.2	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	347	13	9	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	348	11	9	1	0.1	Silcrete	Proximal flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	349	7	7	1	0.04	Silcrete	Medial flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	350	9	4	2	0.1	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	351	12	7	2	0.2	IMT	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	352	9	8	2	0.1	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	353	10	6	1	0.1	Silcrete	Medial flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	354	8	6	2	0.1	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	355	13	7	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	356	6	6	2	0.1	Silcrete	Shatter		FALSE	0%	FALSE	potlid
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	357	9	6	1	0.1	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	358	10	3	2	0.1	Silcrete	Shatter		FALSE	0%	FALSE	potlid
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	359	7	7	1	0.1	Silcrete	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	360	7	5	1	0.03	IMT	Flake		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	361	7	5	1	0.1	Silcrete	xFlaked piece		FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	362	26	9	5	1	Silcrete	Retouched flake	Backed artefact - Bondi point	FALSE	0%	FALSE	
297	2	358129.95	6384009.95	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	363	38	8	4	1.3	Silcrete	Retouched flake	Bondi point	FALSE	0%	TRUE	Broken in 2 mid way conjoin
298	1	358129.96	6383989.99		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
298	2	358129.96	6383989.99		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
299	1	358129.96	6383970.03		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
299	3	358129.96	6383970.03		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
300	1	358129.97	6383949.96		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
300	2	358129.97	6383949.96	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	365	16	11	4	0.6	Silcrete	Flake		FALSE	0%	FALSE	
300	2	358129.97	6383949.96	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	366	10	8	3	0.2	Silcrete	Flake		FALSE	0%	FALSE	
300	3	358129.97	6383949.96		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
301	1	358150.02	6384050.05		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
301	3	358150.02	6384050.05		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
302	1	358170	6384030.04		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
302	2	358170	6384030.04	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	367	38	28	11	11.5	Silcrete	Conesplit flake		FALSE	1-25%	FALSE	cortical platform
302	2	358170	6384030.04	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	368	21	9	2	0.3	IMT	Flake		FALSE	0%	FALSE	
303	1	358189.98	6384010.03		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
303	2	358189.98	6384010.03		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
304	1	358209.96	6383990.02		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
304	2	358209.96	6383990.02	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	371	54	41	12	23.8	Silcrete	Flake		FALSE	1-25%	FALSE	
304	2	358209.96	6383990.02	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	372	43	21	9	7.2	Silcrete	Flake		FALSE	0%	FALSE	
304	3	358209.96	6383990.02		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
305	1	358230.04	6383970.01		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
305	2	358230.04	6383970.01		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
305	3	358230.04	6383970.01		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
306	1	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	384	11	7	3	0.1	Silcrete	Retouched flake	Backed artefact fragment	FALSE	0%	FALSE	distal fragment
306	1	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	385	9	6	2	0.1	Silcrete	Proximal flake		FALSE	0%	FALSE	
306	1	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	386	9	8	2	0.1	IMT	Proximal flake		FALSE	0%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	373	10	6	1	0.1	Silcrete	Flake		FALSE	0%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	374	8	7	1	0.1	Silcrete	Flake		FALSE	0%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	375	10	7	2	0.1	IMT	Flake		FALSE	0%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	376	12	9	3	0.3	Silcrete	Flake		FALSE	1-25%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	377	18	13	4	0.9	Silcrete	Distal flake		FALSE	0%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	378	24	12	5	1.2	Silcrete	Medial flake		FALSE	0%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	379	13	9	3	0.4	Silcrete	Flake		FALSE	0%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	380	11	8	2	0.2	Silcrete	Distal flake		FALSE	0%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	381	12	8	3	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	382	15	9	2	0.3	Silcrete	Distal flake		FALSE	0%	FALSE	
306	2	358250.02	6383950.01	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	383	11	6	6	0.4	Silcrete	Shatter		FALSE	0%	FALSE	
307	1	358139.96	6383899.98		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
307	2	358139.96	6383899.98		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
307	3	358139.96	6383899.98	1	North	PAD26	SAC10	Rothbury	Slope	(not mapped)	387	30	17	12	4.6	Silcrete	Core		FALSE	0%	FALSE	
307	3	358139.96	6383899.98	1	North	PAD26	SAC10	Rothbury	Slope	(not mapped)	388	15	10	5	0.8	Silcrete	xFlaked piece		FALSE	0%	FALSE	
308	1	358160.03	6383900.04		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
308	2	358160.03	6383900.04		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
308	3	358160.03	6383900.04		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
309	1	358180.01	6383900		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
309	2	358180.01	6383900	1	North	PAD26	SAC10	Rothbury	Slope	(not mapped)	389	16	10	4	0.6	Quartz	Flake		FALSE	0%	FALSE	
299	2	358129.96	6383970.03	1	North	PAD27	SAC11	Rothbury	Slope	(not mapped)	364	25	15	8	3.8	Silcrete	Gravel		FALSE	0%	FALSE	
301	2	358150.02	6384050.05		North	PAD27	SAC11	Rothbury	Slope	(not mapped)												
309	3	358180.01	6383900		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
310	1	358199.99	6383899.95		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
310	2	358199.99	6383899.95		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
311	1	358199.99	6383879.98		North	PAD26	SAC10	Rothbury	Slope	Medium												
311	2	358199.99	6383879.98		North	PAD26	SAC10	Rothbury	Slope	Medium												
311	3	358199.99	6383879.98		North	PAD26	SAC10	Rothbury	Slope	Medium												
312	1	358139.97	6383880.02		North	PAD26	SAC10	Rothbury	Slope	Medium												
312	2	358139.97	6383880.02	1	North	PAD26	SAC10	Rothbury	Slope	Medium	390	9	5	1	0.03	Silcrete	Flake		FALSE	0%	FALSE	
312	2	358139.97	6383880.02	1	North	PAD26	SAC10	Rothbury	Slope	Medium	391	16	7	2	0.2	Silcrete	Distal flake		FALSE	0%	FALSE	
312	3	358139.97	6383880.02	1	North	PAD26	SAC10	Rothbury	Slope	Medium	392	14	11	2	0.3	Silcrete	Medial flake		FALSE	0%	FALSE	
312	4	358139.97	6383880.02	1	North	PAD26	SAC10	Rothbury	Slope	Medium	393	16	9	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
312	4	358139.97	6383880.02	1	North	PAD26	SAC10	Rothbury	Slope	Medium	394	10	6	1	0.1	Silcrete	Medial flake		FALSE	0%	FALSE	
312	5	358139.97	6383880.02		North	PAD26	SAC10	Rothbury	Slope	Medium												
313	1	358200	6383860.02		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
313	2	358200	6383860.02		North	PAD26	SAC10	Rothbury	Slope	(not mapped)												
314	1	358209.99	6383830	1	North	PAD25	SAC09	Rothbury	Slope	(not mapped)	395	25	17	11	3.2	Silcrete	Flake		FALSE	26-50%	FALSE	
315	1	358229.97	6383829.95		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
315	2	358229.97	6383829.95		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
315	3	358229.97	6383829.95		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
315	4	358229.97	6383829.95	1	North	PAD25	SAC09	Rothbury	Slope	(not mapped)	396	19	9	4	0.7	IMT	Flake		FALSE	0%	FALSE	
316	1	358250.04	6383830.02		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
316	2	358250.04	6383830.02		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
317	1	358250.04	6383809.95		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												

TU	Spit	Easting	Northing	Count	Area	PAD name	Site name	Soil Landscape	Landform	Sensitivity	Artefact_ID	Length	Width	Thickness	Weight	Raw material	Type	Implement	MUWR	Cortex	Damage	Comment
317	2	358250.04	6383809.95		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
317	3	358250.04	6383809.95		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
318	1	358249.95	6383789.99		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
318	2	358249.95	6383789.99		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
318	3	358249.95	6383789.99		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
319	1	358249.96	6383770.02		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
319	2	358249.96	6383770.02	1	North	PAD25	SAC09	Rothbury	Slope	(not mapped)	397	26	20	5	2.3	Silcrete	Flake		FALSE	0%	FALSE	
319	3	358249.96	6383770.02		North	PAD25	SAC09	Rothbury	Slope	(not mapped)												
320	1	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	398	52	38	16	23.6	ZQuartzite	Flake		FALSE	0%	FALSE	
320	1	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	399	29	17	5	2.7	Silcrete	Shatter		FALSE	0%	TRUE	paotlid
320	1	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	400	18	12	3	0.6	Silcrete	Flake		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	401	15	12	4	0.4	Silcrete	Distal flake		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	402	13	8	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	403	14	8	3	0.3	Silcrete	Flake		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	404	21	11	4	0.9	Silcrete	Proximal flake		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	405	20	12	4	0.9	Silcrete	Proximal flake		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	406	13	11	4	0.5	Silcrete	Medial flake		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	407	15	9	4	0.4	Silcrete	Distal flake		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	408	22	10	3	0.7	Silcrete	Distal flake		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	409	24	13	5	1.2	Silcrete	xFlaked piece		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	410	28	19	10	5.1	Silcrete	Shatter		FALSE	0%	FALSE	
320	2	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	411	11	10	2	0.2	Silcrete	Flake		FALSE	0%	FALSE	
320	3	358229.97	6383810	1	North	PAD25	SAC09	Rothbury	Slope	Medium	412	19	10	5	0.8	Silcrete	Medial flake		FALSE	0%	FALSE	

Appendix J

AHIMS Site Cards

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah IF 1

Easting: 359024 Northing: 6382274 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 17/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Slope

[ ] degrees

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [x] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [x] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	1,200	metres
Distance to temporary water source	1	metres
Name of nearest permanent water source	Hunter Riv	
Name of nearest temporary water	Lake	

Directions for Relocation

Located on the north western bank of the large lake at the southern end of the Anambah property.

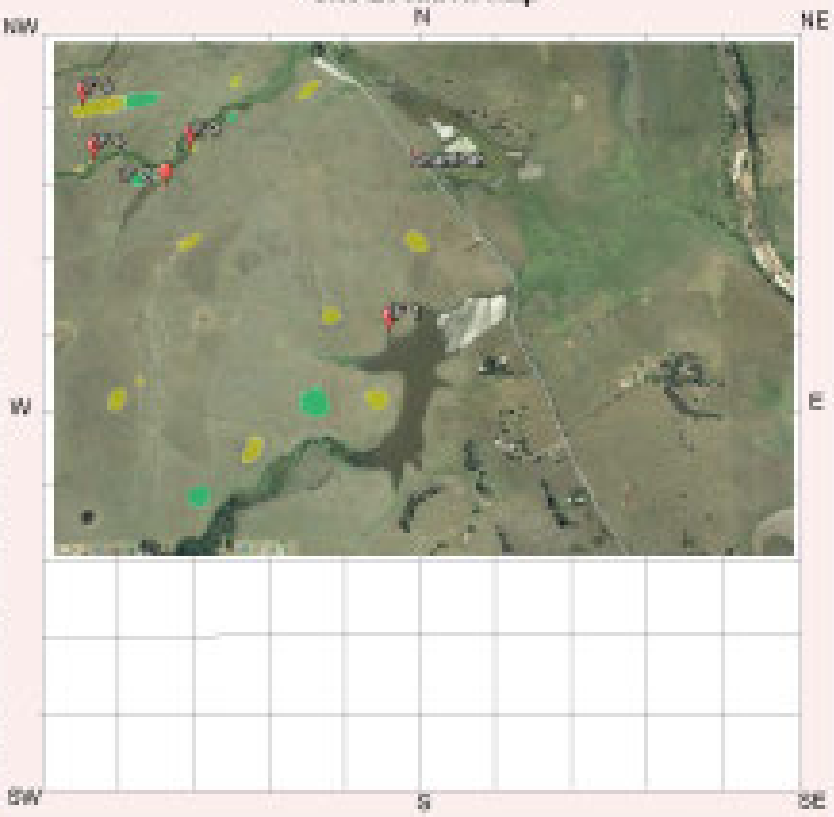
Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012. Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

Site Location Map



NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

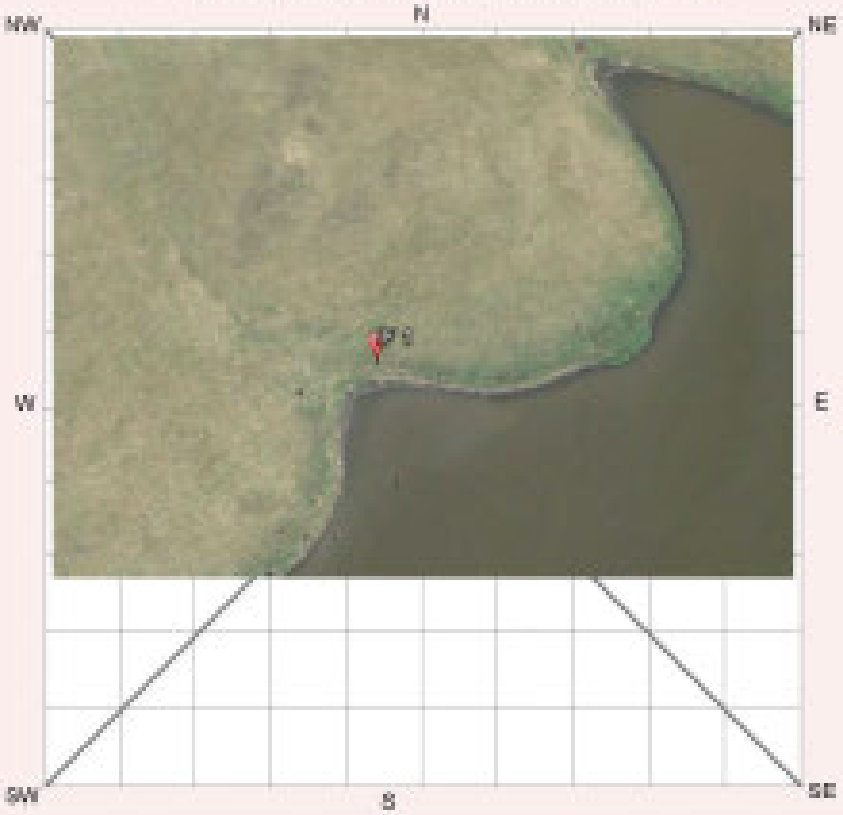
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [x] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

< 1m	Total length of visible site
< 1m	Average width of visible site
1m 2	Estimated area of visible site
1m	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing for this site. Community collection might be a suitable management strategy for this artefact in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

Single red glossy silcrete flake located within animal erosion at the edge of the large dam. No archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah IF 2

Easting: 358313 Northing: 6382885 AGD/GDA: GDA

Mapsheet ____

Zone 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 17/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [x] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

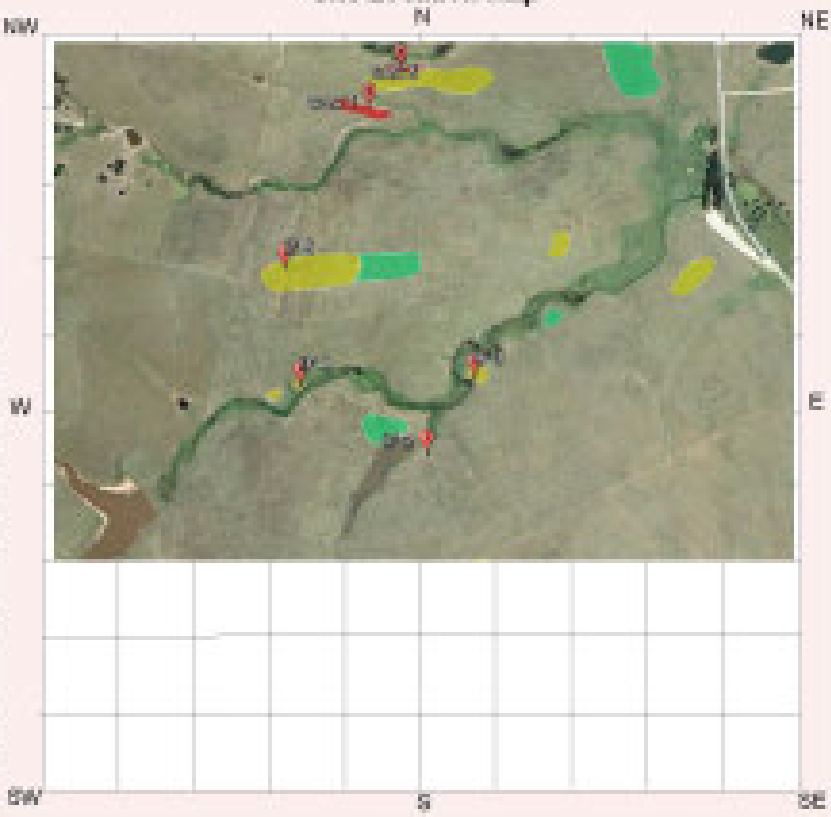
Water

Distance to permanent water source	90	metres
Distance to temporary water source	20	metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water	Damned Ck	

Directions for Relocation

At the end of the south west arm of the next creek north of the large lake at the south of the Anambah land holdings

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared fpr Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

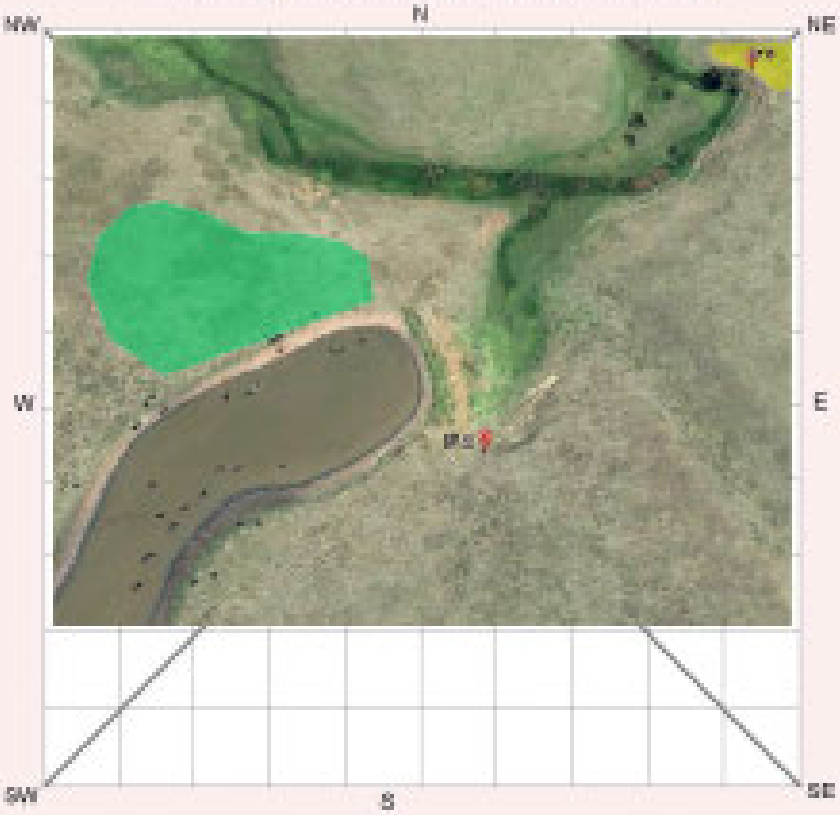
- [ ] N-S
- [ ] NE-SW
- [x] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

< 1m	Total length of visible site
< 1m	Average width of visible site
1m 2	Estimated area of visible site
1m	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing for this site. Community collection might be a suitable management strategy for this artefact in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

Possible core of silicious conglomerate material with small quartz particles. Located within the eroded bank of a damaged second order creek. The site has no archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

NSW Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Client on system ☐

☐ **Knowledge Holder**

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah IF 6

Easting | Northing | AGD/GDA: GDA

Mapsheet

Zone 56 | Location Method: Client GIS or CAD System

Other Registration

Primary Recorder

Title: Ms | Surname: Cowie | First Name: Diana | Initials

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 | Fax: 93194383

Date recorded

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [x] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [ ] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

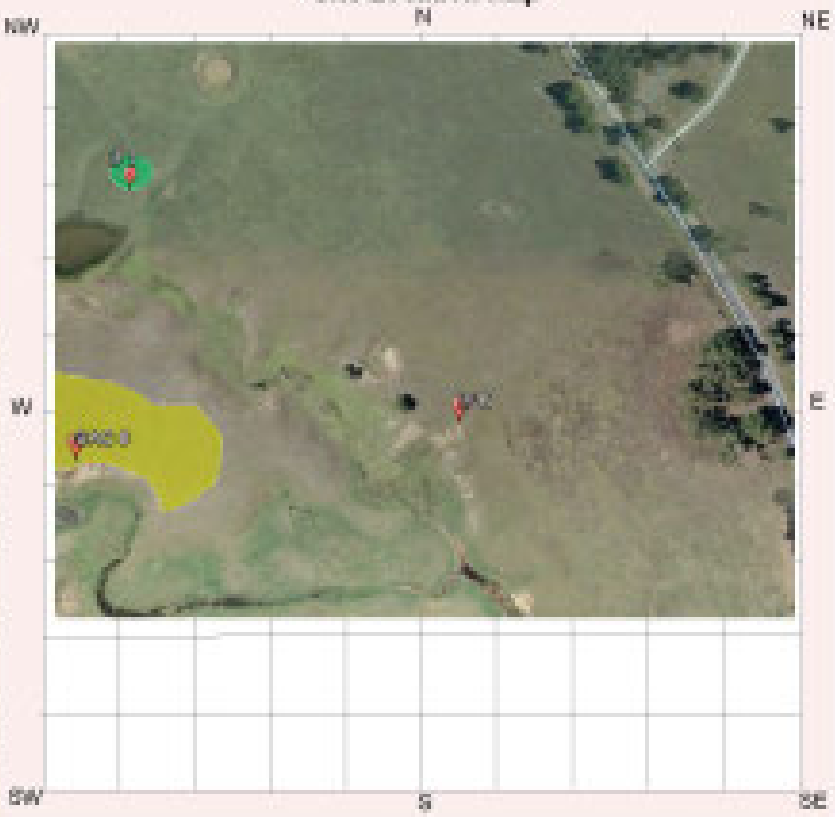
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	20	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

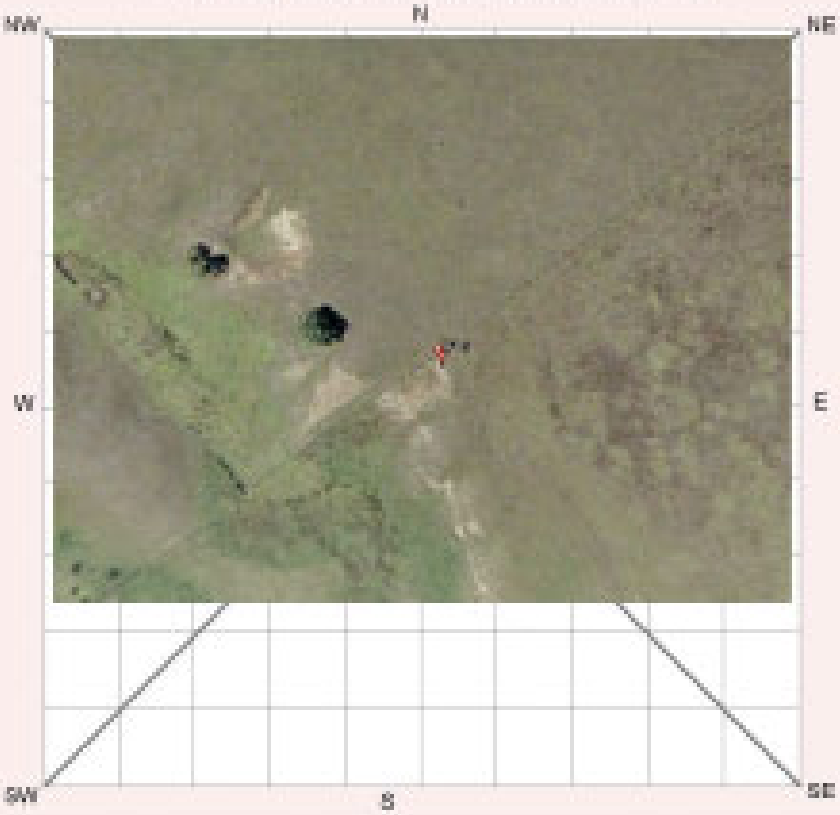
- [ ] N-S
- [ ] NE-SW
- [x] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

< 1m	Total length of visible site
< 1m	Average width of visible site
1m 2	Estimated area of visible site
1m	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation ongoing. Community collection might be a suitable management strategy for this artefact in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

Very fine dark brown/red chert blade in erosion scar 20m from 2nd order creek. This site has no archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah IF 8 & PAD 23

Easting: 358025 Northing: 6383995 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 18/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [x] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

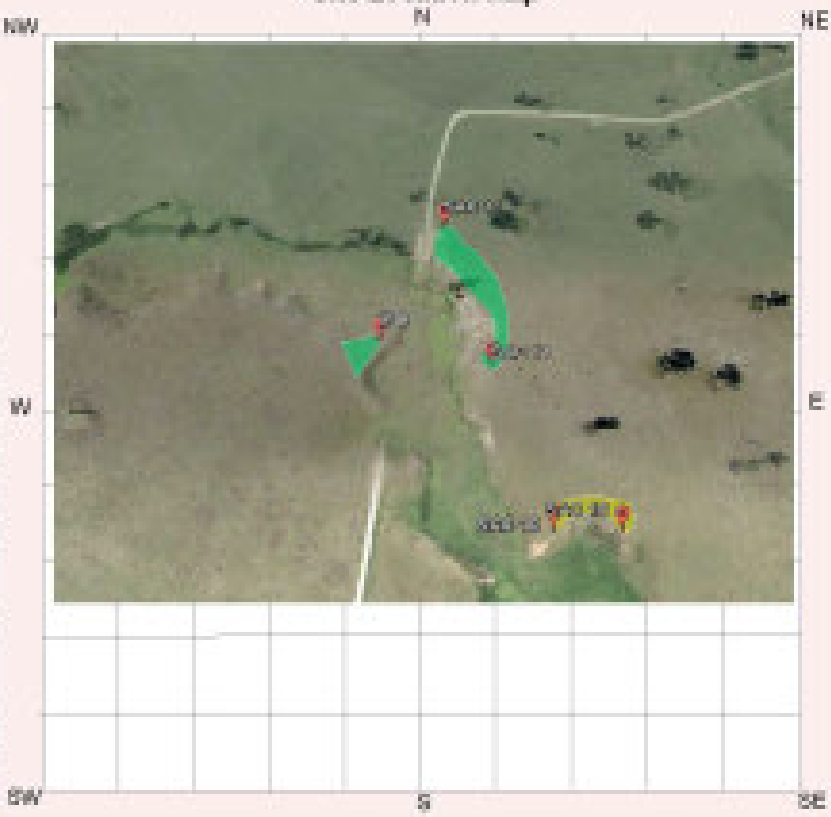
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	35	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

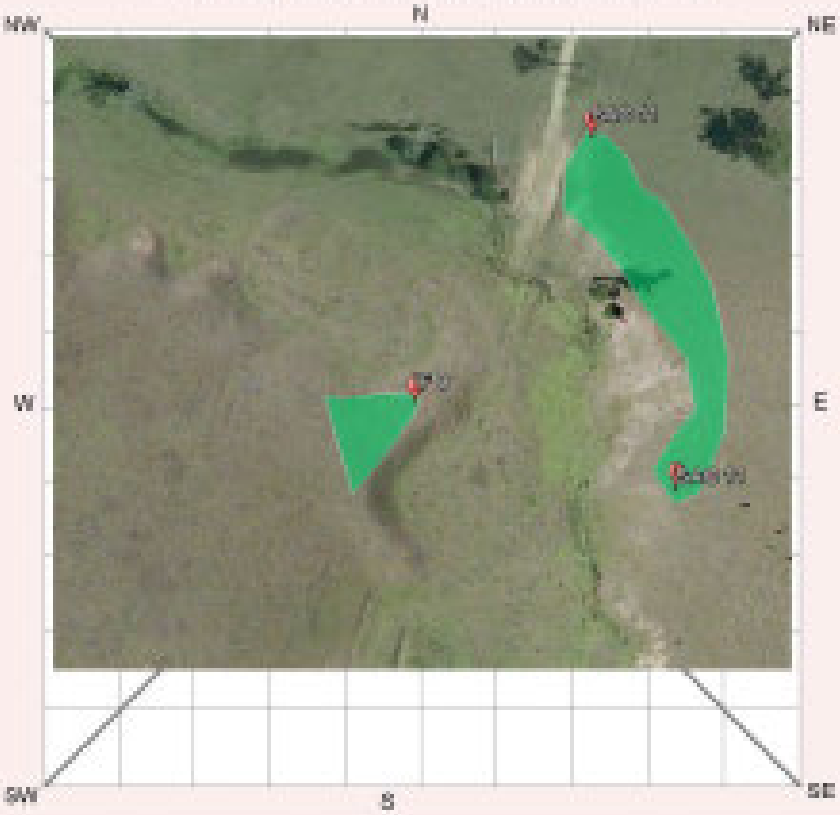
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [x] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

28	Total length of visible site
26	Average width of visible site
728m 2	Estimated area of visible site
28	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. There are two test units plotted at PAD 23 which have not been excavated to date. These should be excavated as part of any future two stage salvage excavation and prior to impact.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 23 is on a raised flat adjacent to the creek. One pale yellow silcrete flake was identified during survey on the heavily eroded bank. The site has low archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah IF 9

Easting: 357717 Northing: 6384140 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 18/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE: Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Slope

[ ] degrees

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [x] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	10	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Current Land Tenure

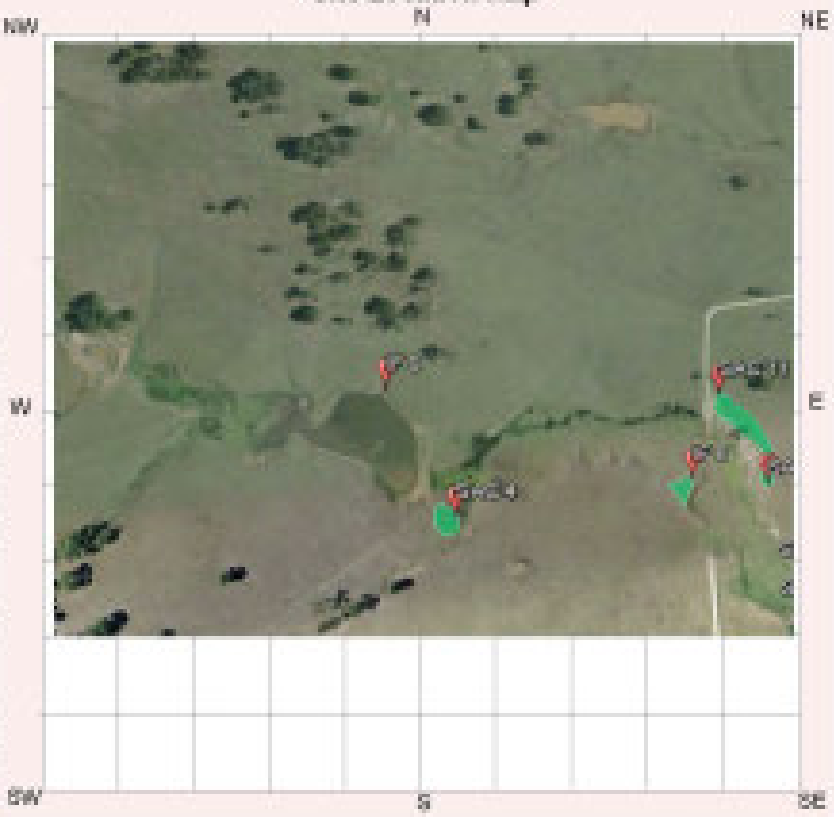
- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report

I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

Site Location Map



NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

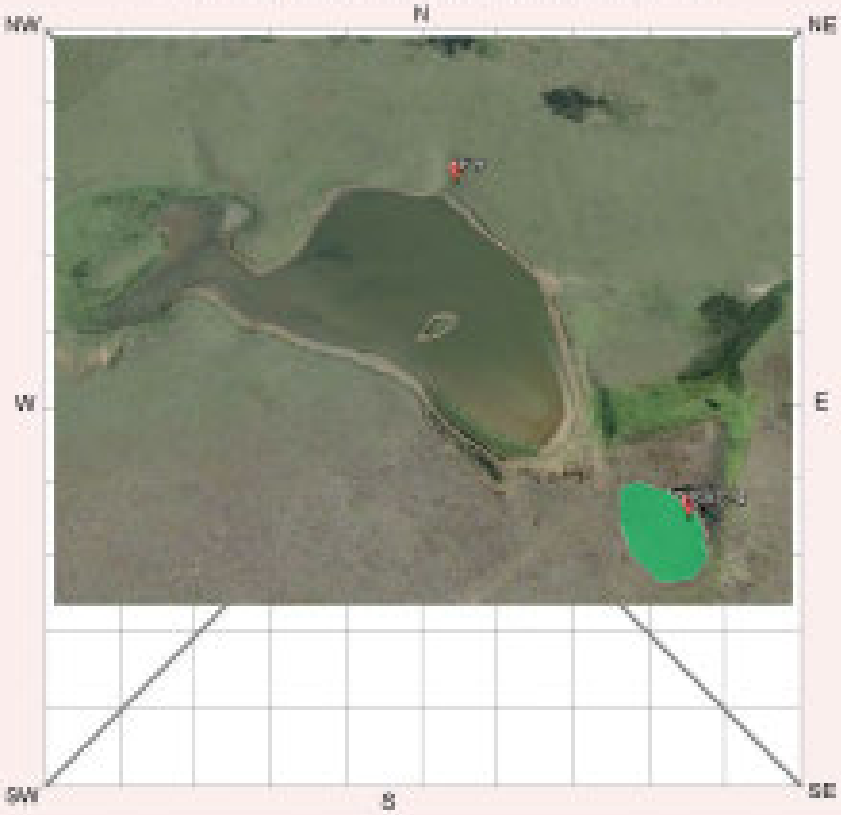
- [ ] N-S
- [ ] NE-SW
- [x] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

< 1m	Total length of visible site
< 1m	Average width of visible site
1m 2	Estimated area of visible site
1m	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation ongoing. Community collection might be a suitable management strategy for this artefact in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

Single silcrete flake on the bank of a dam.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received ___ / ___ / ___ Date entered into system ___ / ___ / ___ Date catalogued ___ / ___ / ___

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah IF 10

Easting: 358397 Northing: 6381819 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Slope

[ ] degrees

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [x] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

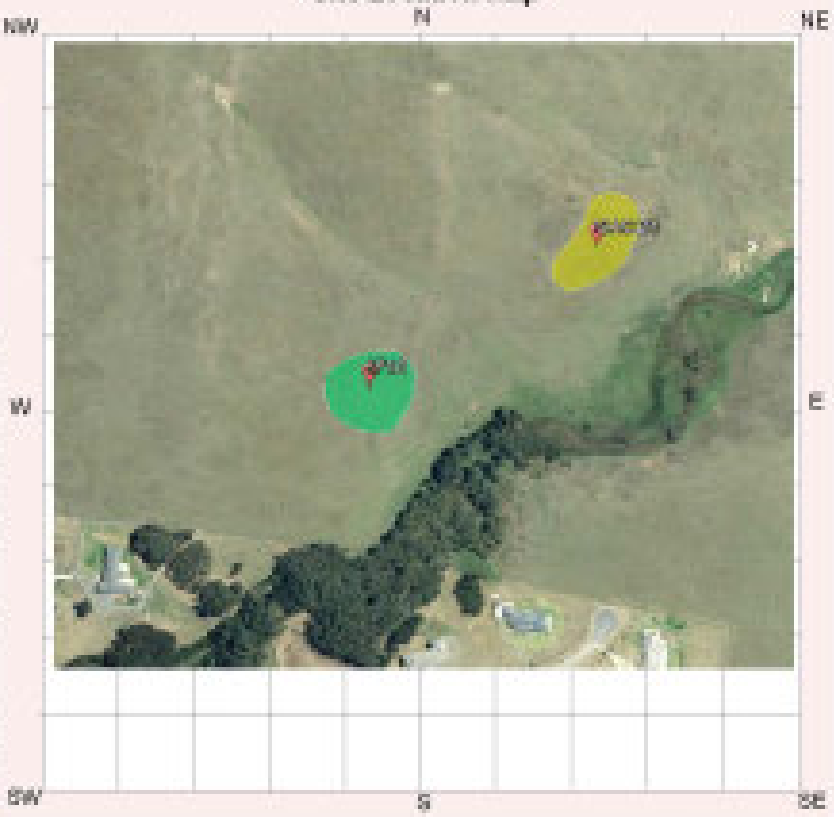
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	45	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report **I.D.** [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

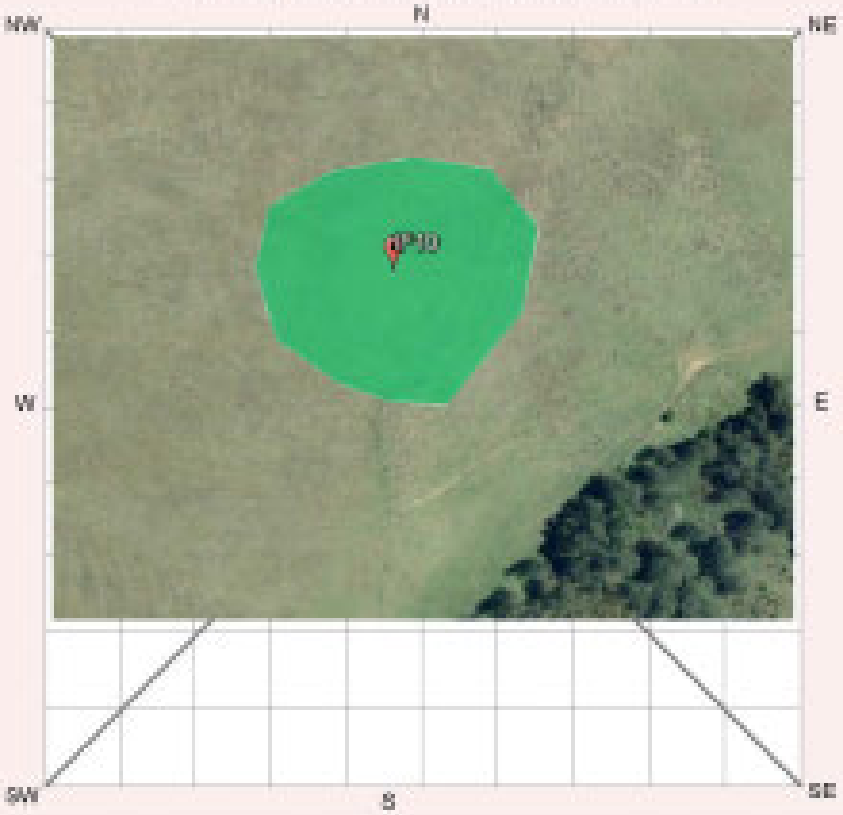
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [x] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

< 1m	Total length of visible site
< 1m	Average width of visible site
1m 2	Estimated area of visible site
1m	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation ongoing but no further management action is required for this site. The IF will be managed with the whole Anambah collection as per the Plan of Management for the study area.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

This IF was located on a flat section at the end of a ridge overlooking a creek. The area has been ploughed and cropped within the last 10 years. Of 9 test pits excavated in the green zone shown on the site plan above, only one artefact (that to which this site card refers) was identified. There is no further archaeological potential at this site including the green zone.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah IF 11

Easting: 358558 Northing: 6383163 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	20	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

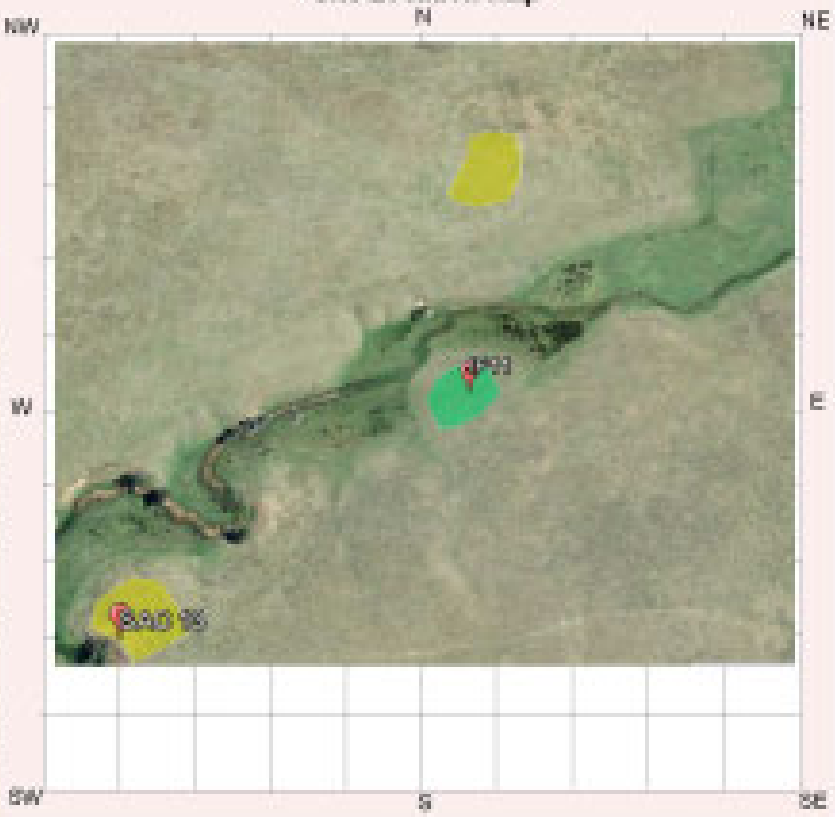
Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

Site Location Map



NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

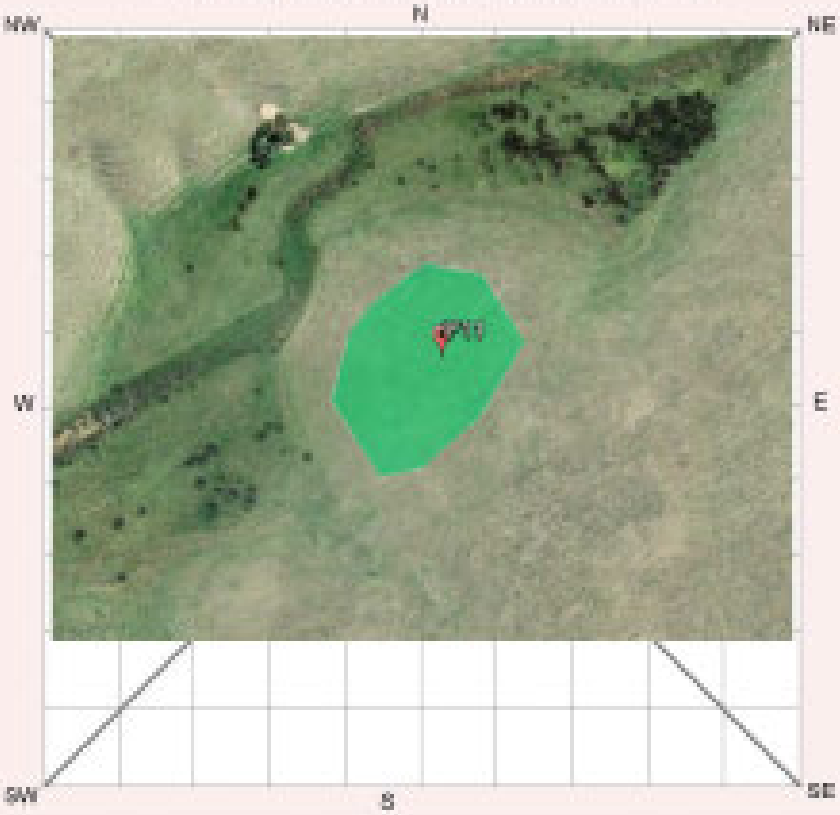
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [x] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

< 1m	Total length of visible site
< 1m	Average width of visible site
1m 2	Estimated area of visible site
4.0m	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. The artefact was identified during test excavation within a test unit and will be managed with the Anambah collection according to the Plan of Management.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

This site is located on a raised flat landform overlooking a large wide creek. The area designated as PAD (the green zone on the site plan above) during survey was 32m by 42m and has been ploughed and cropped within the last 10 years, reducing its integrity. During test excavation of green PAD zone a single artefact was identified within one of the four test units excavated. The site has low to no archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah IF 12

Easting: 358575 Northing: 6383304 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [x] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

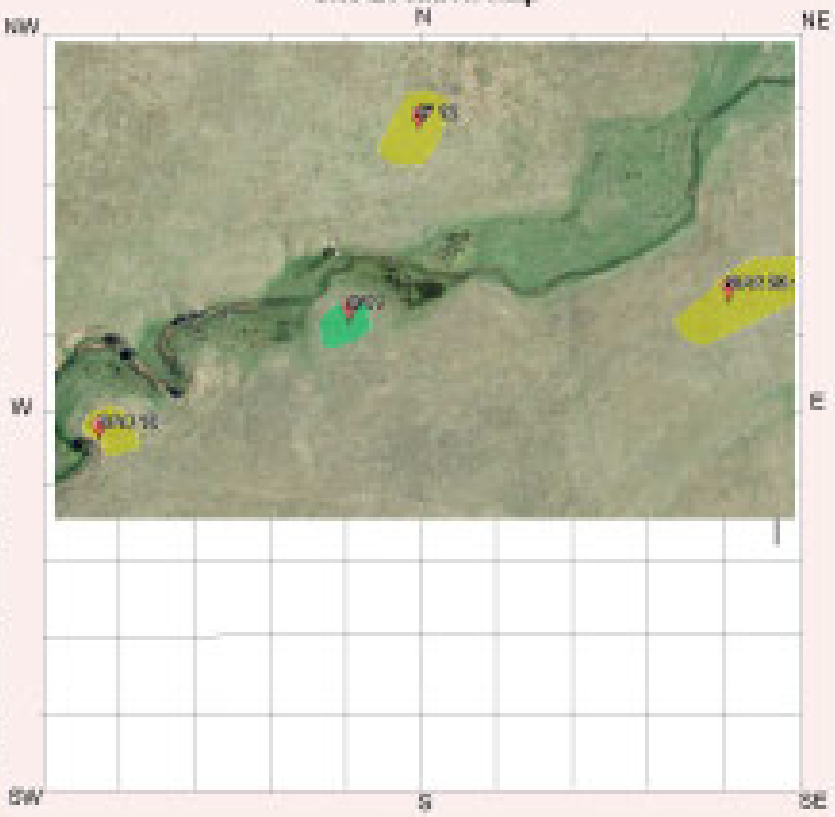
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	50	metres
Distance to temporary water source	175	metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water	Creek	

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

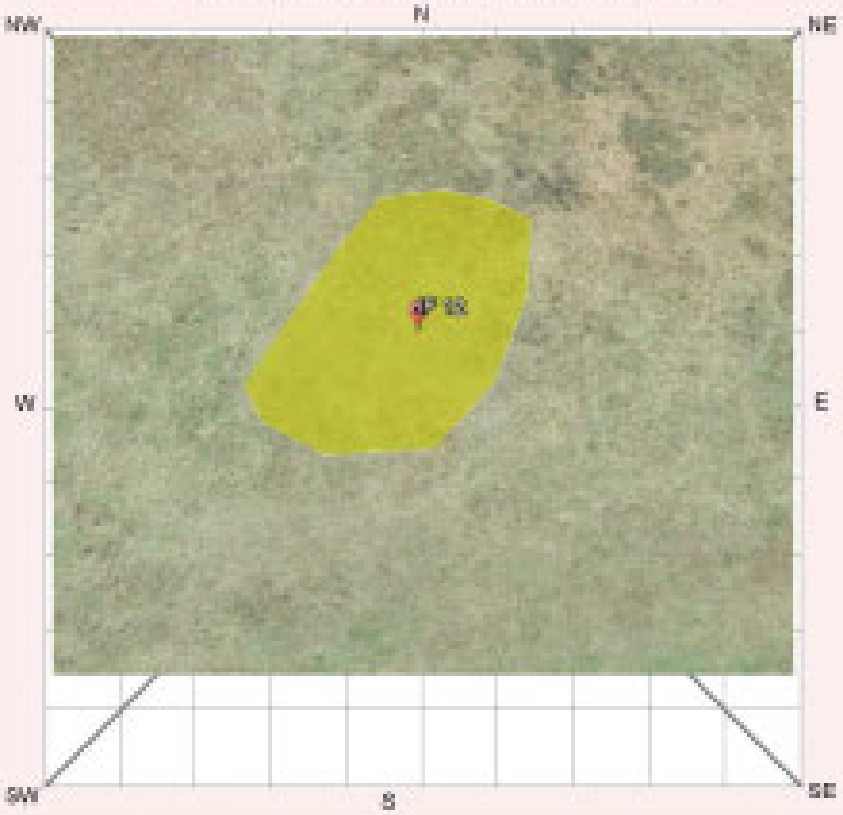
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [x] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

< 1m	Total length of visible site
< 1m	Average width of visible site
1m 2	Estimated area of visible site
60m	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. The artefact was identified during test excavation within a test unit and will be managed with the Anambah collection according to the Plan of Management.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site is located on a small raised flat on the slope of a hilltop overlooking the confluence of three creeks. The area of PAD identified during survey (the yellow zone in the site plan above) has been ploughed and cropped within the last 10 years, and thus has reduced integrity. One artefact was recovered from 6 test pits covering this PAD. The site has low to no potential for further subsurface artefacts.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah SAC 1 and PAD 21

Easting: 358183 Northing: 6383600 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 18/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

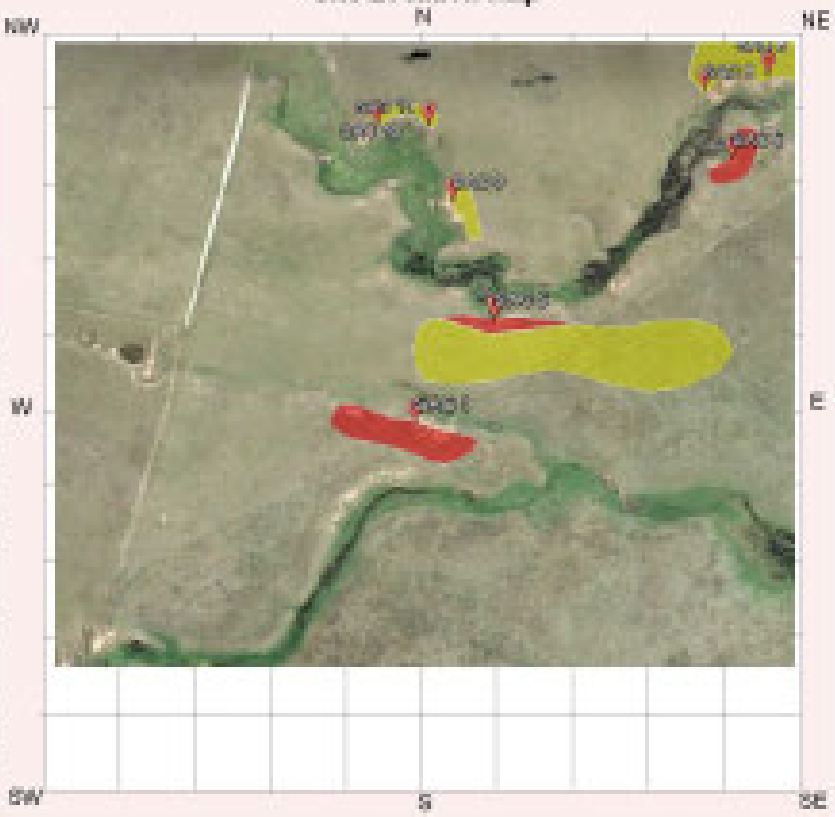
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	20	metres
Distance to temporary water source	50	metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water	Creek	

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

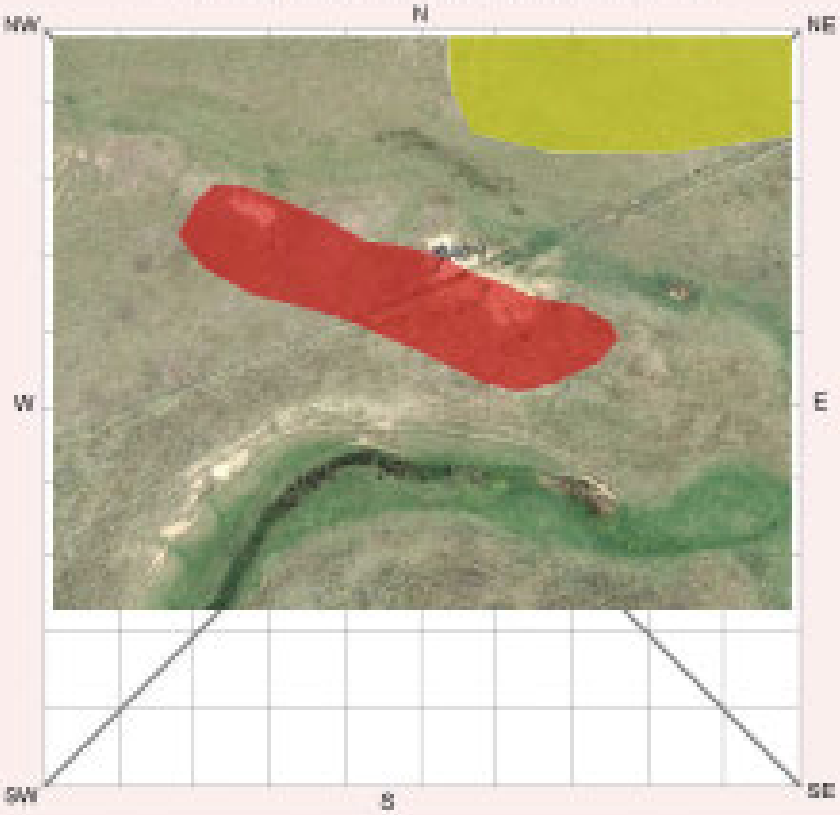
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [x] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

115	Total length of visible site
25	Average width of visible site
2875m2	Estimated area of visible site
115	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. This site should be subject to salvage excavation of up to 50m2.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 21 is on a low flat alluvial terrace above the creek. 14 artefacts at three locations within erosion on the margins of the creek bank were identified during survey. Six artefacts were of silcrete including a core, three were of tuff including a core and five were mudstone (indurated tuff). Six test pits were excavated during test excavation and nine artefacts were recovered from these pits.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Client on system ☐

☐ **Knowledge Holder**

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 2

Easting: 357612 Northing: 6383746 AGD/GDA: GDA

Mapsheet

Zone: 56 Location Method: Client GIS or CAD System

Other Registration

Primary Recorder

Title: Ms | Surname: Cowie | First Name: Diana | Initials

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 18/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [x] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

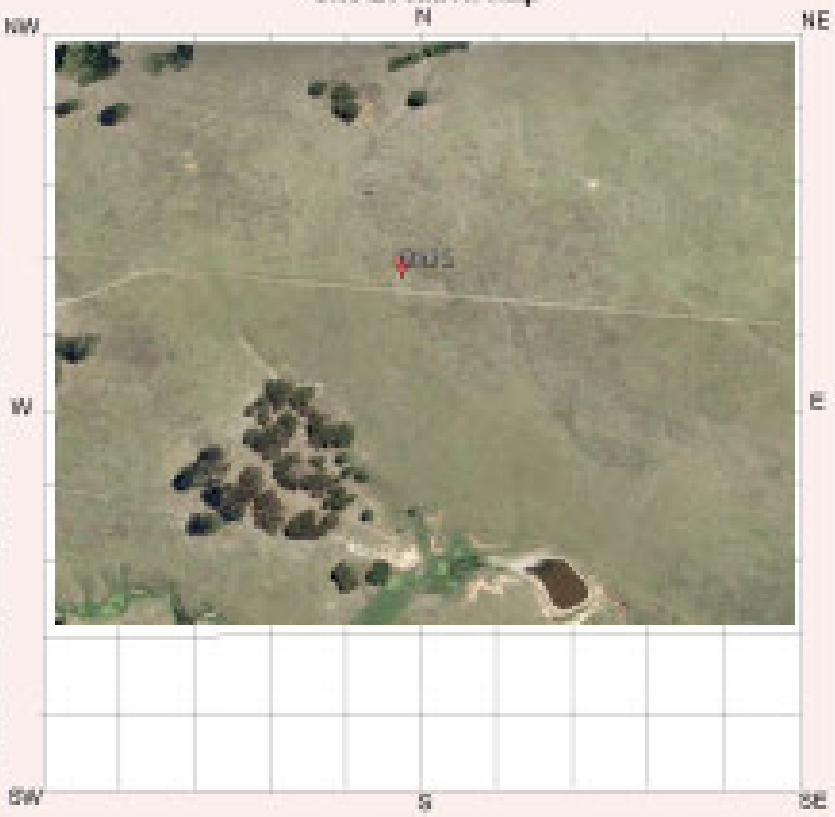
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	20	metres
Distance to temporary water source	50	metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water	Creek	

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [x] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features

Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

< 1m	Total length of visible site
< 1m	Average width of visible site
1m 2	Estimated area of visible site
1m	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. Community collection might be a suitable management strategy for this artefact in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

One pink silcrete core with negative scar and one grey indurated tuff with negative scar were identified during survey. The site has no further archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office Use Only

Site Number ___ - ___ - ___

Date received ___ / ___ / ___ Date entered into system ___ / ___ / ___ Date catalogued ___ / ___ / ___

Entered by (I.D.) ___

Information Access

☑ Gender/male ☐ Gender/female ☑ Location restriction ☑ General restriction ☑ No access

Office Use Only

For Further Information Contact:

☑ **Nominated Trustee**

Title	Surname	First Name	Initials
	SEE END OF	AHIMS CARD	

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☑ **Knowledge Holder**

Title	Surname	First Name	Initials
Mr	Miller	Tommy	

Organisation Lower Hunter Wonnarua Counci

Address 51 Bowden Street HEDDON GRET

Phone number 402636521 Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name Anambah SAC 3

Easting 357212 Northing 6383869 AGD/GDA GDA

Mapsheet ___

Zone 56 Location Method Non-Differential GPS

Other Registration ___

Primary Recorder

Title	Surname	First Name	Initials
Dr	Owen	Tim	

Organisation GML

Address 78 George St Redfern

Phone number 93194811 Fax ___

Date recorded 26/09/2012

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [ ] Rolling hills
- [x] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [x] Mid slope
- [x] Upper slope
- [ ] Plain
- [x] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [ ] Grasslands
- [ ] Isolated clumps of trees
- [x] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [ ] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [x] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

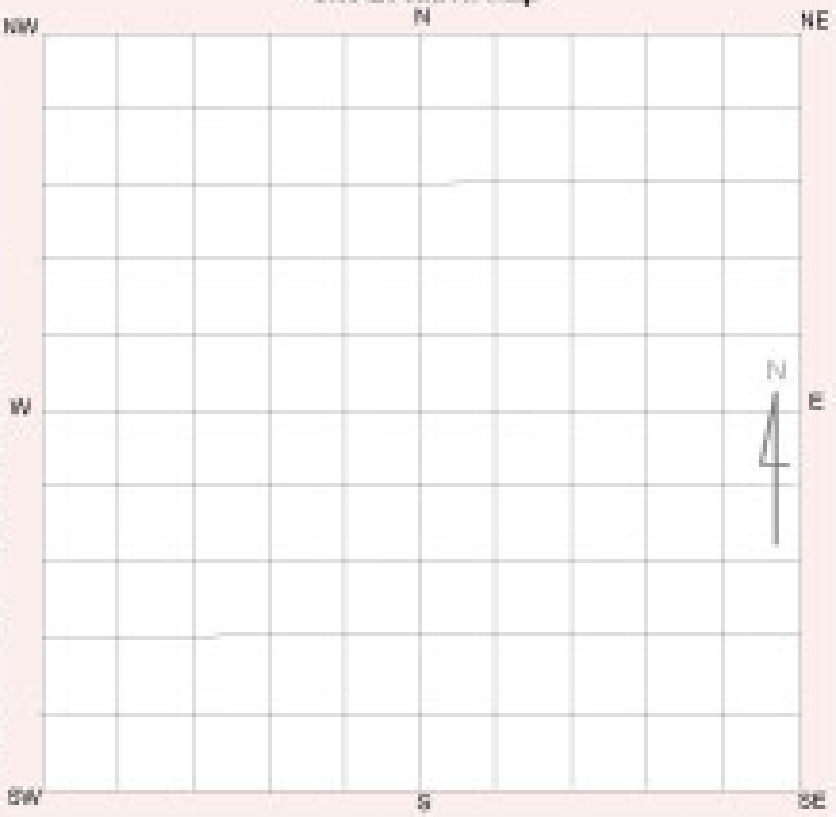
Water

Distance to permanent water source	1,300	metres
Distance to temporary water source	20	metres
Name of nearest permanent water source	Hunter R	
Name of nearest temporary water	1st order	

Directions for Relocation

Located on the middle to upper reaches on a steep finger spur, in a very steep landform, amongst trees. Access can be gained from the east, from Stocklands land. Access is by foot only (or 4WD).

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [ ] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML. 2012. Anambah Investigation Area. Rezoning Report. Prepared for Stockland

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

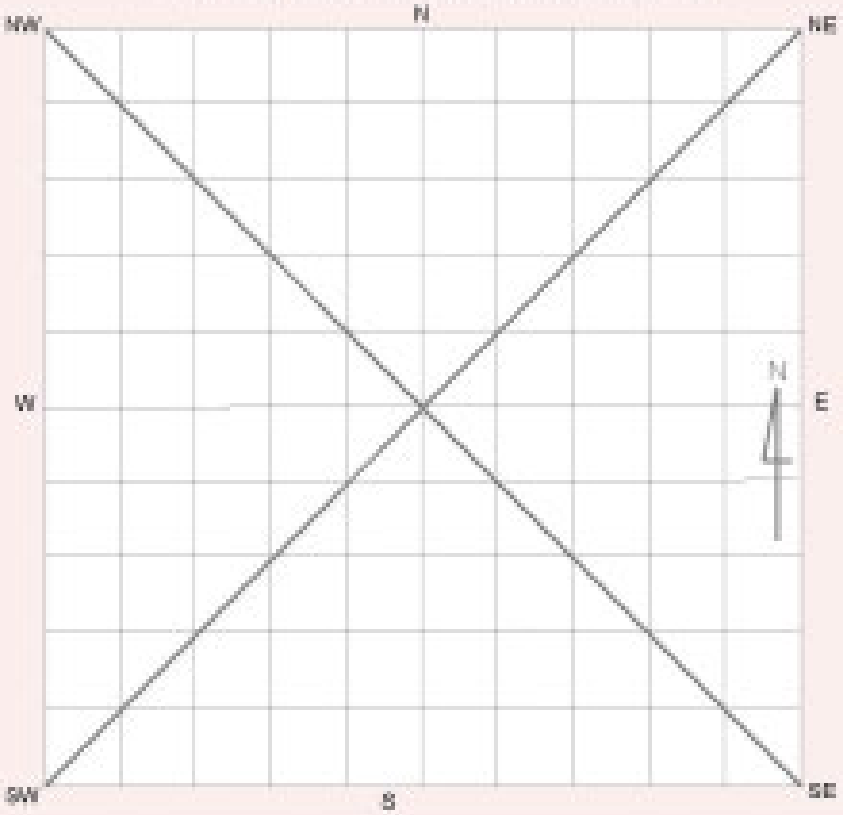
- [ ] N-S
- [x] NE-SW
- [ ] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [x] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

5.0m	Total length of visible site
1.0m	Average width of visible site
5.0m	Estimated area of visible site
	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

A lengthy process of consultation has been undertaken with three community members to determine how this site should be managed.

Mr Steven Hickey (Widescope Indigenous Group Pty Ltd) identified that this site has significant value and he instructed that this site should be registered as restricted for cultural reasons.

Ms Tracey Skene (Culturally Aware) stated that she wished for the site to be registered on AHIMS and instructed GML to discuss the matter with Uncle Tommy Miller.

Uncle Tommy stated that he should be named as the knowledge holder as he is the senior Aboriginal elder in this region.

Therefore, to meet the requirements of all three Aboriginal groups, the site is to be restricted, with Uncle Tommy named as the knowledge holder. All three Aboriginal groups involved need to be consulted before this AHIMS card is released.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site comprises a high density of stone artefacts (over 100 observed in an erosion scour) located on a landform where predictive modelling suggests there should be none. This landform is a small finger spur located behind a high hilltop with commanding views. A number of other finger spurs are located nearby, albeit without an archaeological deposit. The SAC3 finger spur appears to retain soil good integrity and moderate to good condition, where water erosion has exposed the artefacts.

The location was described by Mr Hickey as sensitive and he expressed his wishes for it to be kept 'secret' and not registered under AHIMS. Consequential discussion with Mr Hickey and Ms Skene determined that this location should be registered, although the registration should be kept as restricted.

As of October 2012 the site should not be impacted by development (and it is not located within a development area).

It is recommended that future management of the site should see the general area conserved.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

It was requested that no plan, photographs or further descriptions of the site and area be provided.

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received ___ / ___ / ___ Date entered into system ___ / ___ / ___ Date catalogued ___ / ___ / ___

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 4 and PAD 22

Easting: 357770 Northing: 6383996 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [x] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

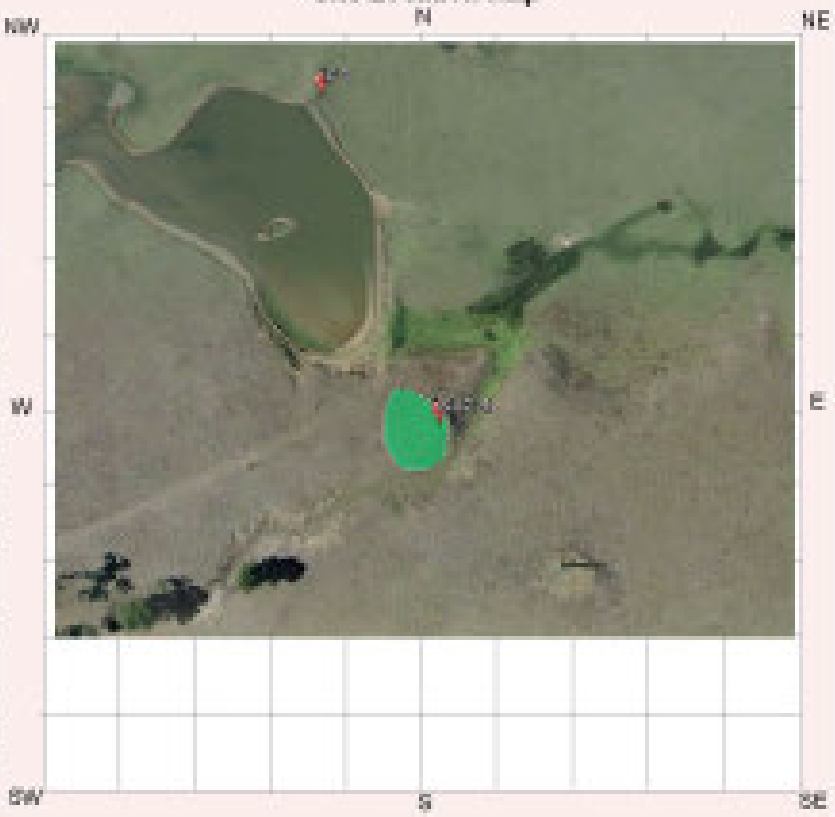
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	17	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012. Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

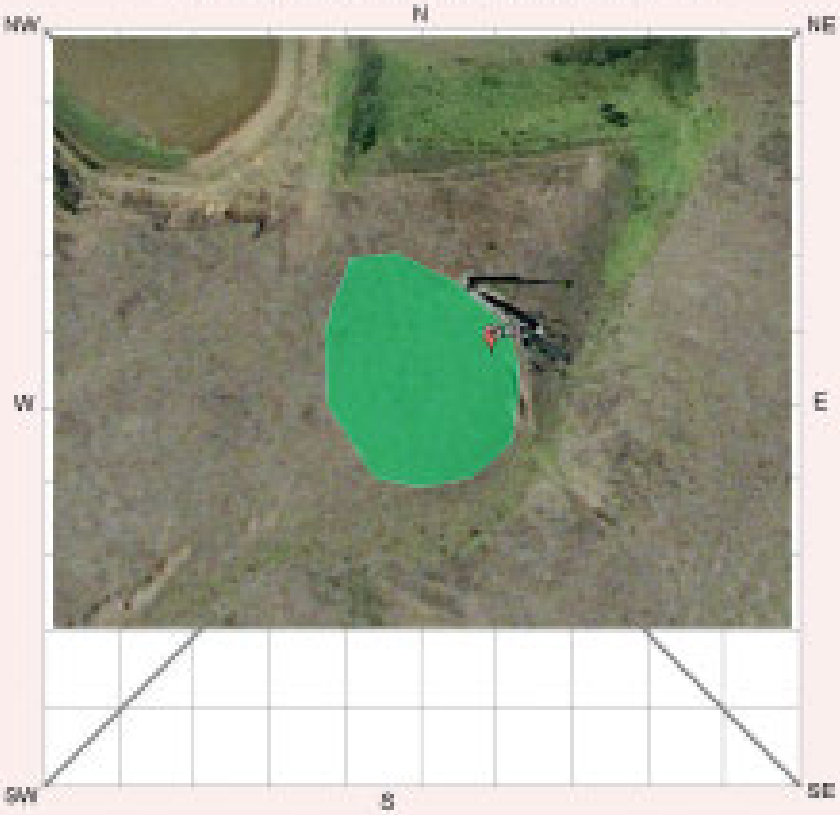
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [x] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

35	Total length of visible site
25	Average width of visible site
8.75m 2	Estimated area of visible site
35	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. There are two test units plotted at PAD 22 which have not been excavated to date. These should be excavated as part of any future two stage salvage excavation and prior to impact.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 22/ SAC 4 is located on a highly eroded sloped bank of a dam, and a flat area to the south. During survey, one yellow/ brown chert flake with possible backing, one yellow mudstone flake and one yellow silcrete flake were identified on the eroded back of the dam. The site has low potential on the slope and lot to moderate potential on flat area to the south.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah SAC 5 and PAD 20

Easting: 358246 Northing: 6383842 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

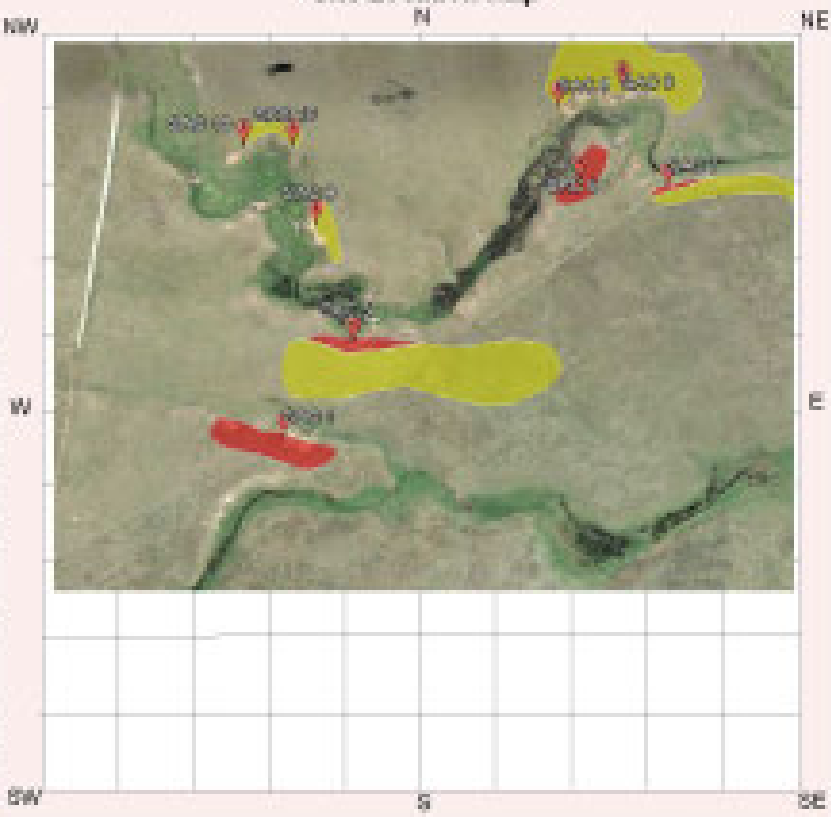
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	20	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report **I.D.** (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

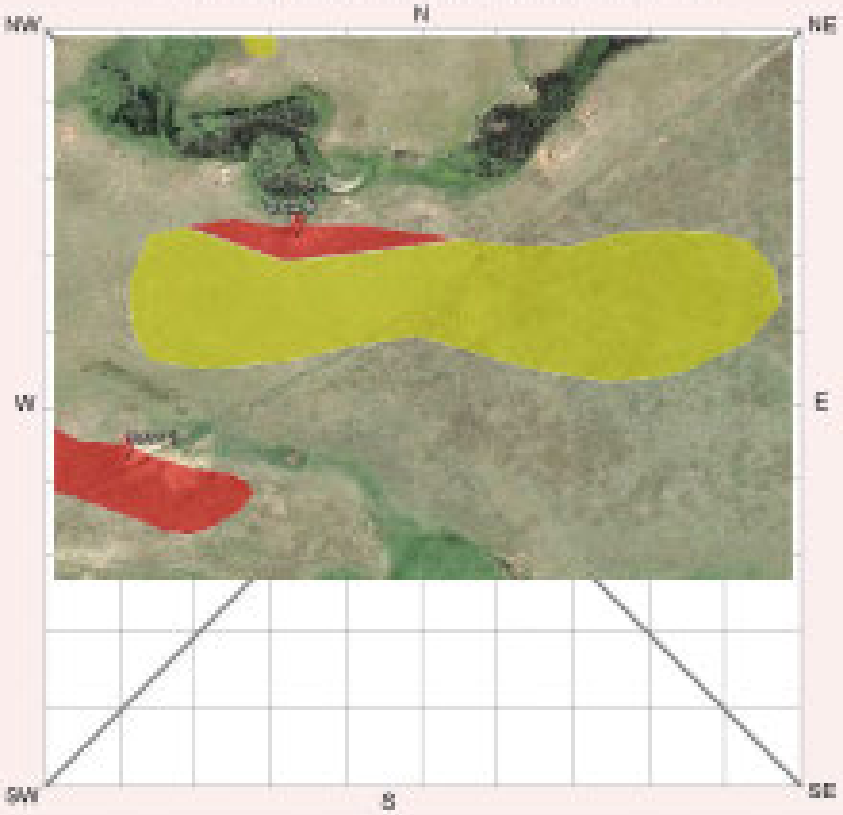
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

256	Total length of visible site
55	Average width of visible site
14080m2	Estimated area of visible site
256	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. The site should be subject to two stage salvage, the first stage being excavation of test units to determine the full extent of the archaeological site present, followed by open area salvage excavation if the area is to be impacted.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 20 is on an elevated flat above the creek. The eastern half of the PAD has been ploughed and cropped within the last 10 years, and thus has some reduced integrity. SAC 5 is on the north side of PAD 20 in the eroded creek bank. 30+ artefacts were identified in one exposure and 15+ artefacts were identified in a second exposure during field survey. In additional 32 artefacts were recovered from 20 test pits during test excavation. This site retains moderate to high archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received ___ / ___ / ___ Date entered into system ___ / ___ / ___ Date catalogued ___ / ___ / ___

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 6&7 + PAD 24&19

Easting: 358536 Northing: 6383837 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

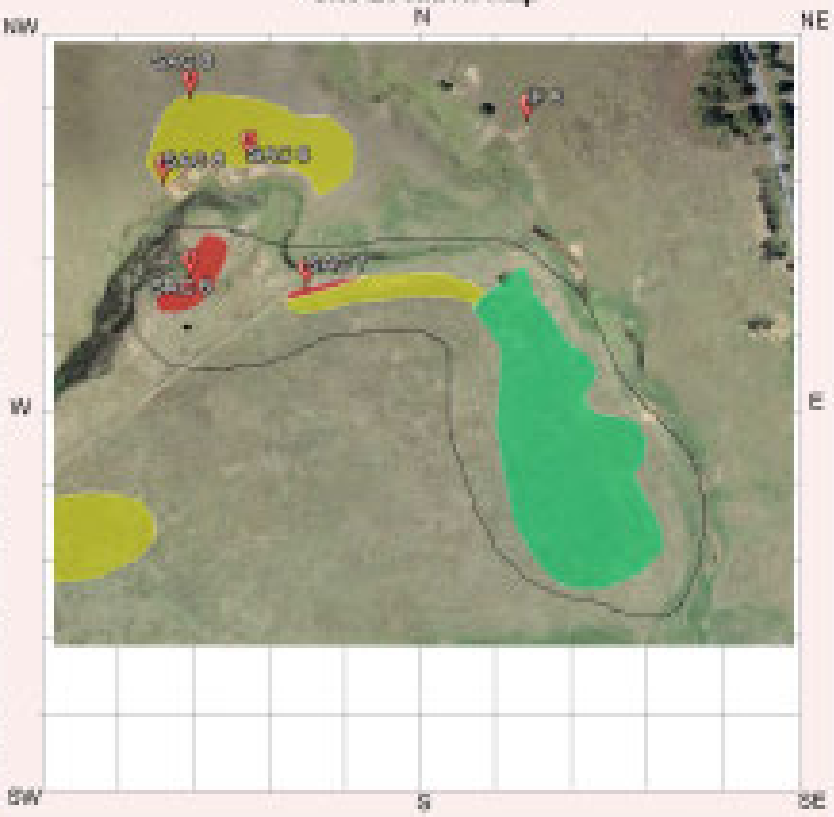
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	3	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012. Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

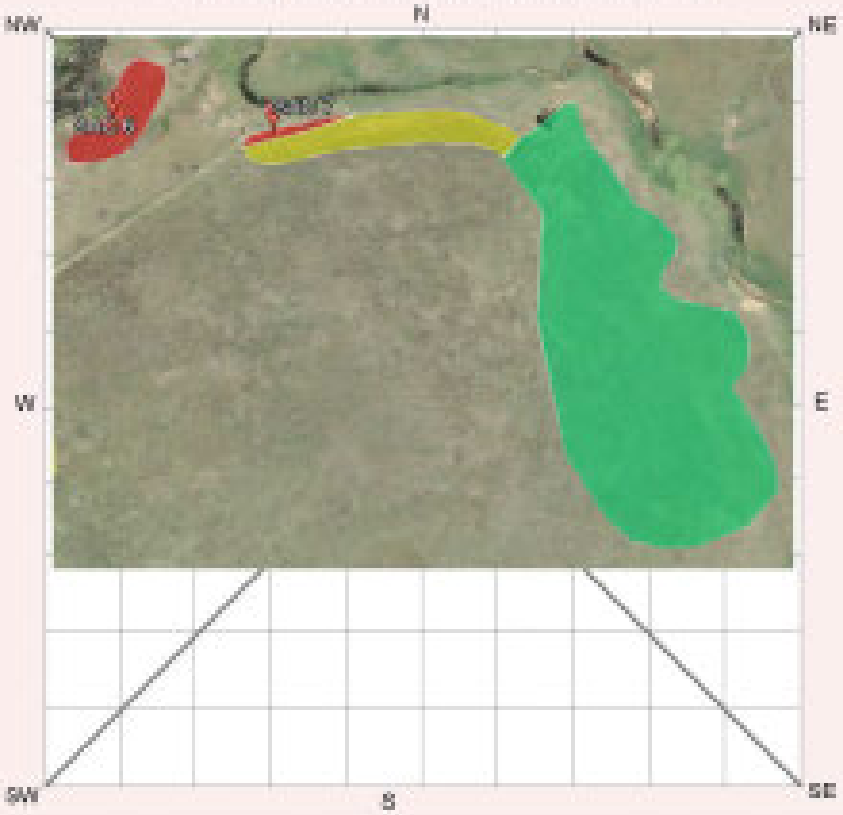
- [x] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [x] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

400	Total length of visible site
50	Average width of visible site
20000m2	Estimated area of visible site
400m	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. This site should be subject to two stage salvage, the first stage being excavation of test units to determine the full extent of the archaeological site present, followed by open area salvage excavation if the area is to be impacted.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

At SAC 6, on the western end of the site, twenty four silcrete and tuff artefacts, with one quartz artefact were identified eroding from the edge of the creek bank during survey. PAD 24 was assigned on the low flat adjacent to the creek, which possesses alluvial soil. SAC 7 is also known as the quarry site as large cobbles of silcrete, a large number of flakes removed for further reduction and flaked primary reduction flakes were identified at this location during survey and smaller tools were noticeably absent. It is located in an exposure on the margin of the creek, overlooking the major confluence. PAD 19 has been assigned to this area and both SAC 6, PAD 24, SAC 7 and PAD 19 retain high archaeological potential particularly closes to the creek. Across this area 25 artefacts were identified during test excavation of 22 pits.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah SAC 8 and PAD 28

Easting: 358491 Northing: 6383928 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Slope

[ ] degrees

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

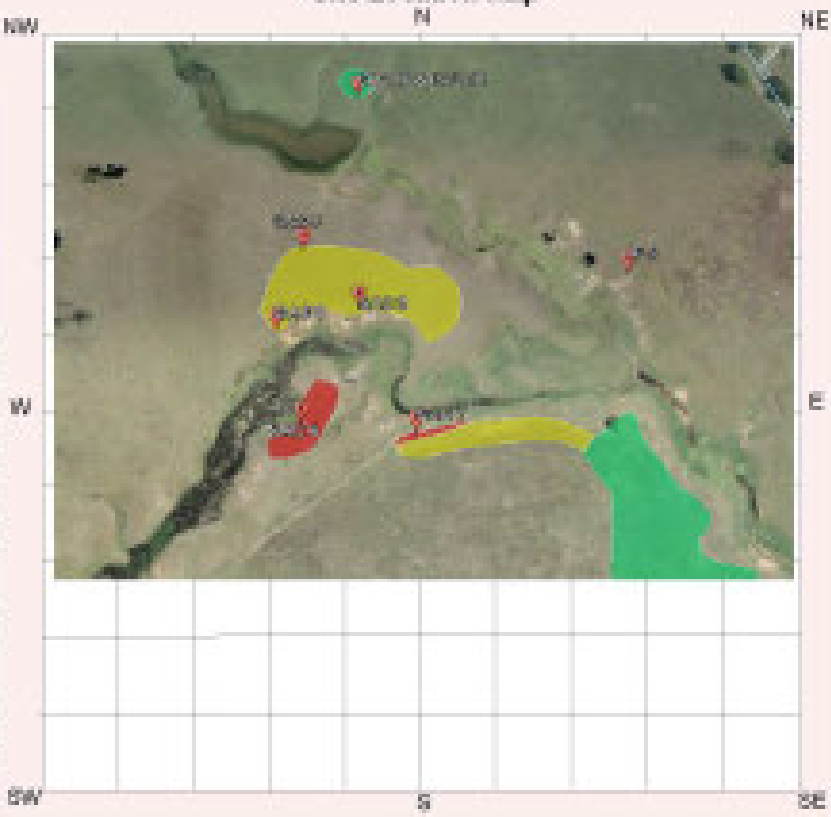
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	12	metres
Distance to temporary water source	50	metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water	Creek	

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

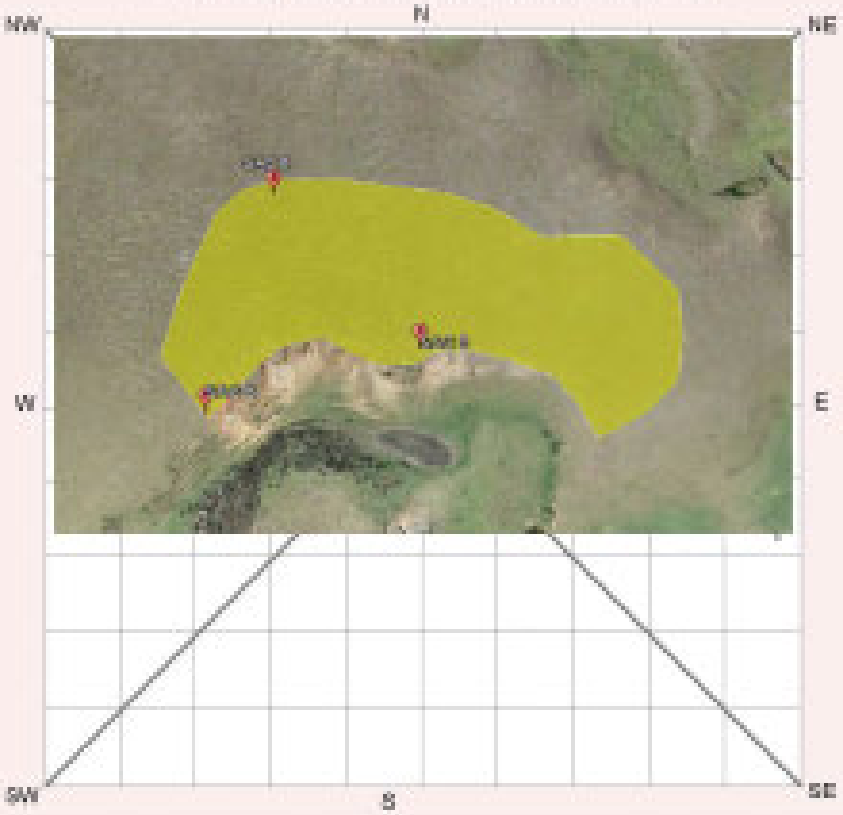
- [x] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

145	Total length of visible site
50	Average width of visible site
7250m2	Estimated area of visible site
145	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation ongoing. This site should be subject to salvage excavation of 50-100m2.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 28 is on a low flat landform overlooking a steep eroded slope to the creek. Large numbers of artefacts were recorded in three exposures along the banks of the creek during survey. In total 70+ artefacts were identified during survey and 19 artefacts were recovered from 16 TUs during test excavation. The site retains moderate to high archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah SAC 9 and PAD 25

Easting: 358210 Northing: 6383796 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [x] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

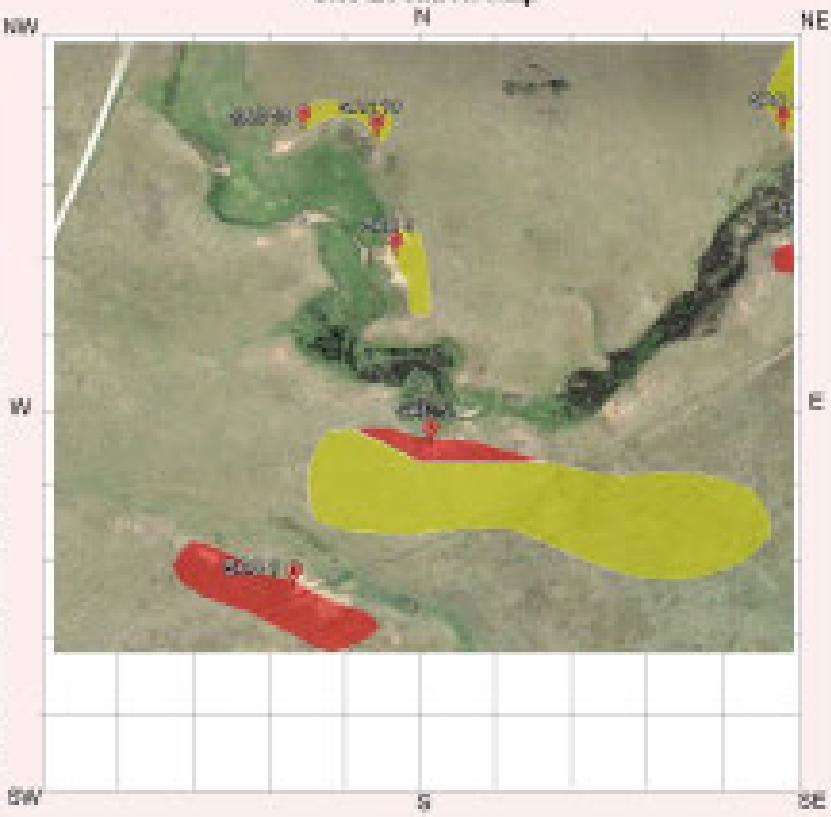
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	10	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report **I.D.** (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

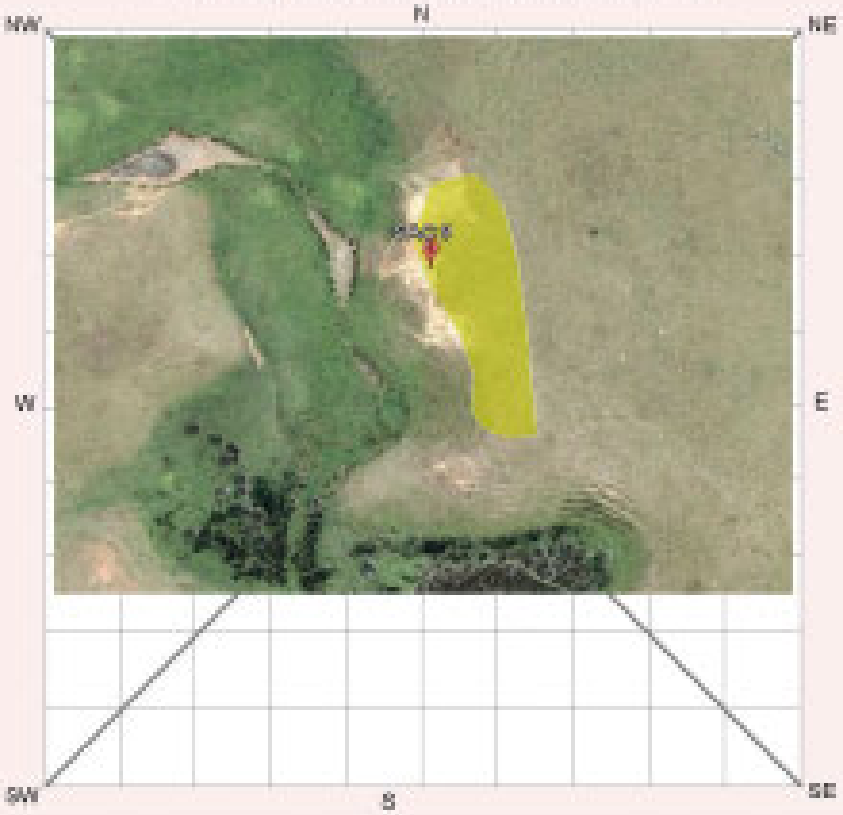
- [x] N-S
- [ ] NE-SW
- [x] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

55	Total length of visible site
21	Average width of visible site
1155m2	Estimated area of visible site
55	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. This site should be subject to salvage excavation of up to 50m2.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 25 is located on a low flat landform above the creek. 30+ artefacts were identified in two exposures in the creek bank. 28 artefacts were identified from 12 TUs during test excavation. The site retains moderate to high archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 10 and PAD 26

Easting: 358188 Northing: 6383868 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [x] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

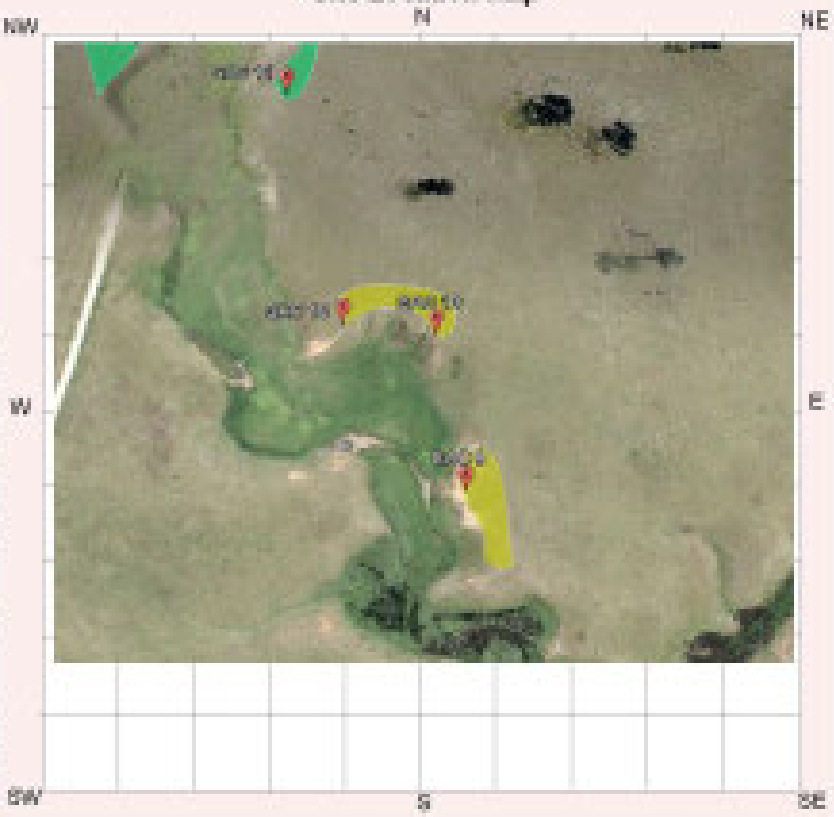
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	8	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report **I.D.** [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

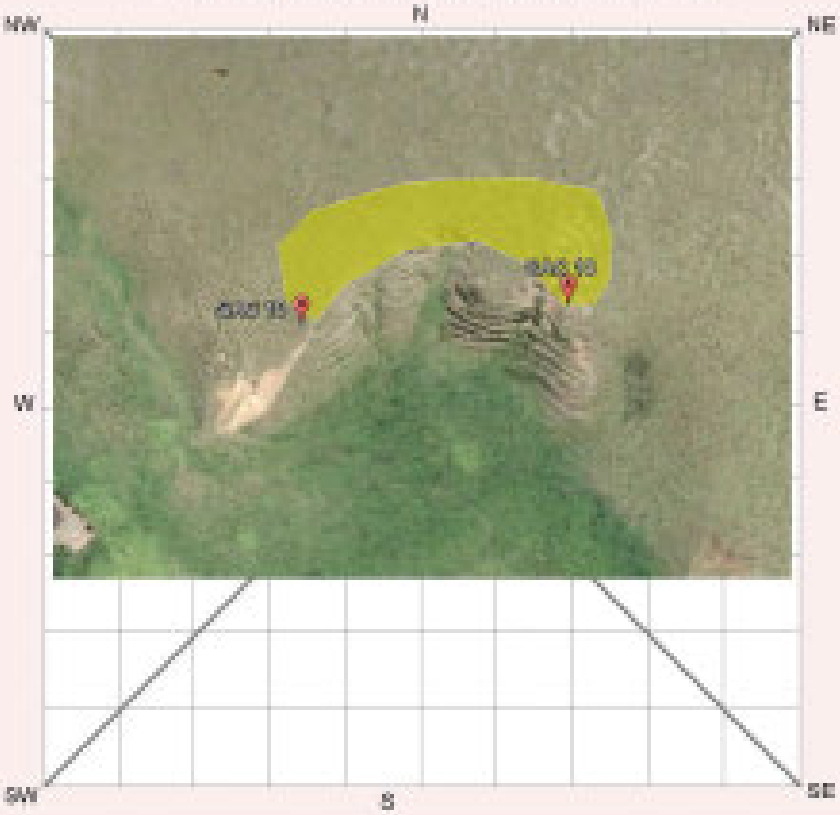
- [x] N-S
- [ ] NE-SW
- [x] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

3.6	Total length of visible site
12	Average width of visible site
57.2m 2	Estimated area of visible site
3.6	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. This site should be subject to salvage excavation of up to 50m2.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 26 is on a very slight sloped landform overlooking the creek. Two silcrete artefacts in heavy erosion were identified during field survey on the creek bank which has been terraced. 25 artefacts were recovered during test excavation of 9 pits within the PAD. The site retains moderate archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 11 and PAD 27

Easting: 358102 Northing: 6383978 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [x] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

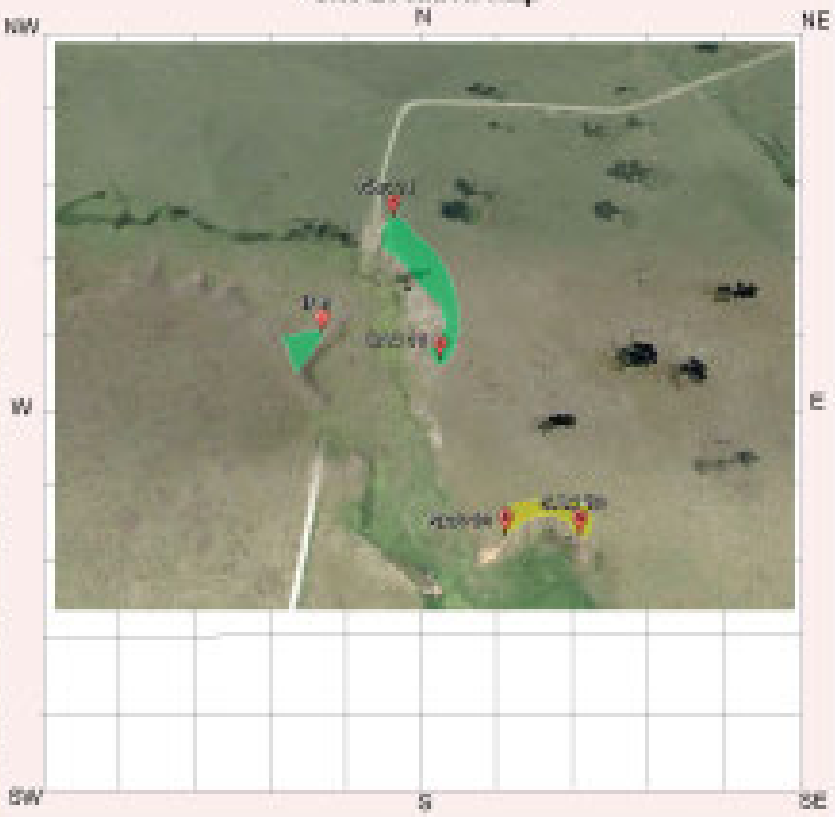
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	10	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

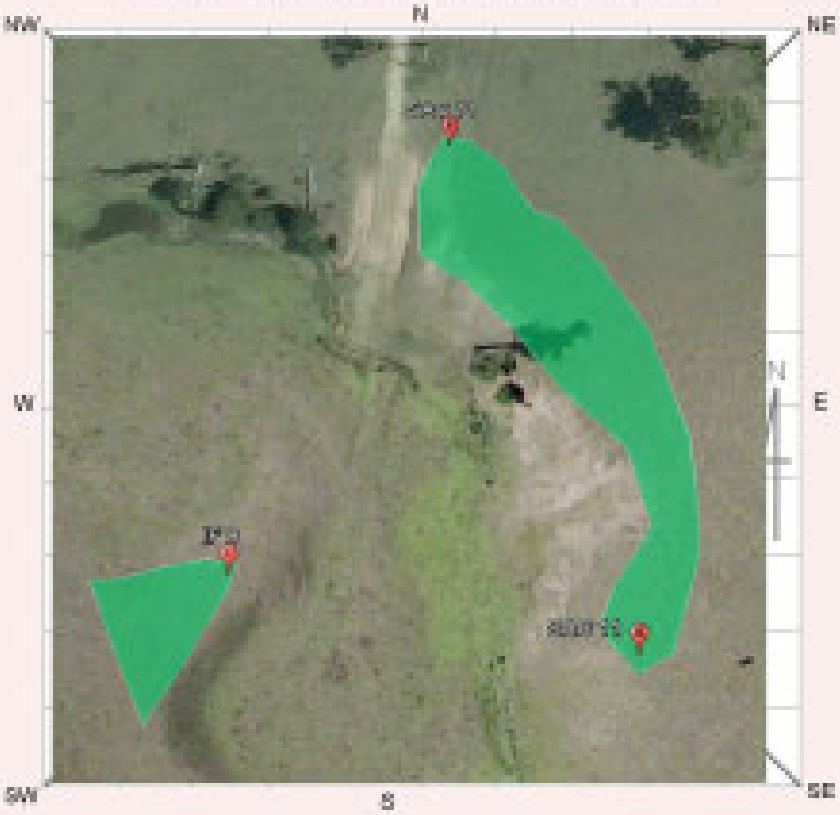
- [ ] N-S
- [x] NE-SW
- [ ] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

110	Total length of visible site
22	Average width of visible site
2420m2	Estimated area of visible site
110	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. This site should be subject to two stage salvage, the first stage being excavation of test units to determine the full extent of the archaeological site present, followed by open area salvage excavation if the area is to be impacted.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 27 is on a slightly sloped landform overlooking the creek. Around ten silcrete artefacts were identified along the highly eroded bank during survey. 171 artefacts were retrieved from 26 test pits during test excavation. The site retains high archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received ___ / ___ / ___ Date entered into system ___ / ___ / ___ Date catalogued ___ / ___ / ___

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 12

Easting: 357645 Northing: 6381559 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [x] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	50	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Current Land Tenure

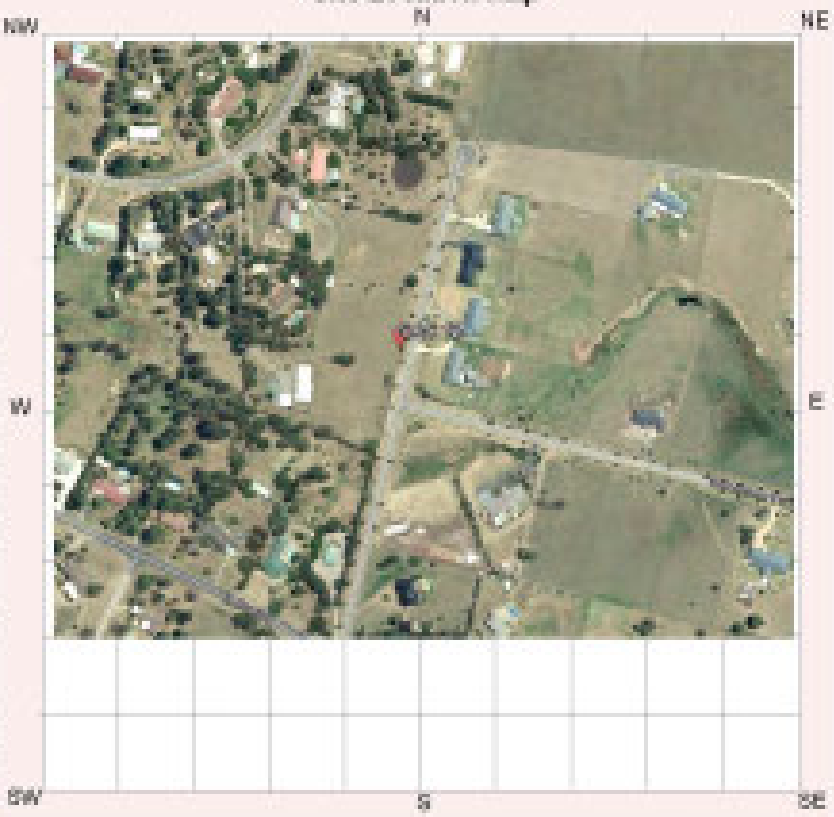
- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D.

(I.D. Office Use only)

GML 2012. Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

Site Location Map



NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [x] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features

Site Dimensions

Closed Site Dimensions (m)

- [ ] Internal length
- [ ] Internal width
- [ ] Shelter height
- [ ] Shelter floor area

Open Site Dimensions (m)

- 5m Total length of visible site
- 1m Average width of visible site
- 5m 2 Estimated area of visible site
- 5m Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. Community collection might be a suitable management strategy for this artefact in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

Four mudstone flakes within a disturbed urban landscaped bank - no archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah SAC 13 and PAD 12

Easting: 358404 Northing: 6383034 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 17/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

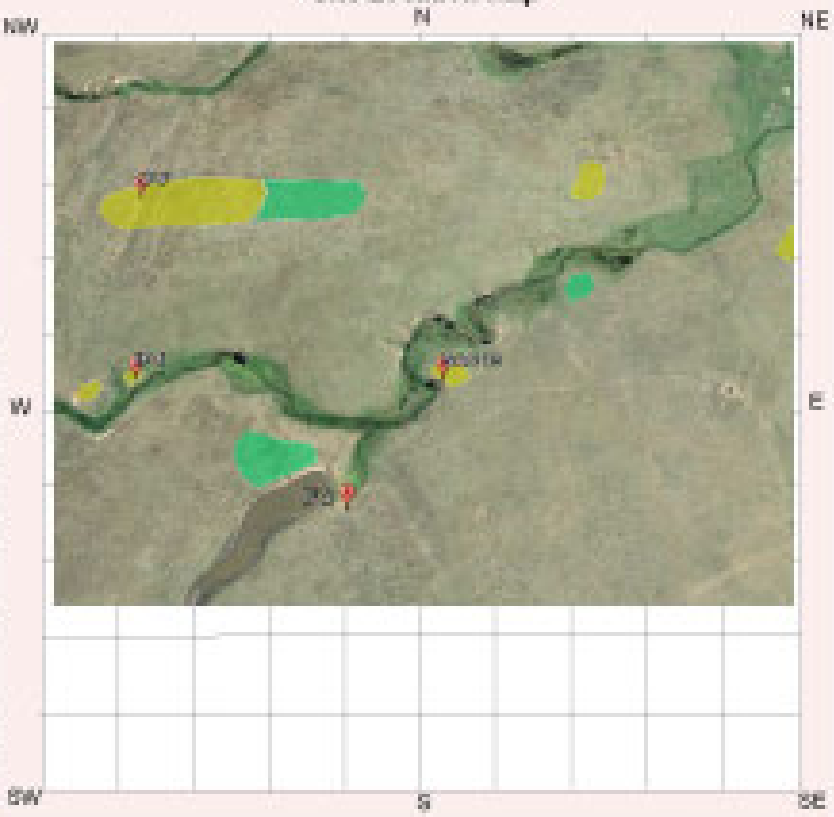
Water

Distance to permanent water source	20	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Adjacent to a large curve in the creek to the north of the large lake at the southern end of the Anambah property

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012. Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

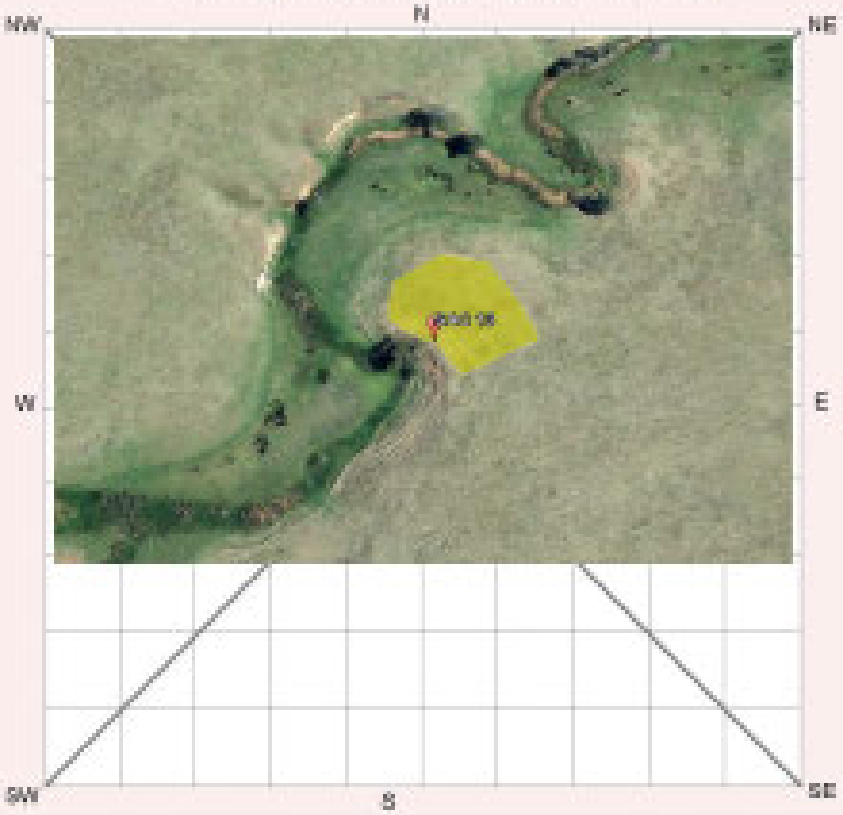
- [x] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

46	Total length of visible site
32	Average width of visible site
1472m2	Estimated area of visible site
50	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing for this site. The SAC and PAD should be subject to salvage excavation of up to 50m2.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 12 is on an elevated flat adjacent to the creek (third order) to the north. The area of the PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity.

During survey, a brown grey mudstone/ tuff broken flake was identified in erosion on the southern bank of a creek. Nine additional artefacts were identified during test excavation of 6 pits within PAD 12. It still retains moderate archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office Use Only

Site Number ___ - ___ - ___

Date received ___ / ___ / ___ Date entered into system ___ / ___ / ___ Date catalogued ___ / ___ / ___

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 14 and PAD 15

Easting: 358068 Northing: 6383015 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 17/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Slope

[ ] degrees

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

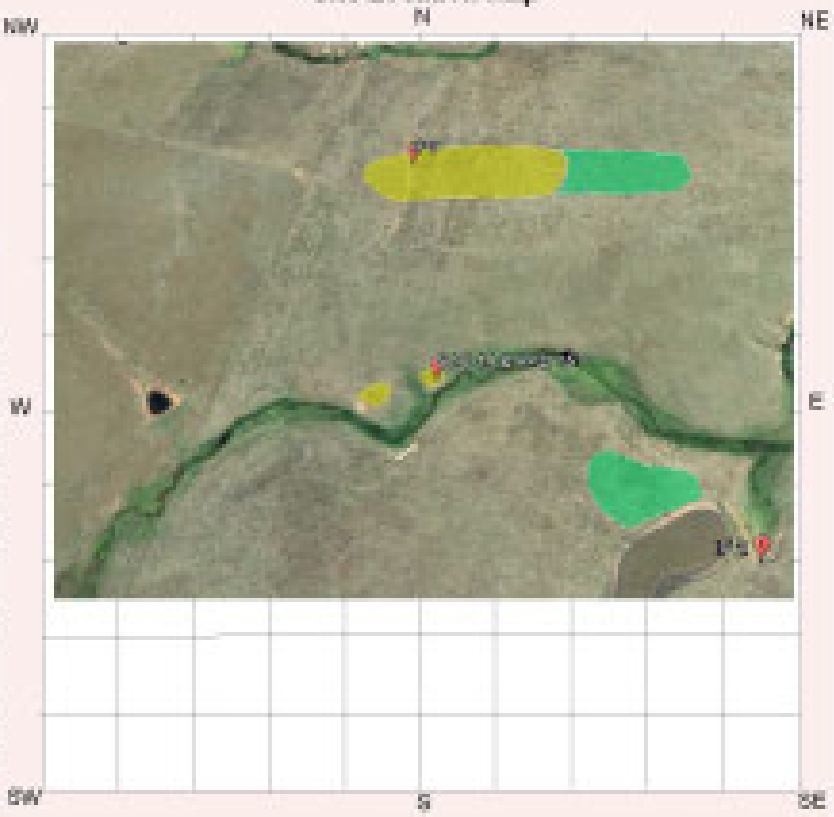
Water

Distance to permanent water source	10	metres
Distance to temporary water source		metres
Name of nearest permanent water source	2nd Creek	
Name of nearest temporary water		

Directions for Relocation

To the north of the second order creek where it bends in a loop to the south.

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [ ] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

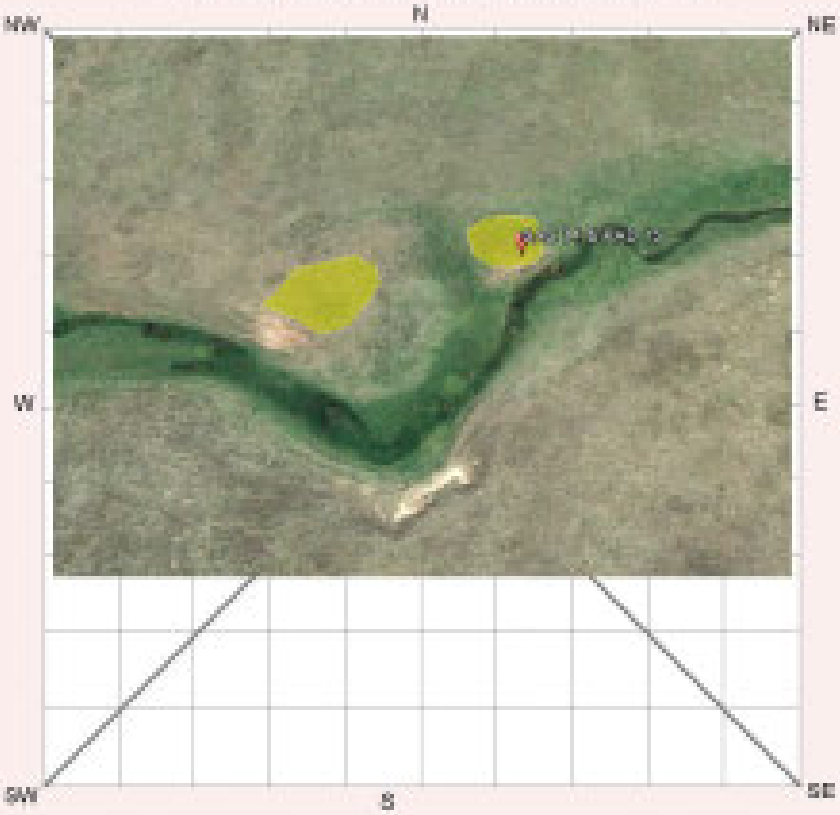
- [x] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

75	Total length of visible site
21	Average width of visible site
1575	Estimated area of visible site
75	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. This site should be subject to salvage excavation of up to 50m2 if it is to be impacted.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 15 covers two elevated flats on the lower slope within the open depression of the second order creek. The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity.

During survey, a silcrete (heat treated) flake was identified within erosion scars adjacent to the creek. During test excavation of 13 pits across PAD 15, 25 additional artefacts were identified.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

ATR and ACHAR are being prepared at the present and will be provided to OEH upon completion.

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office Use Only

Site Number ___ - ___ - ___

Date received ___ / ___ / ___ Date entered into system ___ / ___ / ___ Date catalogued ___ / ___ / ___

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 15 and PAD 16

Easting: 358028 Northing: 6383247 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 17/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [x] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

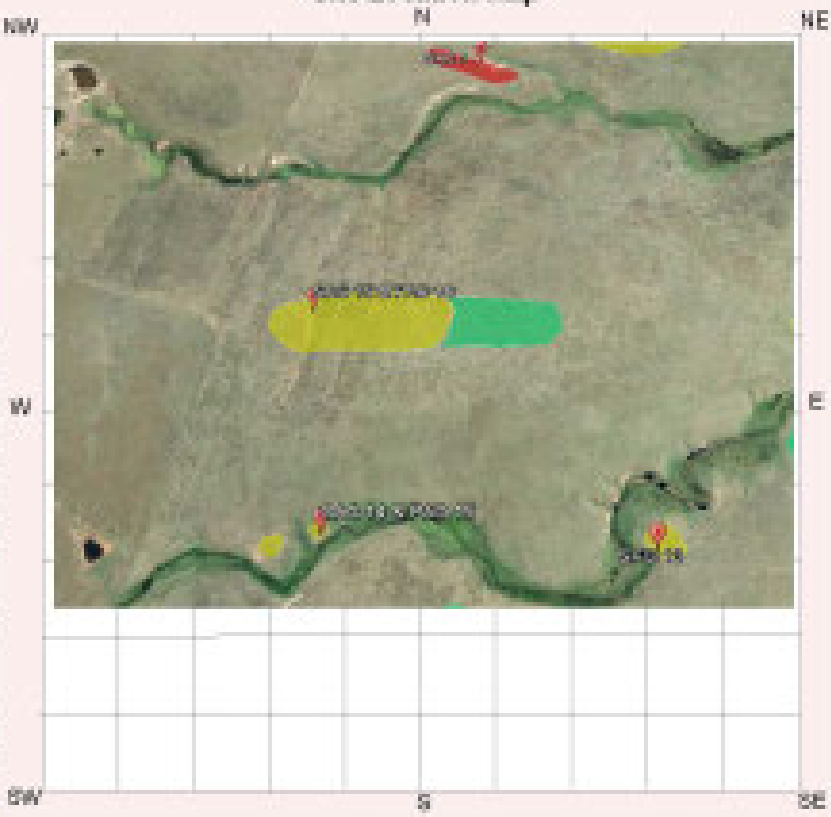
Water

Distance to permanent water source	220	metres
Distance to temporary water source	170	metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water	Creek	

Directions for Relocation

On a hilltop between the two creeks in the centre of the study area

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

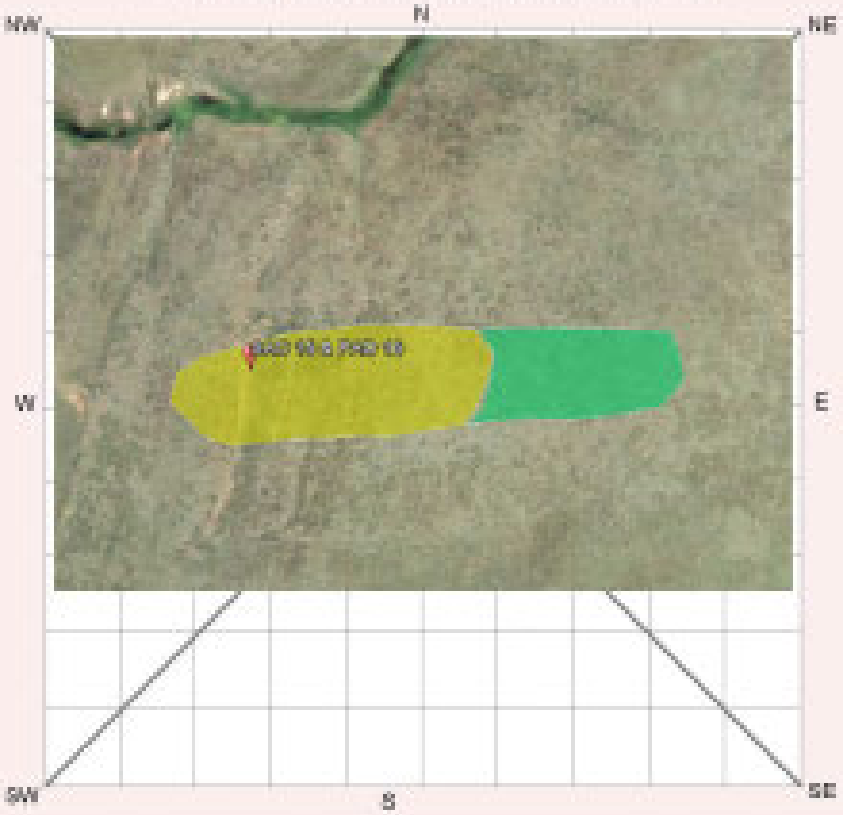
- [ ] N-S
- [x] NE-SW
- [ ] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

320	Total length of visible site
70	Average width of visible site
22400	Estimated area of visible site
320	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. This site should be subject to salvage excavation of 50 to 100m2.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

This site is located on a large flat hilltop and slope to the east, with 270 degree views. The area of PAD has been ploughed and cropped within the last 10 years, and thus had reduced integrity.

A large silcrete core was identified on the flat hilltop during field survey. Testing of 52 pits identified an additional 18 artefacts. This site retains moderate archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title Surname First Name Initials

Organisation

Address

Phone number Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah SAC 16

Easting: 358025 Northing: 6383995 AGD/GDA: GDA

Mapsheet ____

Zone 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded ____

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Slope

- [ ] degrees

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [x] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

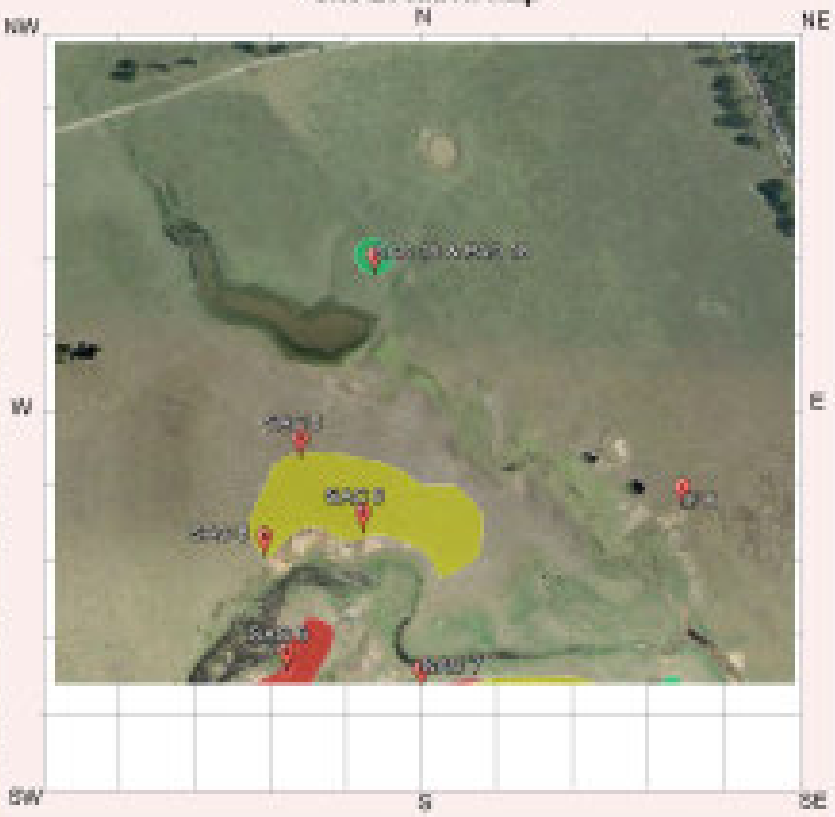
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	220	metres
Distance to temporary water source	80	metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water	Creek	

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

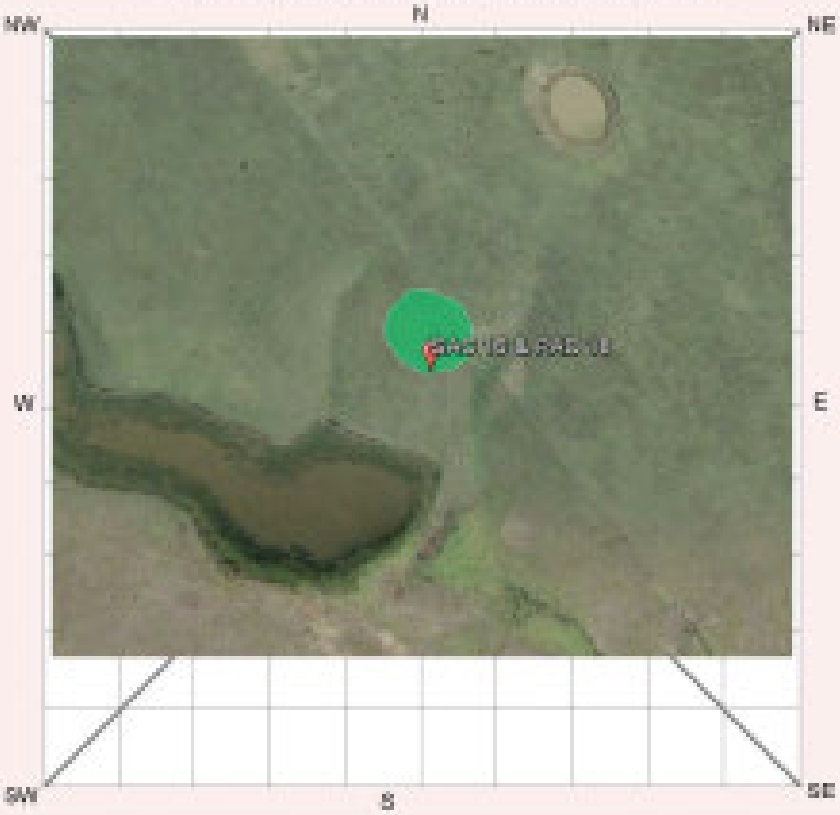
- [ ] N-S
- [ ] NE-SW
- [x] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

28	Total length of visible site
27	Average width of visible site
75 6m 2	Estimated area of visible site
28	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation ongoing. Community collection might be a suitable management strategy for these two artefacts in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

PAD 18 was designated on an elevated flat above a dam. One possible flake of red silcrete with some conglomeration on highly impacted edge of lower slope adjacent to a dam. During test excavation, 2 artefacts were excavated from 3 TUs placed on the PAD. This site has low to no further archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 17 and PAD 1

Easting: 359151 Northing: 6382591 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [x] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

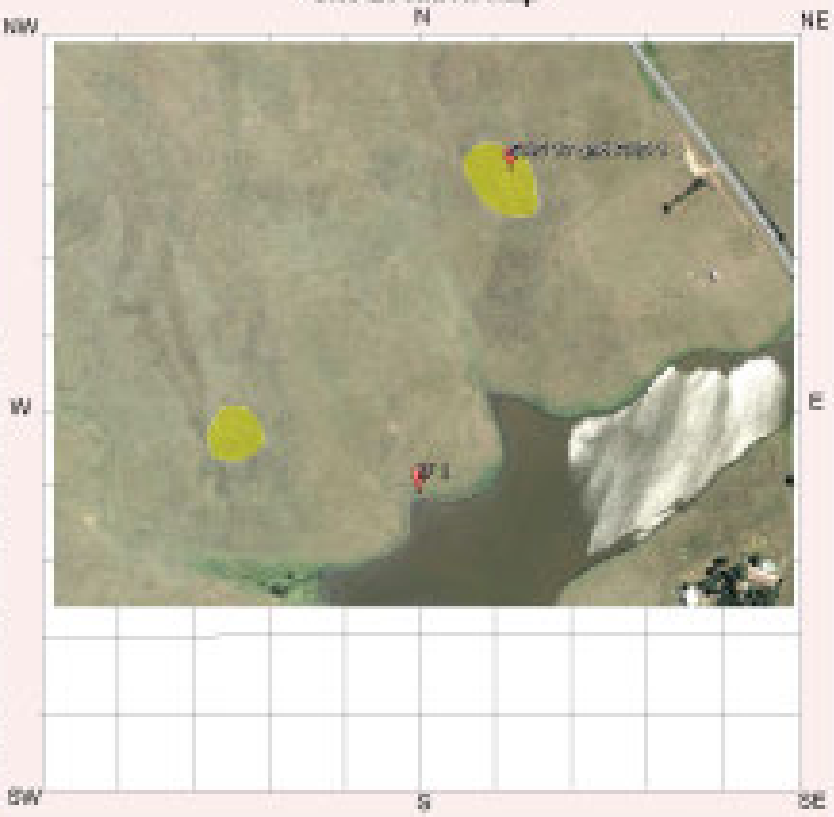
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	210	metres
Distance to temporary water source	140	metres
Name of nearest permanent water source	A Major Ck	
Name of nearest temporary water	Creek	

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

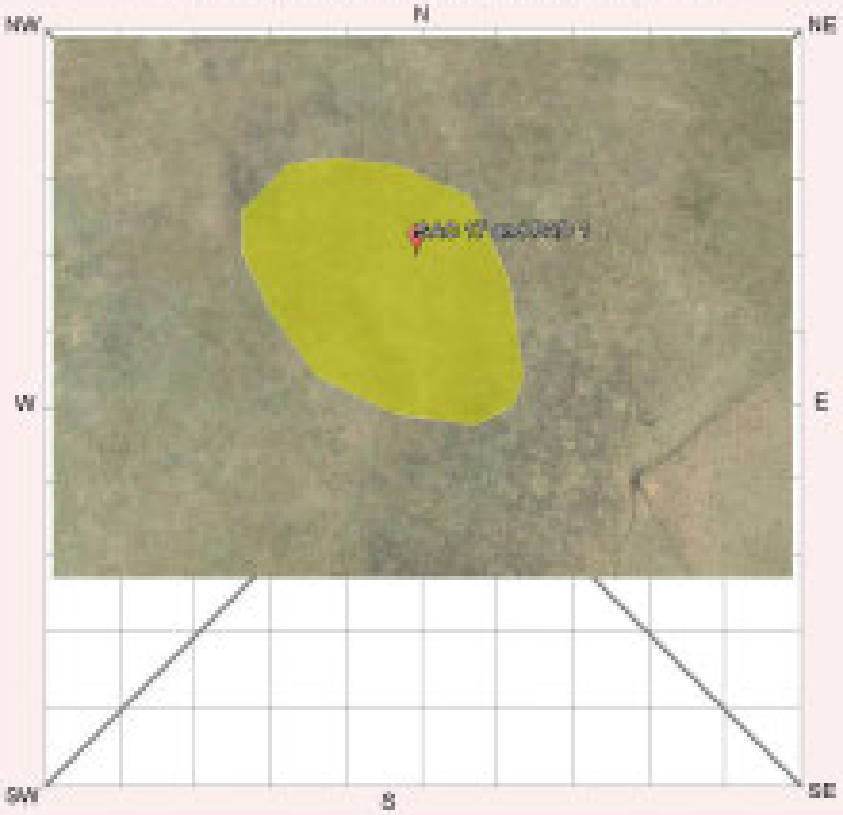
- [x] N-S
- [x] NE-SW
- [x] E-W
- [x] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [x] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

93	Total length of visible site
65	Average width of visible site
6045m2	Estimated area of visible site
93	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. This site should be subject to salvage excavation of 50 to 100m2 if it will be impacted in any way.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

This site is located on a low flat hill top with views in all directions, especially to the low surrounding watercourses. The area of PAD has been ploughed and cropped within the last 10 years and thus has reduced integrity, however, from 19 TUs, 58 artefacts were recovered. The site retains moderate potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received ___ / ___ / ___ Date entered into system ___ / ___ / ___ Date catalogued ___ / ___ / ___

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 18

Easting: 358837 Northing: 6382360 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

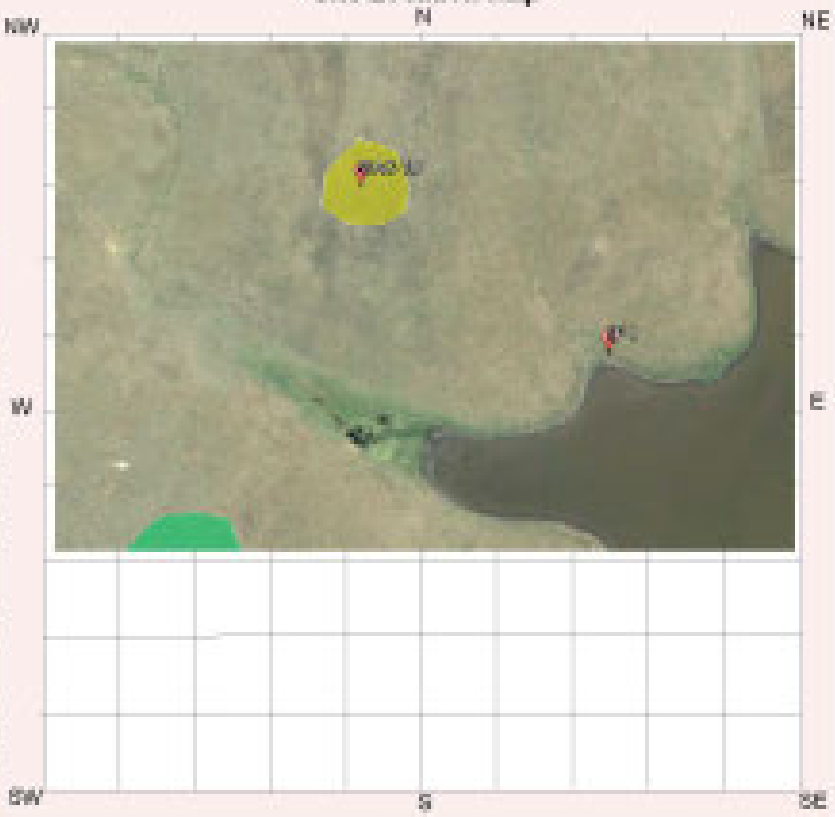
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	150	metres
Distance to temporary water source	100	metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water	Creek	

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

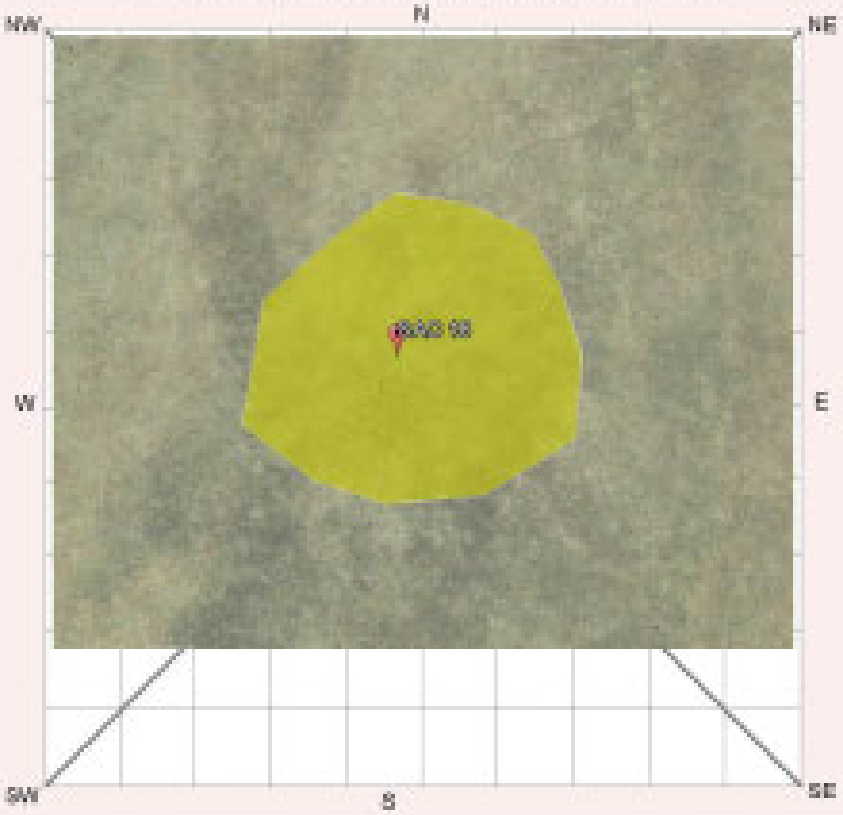
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [x] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

60	Total length of visible site
58	Average width of visible site
3480m2	Estimated area of visible site
60	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation ongoing. Community collection might be a suitable management strategy for this artefact site in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site is located on the break of a slope, creating a small flat landform. The area has been ploughed and cropped within the last 10 years and thus has reduced integrity. 3 artefacts were recovered by 12 test pits during test excavation and the site has low to no further archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Client on system ☐

☐ **Knowledge Holder**

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 19

Easting: 358764 Northing: 6382070 AGD/GDA: GDA

Mapsheet

Zone: 56 Location Method: Client GIS or CAD System

Other Registration

Primary Recorder

Title: Ms | Surname: Cowie | First Name: Diana | Initials

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [x] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [ ] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

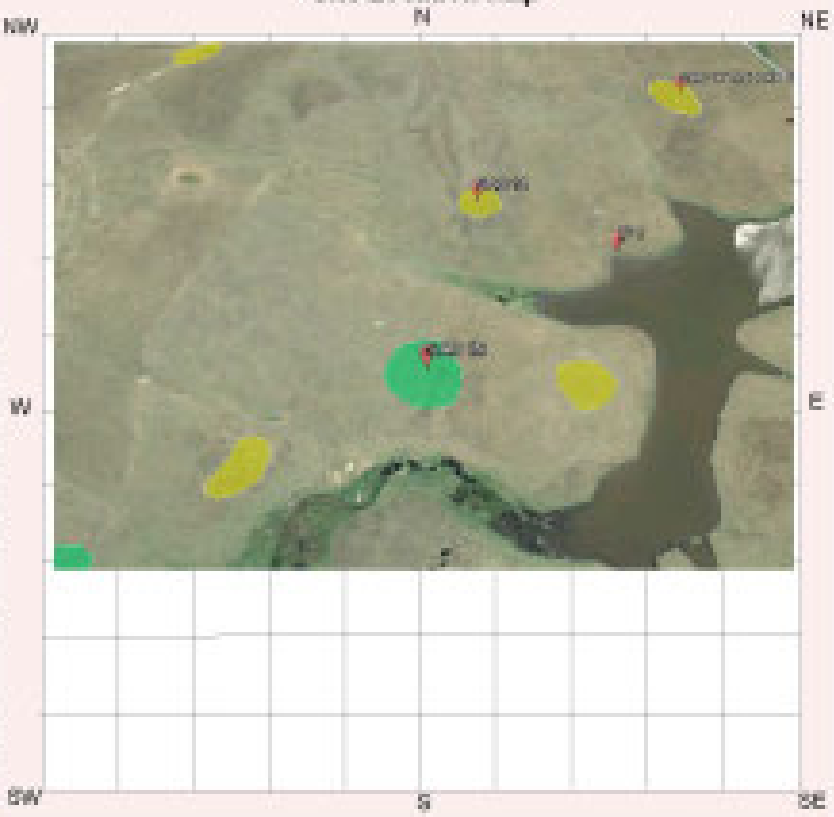
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	80	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

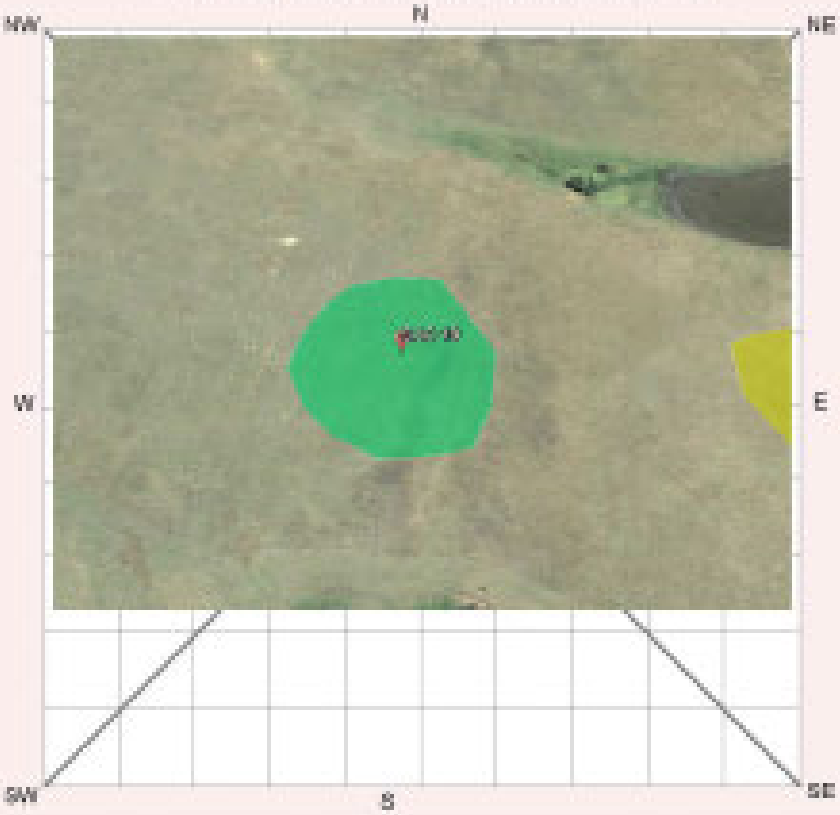
- [x] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

99	Total length of visible site
97	Average width of visible site
9603m2	Estimated area of visible site
99	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation ongoing. Community collection might be a suitable management strategy for this artefact site in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site is located on a mid slope, where an elevated flat creates a good outlook to the south. The area has been ploughed and cropped within the last 10 years and thus has reduced integrity. 5 artefacts were recovered by 17 test pits during test excavation and the site has low to no further archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received ___ / ___ / ___ Date entered into system ___ / ___ / ___ Date catalogued ___ / ___ / ___

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 20

Easting: 358965 Northing: 6382068 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

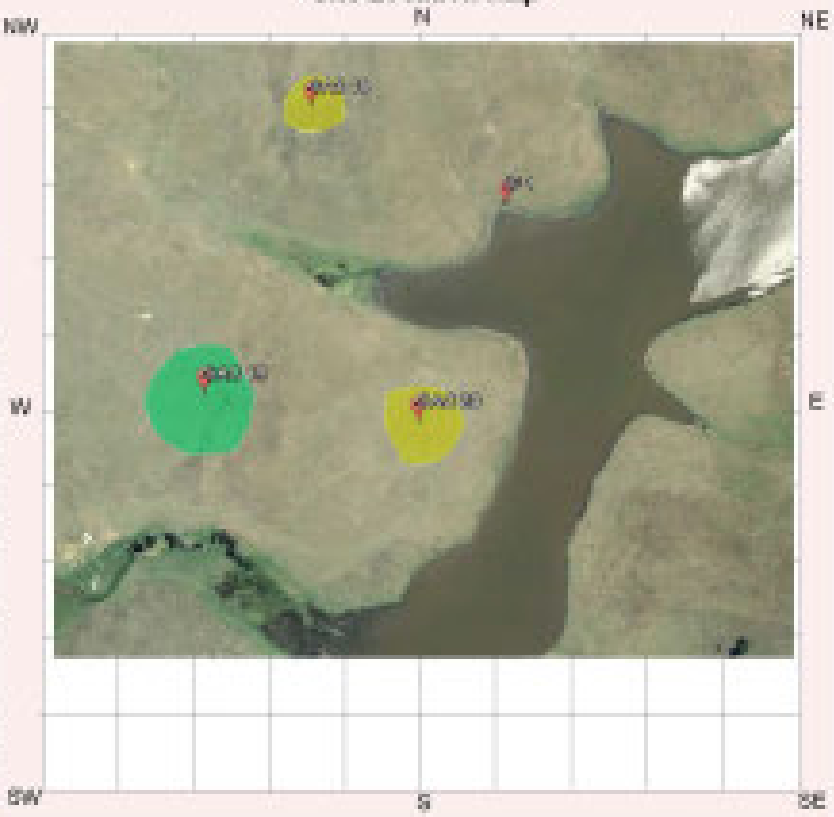
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	45	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

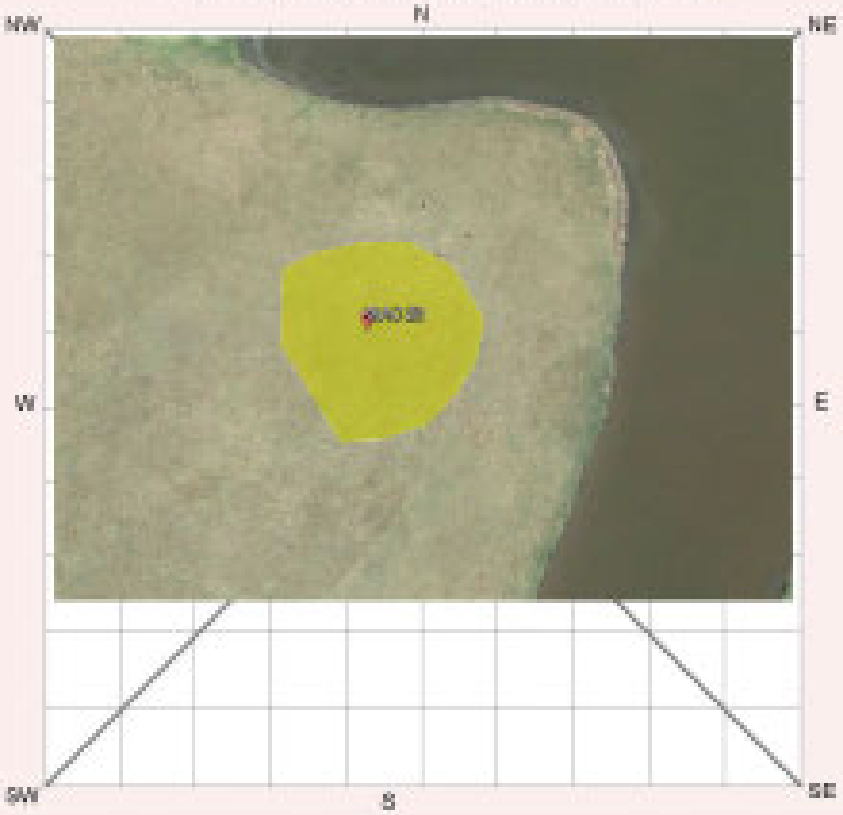
- [ ] N-S
- [ ] NE-SW
- [x] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

70	Total length of visible site
70	Average width of visible site
4900m2	Estimated area of visible site
70	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation ongoing. Community collection might be a suitable management strategy for this artefact site in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site is located on a small raised flat on the slope above the creek (now dammed). Good views to the south, sheltered from northerly wind and receives early morning sun. The area has been ploughed and cropped within the last 10 years, and thus has reduced integrity. From 8 TUs, 5 artefacts were retrieved. There is low to no further archaeological potential at this site.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title Surname First Name Initials

Organisation

Address

Phone number Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 21

Easting: 358568 Northing: 6381937 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Slope

[ ] degrees

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

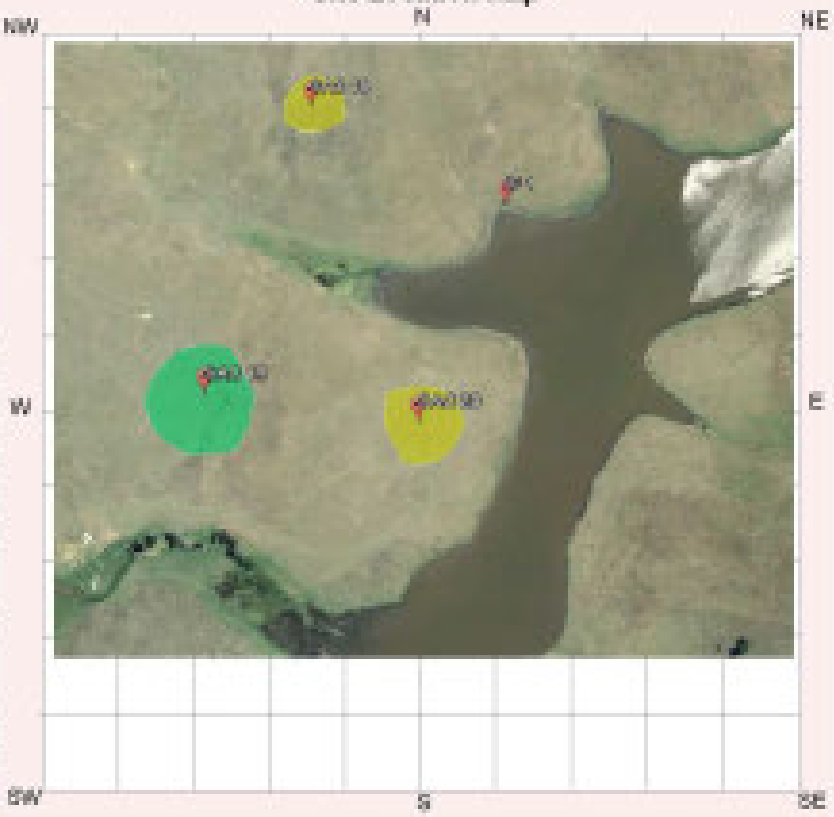
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	60	metres
Distance to temporary water source	50	metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water	Creek	

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public
- [x] Private

National Park / other Government Dept.

Primary report **I.D.** (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

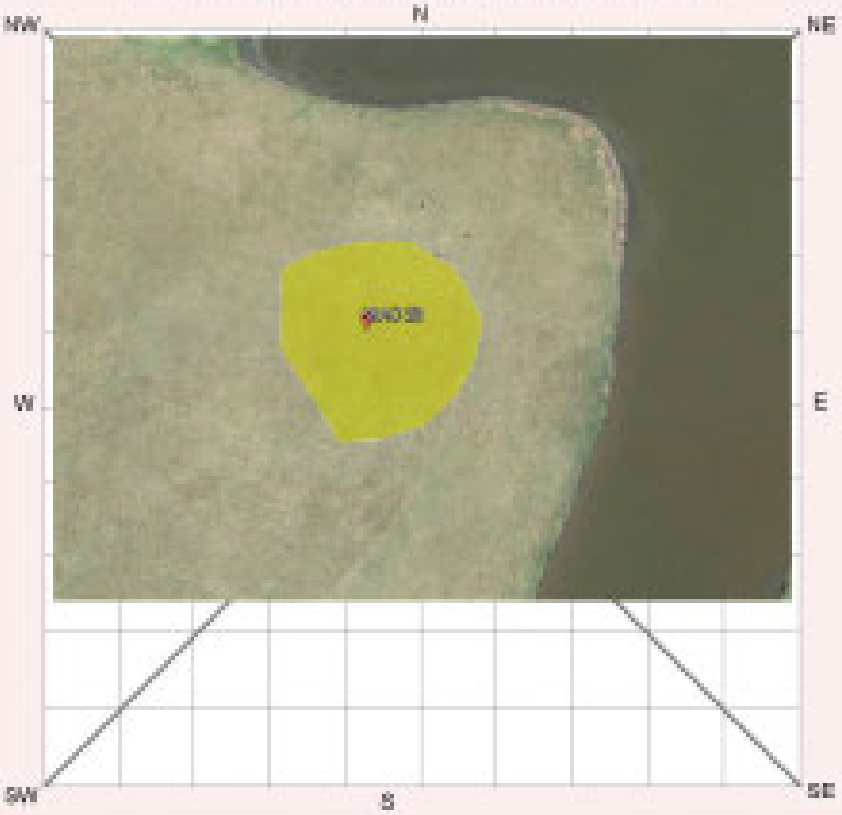
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [x] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

8.5	Total length of visible site
4.4	Average width of visible site
37.4 0m2	Estimated area of visible site
8.5	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation ongoing. Community collection might be a suitable management strategy for this artefact site in light of the proposed development.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site is located on a small raised flat on the slope between two second order creeks. It has localised views to the south. The area has been ploughed and cropped within the last 10 years, and thus has reduced integrity. From 7 TUs, 2 artefacts were retrieved. There is low to no further archaeological potential at this site.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

AHIMS

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office of Environment & Heritage

Office Use Only

Site Number ___ - ___ - ___

Date received __/__/__ Date entered into system __/__/__ Date catalogued __/__/__

Entered by (I.D.) ____

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

☐ **Knowledge Holder**

Title ____ Surname ____ First Name ____ Initials ____

Organisation ____

Address ____

Phone number ____ Fax ____

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

____

Geographic Location

Site Name: Anambah SAC 22 and PAD 11

Easting: 358220 Northing: 6382935 AGD/GDA: GDA

Mapsheet ____

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ____

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ____

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	50	metres
Distance to temporary water source	10	metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water	Creek	

Directions for Relocation

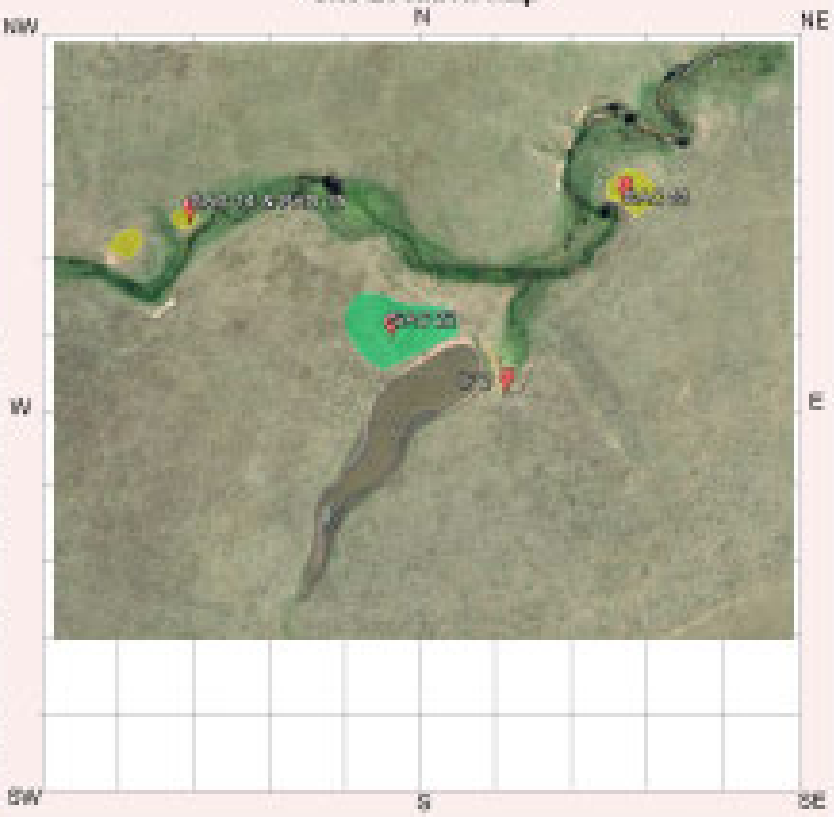
Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report I.D. [ ] (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

Site Location Map



NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

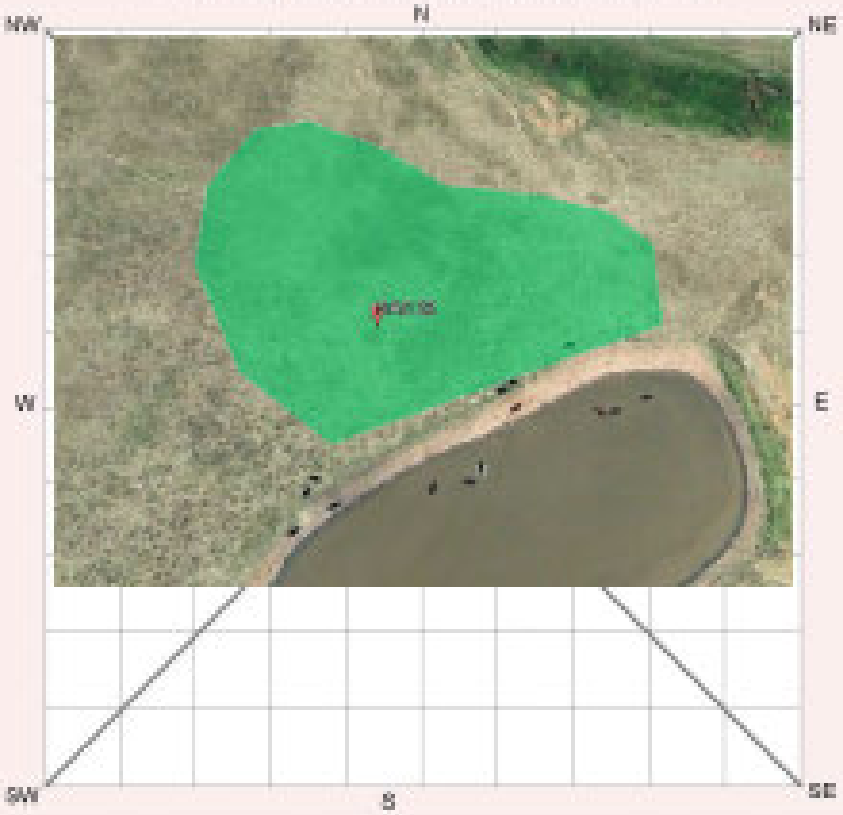
- [ ] N-S
- [ ] NE-SW
- [ ] E-W
- [ ] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [ ] 3. Art
- [x] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

90	Total length of visible site
45	Average width of visible site
4050m2	Estimated area of visible site
90	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. The site should be subject to salvage excavation of up to 50m2.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site is situated on a raised flat at the junction of two second order creeks. A large dam has been constructed adjacent to the PAD and may have impacted the condition and integrity of the PAD. In addition, the area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Nevertheless, there remains an area of PAD with this SAC that has low to moderate archaeological potential.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

Aboriginal Site Recording Form

AHIMS Registrar
PO Box 1967, Hurstville NSW 2220

Office Use Only

Site Number ___ - ___ - ___

Date received ___ / ___ / ___ Date entered into system ___ / ___ / ___ Date catalogued ___ / ___ / ___

Entered by (I.D.) ___

Information Access

☐ Gender/male ☐ Gender/female ☐ Location restriction ☐ General restriction ☐ No access

Office Use Only

For Further Information Contact:

☐ **Nominated Trustee**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

☐ **Knowledge Holder**

Title ___ Surname ___ First Name ___ Initials ___

Organisation ___

Address ___

Phone number ___ Fax ___

Client on system ☐

Aboriginal Heritage Unit or Cultural Heritage Division Contacts

Geographic Location

Site Name: Anambah SAC 23 and PAD 13

Easting: 358834 Northing: 6383251 AGD/GDA: GDA

Mapsheet ___

Zone: 56 Location Method: Client GIS or CAD System

Other Registration ___

Primary Recorder

Title: Ms Surname: Cowie First Name: Diana Initials ___

Organisation: GML

Address: 78 George St Redfern

Phone number: 93194811 Fax: 93194383

Date recorded: 19/09/2013

Client on system ☐

NPWS Aboriginal Site Recording Form - Site Information

OPEN/CLOSE SITE Open Site

Site Context

Landform

- [ ] Mountainous
- [ ] Plain
- [x] Rolling hills
- [ ] Steep hills
- [ ] Undulating plain

Landform Unit

- [ ] Beach
- [ ] Coastal rock platform
- [ ] Dune
- [ ] Intertidal flat
- [ ] Lagoon
- [ ] Tidal Creek
- [ ] Tidal Flat
- [ ] Cliff
- [ ] Crest
- [ ] Flat
- [ ] Lower slope
- [ ] Mid slope
- [ ] Upper slope
- [ ] Plain
- [ ] Ridge
- [ ] Tor
- [ ] Valley flat
- [ ] Levy
- [ ] Stream bank
- [ ] Stream channel
- [ ] Swamp
- [ ] Terrace
- [x] Terrace flat

Slope

[ ] degrees

Vegetation

- [ ] Closed forest
- [x] Grasslands
- [ ] Isolated clumps of trees
- [ ] Open forest
- [ ] Open woodland
- [ ] Scrub
- [ ] Woodland
- [x] Cleared
- [ ] Revegetated
- [ ] N/A

Land use

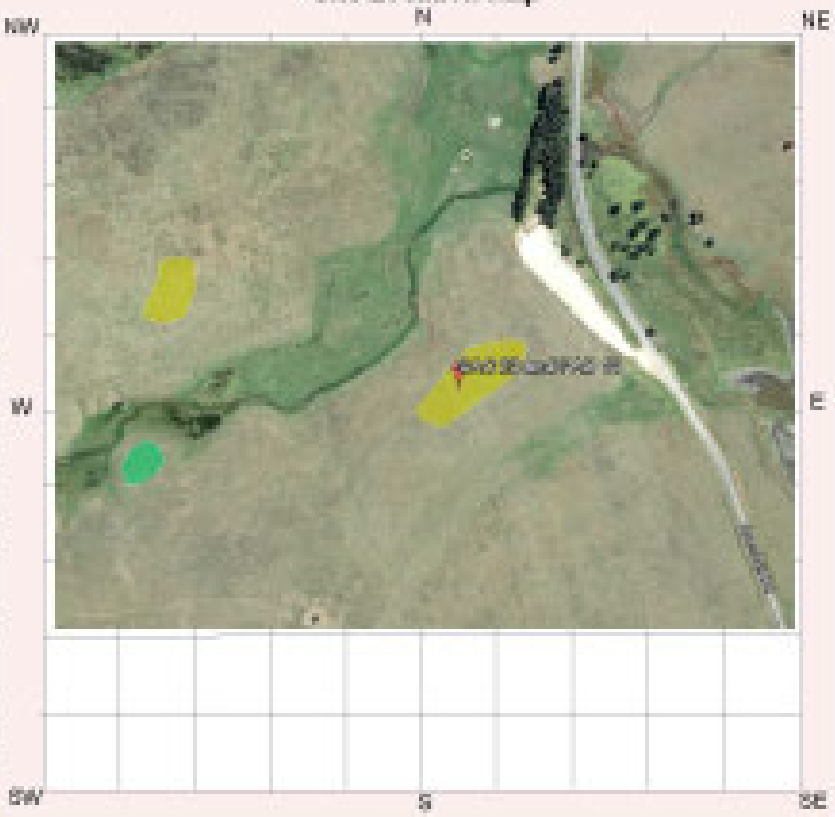
- [ ] Conservation
- [ ] Established urban
- [ ] Farming-intensive
- [ ] Farming-low intensity
- [ ] Forestry
- [ ] Industrial
- [ ] Mining
- [x] Pastoral/grazing
- [ ] Recreation
- [ ] Semi-rural
- [ ] Service corridor
- [ ] Transport corridor
- [ ] Urban expansion
- [ ] N/A

Water

Distance to permanent water source	45	metres
Distance to temporary water source		metres
Name of nearest permanent water source	Creek	
Name of nearest temporary water		

Directions for Relocation

Site Location Map



Current Land Tenure

- [ ] Public — National Park / other Government Dept.
- [x] Private

Primary report **I.D.** (I.D. Office Use only)

GML 2012, Anambah Aboriginal Heritage Rezoning Report, prepared for Stockland Pty Ltd.

NPWS Aboriginal Site Recording Form - Site Information

General Site Information

Closed Site

Shelter/Cave Formation

- [ ] Boulder
- [ ] Wind erosion
- [ ] Water erosion
- [ ] Rock collapse

Rock Surface Condition

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Condition of Ceiling

- [ ] Boulder
- [ ] Sandstone platform
- [ ] Silica gloss
- [ ] Tessellated
- [ ] Weathered
- [ ] Other platform

Shelter Aspect

- [ ] North
- [ ] North East
- [ ] East
- [ ] South East
- [ ] South
- [ ] South West
- [ ] West
- [ ] North West

Open Site

Site Orientation

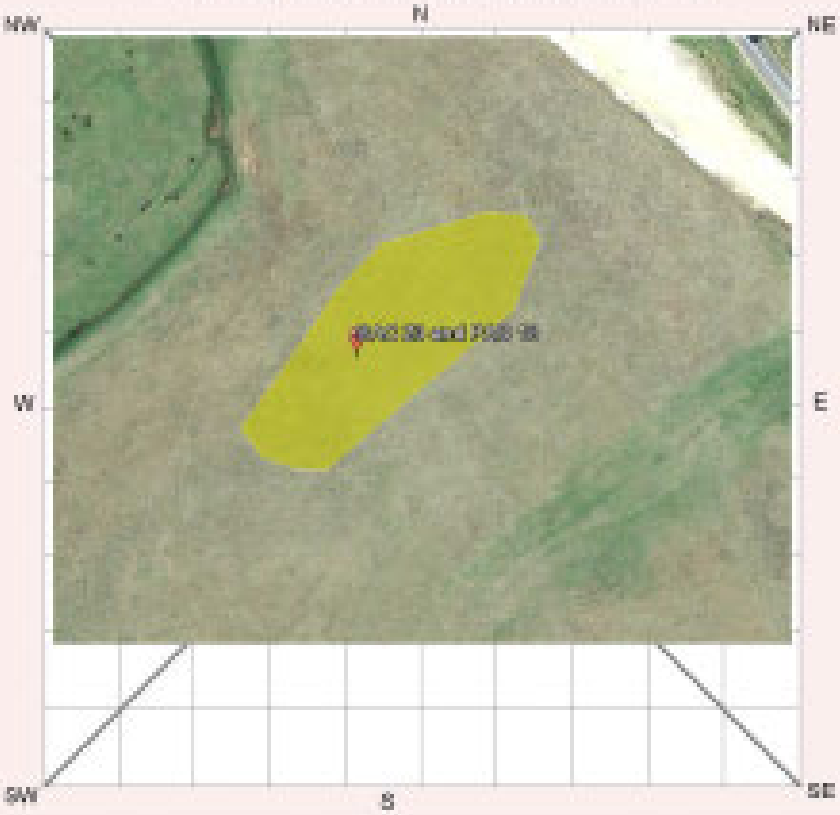
- [x] N-S
- [x] NE-SW
- [x] E-W
- [x] SE-NW
- [ ] N/A

Features

- [ ] 1. Aboriginal Ceremony & Dreaming
- [ ] 2. Aboriginal Resource & Gathering
- [x] 3. Art
- [ ] 4. Artefact
- [ ] 5. Burial
- [ ] 6. Ceremonial Ring
- [ ] 7. Conflict
- [ ] 8. Earth Mound
- [ ] 9. Fish Trap
- [ ] 10. Grinding Groove
- [ ] 11. Habitation Structure
- [ ] 12. Hearth
- [ ] 13. Non Human Bone & Organic Material
- [ ] 14. Ochre quarry
- [ ] 15. Potential Archaeological Deposit
- [ ] 16. Stone Quarry
- [ ] 17. Shell
- [ ] 18. Stone Arrangement
- [ ] 19. Modified Tree
- [ ] 20. Water Hole

Site Plan

Indicate scale, boundaries of site, features



Site Dimensions

Closed Site Dimensions (m)

	Internal length
	Internal width
	Shelter height
	Shelter floor area

Open Site Dimensions (m)

110	Total length of visible site
45	Average width of visible site
4950m2	Estimated area of visible site
110	Length of assessed site area

Aboriginal Community Interpretation and Management Recommendations

Community consultation is ongoing. This site should be subject to salvage excavation of 50-100m2.

Preliminary Site Assessment

Site Cultural & Scientific Analysis and Preliminary Management Recommendations

The site is located on a wide raised flat landform overlooking a large creek system. The area of PAD has been ploughed and cropped within the last 10 years and thus has some reduced integrity, however of the 15 test units excavated during test excavation, 23 artefacts were identified. The PAD has moderate archaeological potential for further subsurface artefacts.

This section should only be filled in by the Endorsees

Endorsed by: ☐ Knowledge Holder ☐ Nominated Trustee ☐ Native Title Holder ☐ Community Consensus

Title | Surname | First Name | Initials

Organisation

Address

Phone number | Fax

Attachments (No.)

- ☐ A4 location map
- ☐ B/W photographs
- ☐ Colour photographs
- ☐ Slides
- ☐ Aerial photographs
- ☐ Site plans, drawings
- ☐ Recording tables
- ☐ Other
- ☐ Feature inserts-No. ☐

Comments

Appendix K

Salvage ARD

Appendix K—Anambah Salvage Archaeological Research Design (ARD)

This ARD has been designed to provide a methodology and research parameters for the archaeological salvage excavation of a number of First Nations sites, identified through test excavation, within the Anambah Precinct study area.

The background context for the proposed salvage excavation, including the research context, and results of archaeological test excavation, is presented in GML 2021 (Anambah First Nations Heritage Archaeological Technical Report), to which this ARD is an appendix. The report should be referred to for all relevant contextual materials.

Mechanism Used to Identify Locations for Salvage Excavation

The locations that will require open area salvage archaeological excavation have been defined through the First Nations heritage assessment process, based on:

- the results of field survey and archaeological test excavation;
- consultation with the First Nations community representatives;
- an assessment of cultural and scientific values pertaining to each distinct First Nations site and the wider Anambah Precinct;
- an assessment of previous archaeological research within the Hunter Valley and the identification of research knowledge gaps; and
- local and regional research questions that may be addressed through further archaeological excavation at the Anambah Precinct.

Salvage Excavation Research Context

Section 4 of the Anambah ATR identified the need for salvage excavation in order to further investigate the nature of archaeological deposits and long term First Nations occupation across Anambah, including on alluvial landscapes, as well as the need for the determination of stratigraphical chronology of First Nations occupation of the study area.

Twenty-two areas require further archaeological work, 12 areas require salvage excavation. The research objectives as stated for the test excavation investigation of Anambah were:

1. What are the characteristics of soil horizons across the study area?
    a. How has the land use history impacted the study area and survival of soils, and thus archaeological material?
    b. Is there a difference in the soil landscape's integrity across the study area due to different ploughing regimes?
    c. At each location, is the deposit consistent? Or, does it possess characteristics that tell of different depositional events?
    d. Are there three soil landscapes (Hunter, Branxton and Rothbury) present? Are these found where they are mapped at the regional level? Does the archaeological deposit vary on each

landscape? How do these soil landscapes interact and does the archaeological deposit vary by soil landscape?

e. Is there alluvium present (other than that identified through field survey)? How deep is the alluvium and what are its characteristics? Is there evidence for former alluvial terraces and 'ancient' modifications to the water courses? How does the alluvium interact with the associated soil landscape?

f. Are buried sand sheets or buried alluvial terraces present within the study area? If so, is any archaeological material associated with them? Is stratigraphy present in alluvial deposits?

2. What are the characteristics of archaeological deposits across the study area?

   a. What types and densities of archaeological materials are present? What is the nature (type) of the deposit? Is the deposit stratified? Is the deposit associated with a particular flood event? Does the deposit have different degrees of archaeological potential with depth?

   b. What, if any, evidence other than stone is present for First Nations occupation of this region? Is it correct to infer that stone equates to First Nations use of a landform or were other landforms without stone used by First Nations people?

   c. How was stone used on site? Is there a relationship between artefact creation and use of landscape and/or landform?

   d. Are stone deposits spatially discrete within areas of PAD? Does this provide information in terms of First Nations social laws and patterning of site use?

   e. Can deposits be dated? What is the antiquity of the evidence?

   f. What is the source of the artefactual stone at any particular site? How does this correlate with the regional research into stone resources undertaken (Appendix C)?

3. How can the deposit be interpreted?

   a. Is there evidence of archaeological spatial patterning of deposits on continuous landforms? How long has it taken for such evidence to be created?

   b. Does spatial patterning, if present, provide any evidence for First Nations social rules and laws?

   c. How do archaeological deposits relate to the hill-slope shade analysis? Can this analysis be used to inform seasonal use of this landscape?

   d. If archaeological deposits are absent from a landform in which they were expected to exist, ie soils have good condition and integrity, what does this mean in terms of First Nations landscape use?

   e. What are the physical attributes of the deposit (stone, carbon, clay or other)?

   f. For stone deposits, what are their physical characteristics and do they indicate a specialised use? Is there a difference in stone tool types between the different locations tested?

4. What does the archaeological deposit tell us about First Nations use of this specific landscape?
    a. How do long-term patterns of First Nations population movement through this valley (as described by First Nations Elders and early ethnographers) correlate with archaeological deposits?
    b. Was the study area used for large-scale First Nations gatherings? Does landform use correlate with the number of people inhabiting the study area—ie if large groups gathered, then did they use the larger landforms for habitation?
5. Can the archaeology be interpreted in a regional context?
    a. Where did raw stone materials originate from? Have they been brought into the study area? If so, from how far away has the stone been brought?
    b. How old is the archaeological deposit and how does this relate to regional use of this landscape?
    c. What is the relationship of the archaeological material within the study area to the region; in particular, the Pleistocene/Holocene relationship with Stockton Bight and other sites of great antiquity in the region?
    d. Is there evidence of trade in connection to stone deposits?
6. Is the archaeological deposit culturally significant?
    a. What is the heritage value of the deposit, both scientifically and culturally?
    b. How does the First Nations community view and value the deposit identified?
7. Is there a deposit worthy of conservation or of future research?
    a. Where and what deposits should be conserved for future generations?
    b. Which deposits should be subject to more extensive investigations?
    c. How should a boundary be drawn around an identified site? Are identifiable places present within a cultural landscape?
8. Does the deposit provide a link between scientific hypotheses and First Nations cultural views?

Test excavation of Anambah demonstrated the validity of these research objectives, however further archaeological work needs to be undertaken in order to address these objectives in detail. Further archaeological excavation will be required to fully ascertain the scientific value contained within the deposit (ie recovery of dates, both relative and absolute, recovery of a complete lithic assemblage from an alluvial landscape etc). The nature of the test excavation at Anambah (ie 50cm x 50cm squares, a lack of datable features recovered, and a relatively pressing timeframe) limited the extent information that was gathered. It is proposed that sedimentary analysis coupled with scientific dating of secure alluvial deposits will be a component of the salvage ARD. The objective is to recover new data to further aid the interpretation and understand the formation sequences of archaeological deposits within the Anambah and the wider lower Hunter Valley.

Archaeological research focus for the future investigation of Anambah have been identified and summarised as follows in Table 1. These works focus on the alluvial landscapes, as these hold the greatest research potential.

Table 1 Future Archaeological Research Focus across Anambah.

Research Focus	Description	Further Investigation/How this can be addressed
The presence of chronologically stratified deposits	Recovery of spatial information about cultural change over time, including lithic technology, and use of these landscapes.	Salvage excavation across the areas with alluvium, notably the intact raised terraces in the north of the study area, with demonstrated potential for deeper stratified deposits.
The nature of continued Aboriginal occupation on alluvial landscapes	The archaeological deposits could vary between the alluvial landscapes, notably if some are associated with primary extraction and reduction of silcrete. The differences in archaeological deposit could provide insight into the function use of this landscape by Aboriginal people, and related to social and economic function of this place.	Recovery of a larger lithic assemblage from alluvial and non alluvial landscapes within Anambah in order to allow more detailed and holistic analysis of artefact types, densities, and technology between alluvial and non-alluvial soils to take place. Analysis of lithics from these sites should examine the functional typology of the objects, and consequently the use (or not) of those tools through usewear analysis. This can provide further insight into the intent behind manufacturing tools in this landscape.
Sedimentary and soil dating analysis	Archaeological excavations of the alluvial soils hold the potential to yield stratified sequences of Aboriginal objects. Sedimentary analysis (such as particle size analysis) may provide insight into the formation processes of this soil landscape. Intact deeper alluvial sequences can be dated through OSL methods. If Aboriginal archaeological features with carbon are present, these can also provide dates for the features.	Secure alluvial sequences from the deeper archaeological sites will need to be identified. If associated with a dense archaeological deposit, these could be subject to sedimentary and soil dating analysis.

Mechanism for Archaeological Open Area Excavation

Archaeological open area excavation would be approved under Section 90 of *NPW Act* 1974. This ARD could be amended to the Section 90 as the mechanism for undertaking the required open area archaeological works.

Salvage Excavation Strategy

The salvage excavation of the sites at Anambah is proposed to be undertaken in 1m by 1m square units. Excavation would be in 50mm spits, or by apparent stratigraphy (which every is smaller). Any archaeological features (hearth, oven, pits etc) identified would be excavated by stratigraphy. The precise locations for open area salvage excavation have been defined through the results of archaeological test excavation. A total of 12 separate locations have been identified with the requirement for archaeological salvage excavation; these are described in Table 2 and Figure 1. Excavation of these areas should provide results that are statistically testable and allow the research questions posed by the project to be addressed.

Archaeological Sampling Strategy

The archaeological sampling strategy to be employed during the salvage excavation of Anambah is based upon the methodology for sampling, as presented by Orton[1]. Orton presents a 12-step process[2]

for determining a suitable process of sampling and to provide a suitable test excavation methodology. This methodology, following Orton's categories, is presented below.

Existing Knowledge

Existing knowledge has been gathered and presented in the GML 2021 report (Anambah First Nations Heritage ATR). In terms of AHIMS data and prior reports; the landscape context, the known impacts to the study area; archaeological predictive modelling; the results of archaeological test excavation and detailed analysis of the recovered stone artefact assemblage. The combination of these aspects has defined the zone within the study area that are suitable for archaeological open area excavation. Open area excavation is only proposed within zones that have a moderate to good proven levels of archaeological potential and will contribute knowledge and understanding within the research context of the investigation of alluvial landscapes and chronology/stratigraphy. No open excavation is proposed for zones that have been designated conservation.

Objectives

The objectives of the archaeological salvage excavation (and surface collection) are to recover representative assemblages of First Nations cultural materials, to both prevent permanent destruction (resultant of harm from development activities), and sufficient to address the research questions that can be addressed by the project.

Population

The targeted population is defined by the extent of the sites identified during archaeological test excavation. Open area excavation will be restricted to those test areas with a scientifically significance archaeological deposit.

It is acknowledged that it may not be possible to archaeologically excavate 100% of Aboriginal objects associated with the 12 locations requiring salvage excavation. It is envisaged that open area salvage excavation at Anambah will be undertaken until either: a statistically testable sample has been recovered; the extent of the archaeological deposit has been exhausted and/or further excavation will not provide additional data at that location. Test excavation has identified that locations in Anambah should retain a high level of soil integrity in a good condition; should this not be the case, then open excavation may cease at that location before the above parameters are achieved, as the aim is not just to collect First Nations stone objects.

Data to be Collected

Data will be collected for the open excavation area Anambah, on specific area context sheets. Data collected will include: spatial layout of each open excavation trench, the location, landform, the depth of spits or stratigraphical layers (as excavated), number of stone objects (or other feature) per spit and intra-site grid square, total number of objects, the identification of any features or inclusion (such as carbon), taphonomic factors (disturbance, bioturbation etc), soil characteristics, section and plan diagrams (especially where features are present) and reasons for expansion (and eventual cessation) of the excavation at any one area. A running total of features and First Nations objects will be kept, so as to determine an in-the-field comparison between sample areas.

The excavation director will supervise all recording and determine, in collaboration with the First Nations community representatives present, the mode of expansion at each site.

Degree of Precision Required

The location of Test Units (TU) for the test excavation was established using GIS and set out by a surveyor, as well as through the manual layout of any required additional units in field using a hand tape and compass. As such the precise location of each TU is known and will be used as the basis for open excavation. The accuracy of the TU layout was high.

During the excavation, the excavation director will be responsible for the intra-site expansion and layout of the expansion grid.

Following open excavation all trench locations will be recorded by a surveyor, so as to accurately plot the location of excavation. Spatial control of horizontal and vertical excavation will be sufficiently precise to define the location of First Nations deposits within each site and to allow the research questions to be addressed.

Method of Measure

The natural 'background' density of First Nations objects across the wider Hunter region is relatively high. This is in consideration of located surface artefacts across Anambah and the results of the test excavation.

Some zones may have limited evidence relating to First Nations objects, but yield other significant deposits, such as hearths, oven/fire pits, heat retaining stone, etc. Archaeological investigation of such features will be considered, irrespective of the associated stone artefact deposit, as they could reflect domiciliary areas. Such locations (if present within the study area) may be related to long term subsistence strategies by First Nations people and may provide new information relating to their economy, demography and society. Confirmation of the nature of artefact densities may also contribute to the understanding of First Nations use of alluvial landscapes in comparison with non-alluvial landscapes.

The Frame for Sampling

With reference to the units of sampling, Orton states that:

> *...surveys does not have to be based on grid squares or transects: other shapes (even ones without straight lines) are statistically permitted...* [3]

The test excavation sampling framework within Anambah was based upon 20m grids, where TUs were excavated in transects, with 20m spacing between TUs. The offset between transects was generally 20m, thus allowing for a regular pattern of sample TUs. Orton [4] examined the relationship between site diameter to grid interval and the probability of discovering a site. He contrasted a square grid against a staggered square grid and found that 'a staggered grid is considerably more efficient than a square grid…' [5] with an increased probability of discovering sites using the staggered grid. Thus a staggered grid pattern was applied to the relationship of TUs on parallel transects. When necessary additional TUs were placed at 20m intervals to further define the extent of some First Nations sites and soil features during test excavation.

As such the pattern of data prior to open excavation has defined the location of archaeological features, where 20m spacing exists between the TUs for open excavation, it is proposed that within each salvage site the TUs with the highest density, and/or other features, will be initially expanded, either to a 1m by 1 m or 3m by 3m squares (set out and excavated 1m squares). This sample window will allow confirmation of intra-site artefact densities and/or features and provide direction for further expansion.

The archaeological salvage excavation of Anambah should focus on the recovery of a larger lithic assemblage in order to understand the nature of occupation and use of the area, as well as the identification of features appropriate for dating (carbon—C14, or sands—OSL), an investigation into the potential for vertical stratification of both artefacts, and soils.

The extent of recommended salvage excavation has been determined by the requirement of obtaining an adequate assemblage of stone objects for statistical analysis, and to afford the opportunity to recover other features such as hearths or ovens. It should also be sufficient to understand the spatial pattern of archaeological features/objects in an area—allowing for interpretation of the long term First Nations use of 'space' within and across the landscape. Extent of salvage excavation in Anambah has been determined by dividing the aim of the recovery of 2000 artefacts from each salvage area, by the mean cultural lithic density recovered from test excavation. Mathematically, this would be the amount of excavation required within each area to recover a statistically viable lithic sample for analysis. However, the area of excavation within each area may need to be altered dependent on the nature of the lithic densities and the nature of the lithic assemblage (eg a knapping floor, a high number of tools, or unusual archaeological material or densities). Therefore a range for extent of excavation area, including an upper limit of excavation size, is proposed. Excavation of non-artefactual deposits, such as ovens, hearths or other features requires a slower and more delicate approach to excavation. Therefore, excavation of these features, within the identified First Nations sites, should not be connected to a volume of excavation. Rather, excavation should aim to extract as much archaeological data through precise stratigraphical excavation techniques and consequential recording.

Within each salvage excavation area, grids will be set out in one-metre squares around TUs to be expanded, marked with pegs and string. Deposits from all sub squares will be wet sieved through a 3mm mesh.

Archaeological excavation will be undertaken by hand. Should suspected or identified stratigraphical layers be present then excavation will proceed in spits and/or according to site or the soils stratigraphy.

Excavation of any encountered archaeological features, such as the cultural burning features, will be undertaken according to the site's stratigraphy, where multiple sub squares can be excavated at once (with retention and sieving of the spatial deposit from each sub square). This method of excavation will allow the determination of feature boundaries and soil cuts etc, which are essential for understanding the taphonomy of the features.

Should suitable carbon samples be present, these will be recovered and submitted for C14 analysis. Running totals of artefacts and features will be kept in order to keep track of yields in each excavation area, so that the process of open excavation expansion can be made based on the initial results. Following excavation, final recording and photography will be undertaken.

There is the possibility that areas within salvage excavation areas of Anambah possess relatively deep deposits (ie deposits may be up or greater than 1m in depth). Therefore, the methods for excavation to this depth may need consideration in relation to Work Health and Safety conditions. Shoring and/or benching of open excavation areas may be required in order to ensure the safety of workers. The NSW Work Health and Safety Regulation 2011[6], requires benching and/or shoring of trenches of a depth of 1.5m or greater (Division 3, Section 306(1)). Therefore, benching of trenches may be required through the use of a mechanical excavator, in order to ensure the safety of workers and accessibility of deposits. However, the need for the use of a mechanical excavator would be assessed in the field, and determined through consultation with Heritage NSW, the proponent, and the First Nations community, prior to the use of any mechanical excavation equipment.

The Pre–Test, or Pilot Survey

Orton notes that the best survey designs can be made when the survey is over and that a pilot survey can serve to remove some of the 'bugs' from the sampling process.[7] The current survey design has been based upon the results of the test excavation and hindsight based on other archaeological open excavations in the Sydney region.

It is intended that during the open excavation, the First Nations representatives and field archaeologists will be able to respond to the initial results of excavation and determine the extent and direction of further sampling at each location.

Should an open excavation area yield little cultural evidence, then excavation of the area may be terminated, provided both archaeologists and First Nations stakeholders agree on this course of action.

Organisation

The open area excavation would be undertaken by a team, which will include an archaeological Director, six field archaeologists and a minimum of six First Nations representatives (from the Registered Aboriginal Parties [RAP]).

Summary and Analysis

Following excavation, all recovered First Nations stone objects will be subject to specialist analysis, recording of all relevant attributes in a comparable manner to other regional lithic studies and in accordance with Holdaway and Stern (2004). Usewear analysis of specific tools should be undertaken to understand the function of certain objects.

Following excavation, objects will be stored at either GML's office, or Beth White's office which lithic analysis is being undertaken. Long term management and storage of all First Nations stone objects recovered from excavation of Anambah is the responsibility and right of the local First Nations community (ie the project RAPs). The options for the long term management of First Nations stone objects have been presented to the project RAPs in their review of the draft ACHAR and ATR for Anambah, and will be confirmed in the final reports and the AHIP application (which this salvage excavation ARD supports).

Should human skeletal material be identified during the salvage excavation, work will cease in the immediate area and Heritage NSW (and in the case of the latter) the NSW Police Department will be notified.

If recovered, carbon samples associated with cultural features would be submitted for carbon dating. Where appropriate and is possible, Optical Stimulated Luminescence (OSL) samples will be taken and submitted for dating. Soil samples will be subject to sedimentary analysis.

All results will be assessed with the assistance of ArcGIS, and consequential mapping of sites, place, landscapes and heritage values will be GIS based. The open area excavation report will be provided to the RAPs for review and comment. Following First Nations review the report will be forwarded to Heritage NSW.

Information Gained for Future Survey

The information derived from open area salvage excavation of Anambah will be used in the heritage values interpretation of the study area. The report will provide direction for conservation of First Nations heritage and a wider knowledge of objects, sites, places and values within the local area, as well as in relation to archaeological understanding of the wider Hunter Region.

Following the completion of the salvage excavation, all archaeological material recovered from the excavation, other than First Nations cultural objects, (ie soil samples, other dateable samples, field drawings, excavation recording forms, excavation data etc), should ideally be stored in a common place within the archaeological department of an Australian academic institute. This would provide a centralised location for all data recovered from the excavation, which could offer excellent opportunities for further and more detailed future research (ie postgraduate studies) of the archaeological data that is outside the scope of the proposed salvage excavation. A storage strategy should be negotiated with an appropriate academic institution following the acquisition of the Section 90 AHIP for the study area.

Extent of Salvage Excavation and Community Collection

If requires open salvage excavation Phase 1, will include completion of original proposed sampling grids, sufficient to inform the need for salvage excavation. Phase 2 is open excavation across a site/location until densities fall below reasonable densities to warrant salvage, the margins of the deposit are reached, and/or a statistically viable sample has been obtained from this site.

Community collection of some sites is warranted. In each instance the RAPs present during salvage works should be afforded the opportunity to collect eroding materials. These would be collated as a surface assemblage from each area, and subject to post excavation analysis and reporting. Curation would be as per the primary excavation assemblage.

Table 2 sets out the nature and extent of all salvage works. The location of these works is shown in Figures 1 to 5.

Table 2 Locations of salvage excavation and community collection within Anambah.

Site and PAD #	AHIMS #	Extent of Future Work Required	Indicative Extent of Archaeological Excavation	Figure #
PAD 1 & SAC 17	37-6-3574	Salvage Excavation	Initial expansion (1m^2) around TU 224. Initial expansion (9m^2) around TUs 221 and 227. Possible further expansion on the basis of the results.	Figure 5
PAD 12 & SAC 13	37-6-3570	Surface collection	None	Figure 3
PAD 14 & IF 11	37-6-3558	Surface collection	None	Figure 3
PAD 15 & SAC 14	37-6-3571	Surface collection	None	Figure 3
PAD 16 & SAC 15	37-6-3572	Surface collection and salvage excavation	Initial expansion (9m^2) around TUs 189 and 191. Possible further expansion on the basis of the results.	Figure 3
PAD 17 & IF 12	37-6-3559	Surface collection	None	Figure 3
PAD 18 & SAC 16	37-6-3573	Surface collection	None	Figure 2

Site and PAD #	AHIMS #	Extent of Future Work Required	Indicative Extent of Archaeological Excavation	Figure #
PAD 19 & SAC 7	37-6-3564	Surface collection and salvage excavation	Phase 1 salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions. Up to 100m^2 salvage may be required.	Figure 2
PAD 20 & SAC 5	37-6-3563	Surface collection and salvage excavation	Phase 1 salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions. Up to 100m^2 salvage may be required.	Figure 2
PAD 21 & SAC 1	37-6-3560	Surface collection and salvage excavation	Phase 1 salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 2
PAD 22 & SAC 4	37-6-3562	Salvage excavation	Phase 1 salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 2
PAD 23 & IF 8	37-6-3555	Surface collection and salvage excavation	Phase 1 salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 2

Site and PAD #	AHIMS #	Extent of Future Work Required	Indicative Extent of Archaeological Excavation	Figure #
PAD 24 & SAC 6	37-6-3564	Surface collection and salvage excavation	Initial expansion (9m^2) around TU 32. Phase 1 salvage of the unexcavated TU (Table 3.15) as necessary to complete confirmation of the extent of the deposit. Initial expansion of any TU with 6+ lithics to a 1m^2 unit. Expansion of 1m^2 units with +20 lithics, to a 9m^2 salvage area. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 2
PAD 25 & SAC 9	37-6-3566	Surface collection and salvage excavation	Initial expansion (9m^2) around TU 320. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 2
PAD 26 & SAC 10	37-6-3567	Surface collection and salvage excavation	Initial expansion (9m^2) around TU 83. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 2
PAD 27 & SAC 11	37-6-3568	Surface collection and salvage excavation	Initial expansion (1m^2) around TUs 6, 7 and 304, with potential expansion to a 9m^2 area. Initial expansion (9m^2) around TUs 290, 295, 297 and 306. Determination of further salvage depending on the densities of lithics, and ability to address research questions.	Figure 2
PAD 28 & SAC 8	37-6-3565	Surface collection and salvage excavation	Initial expansion (1m^2) around TU 19. Initial expansion (of a trench measuring 60x2m) connecting TUs 14,15,16 and 17. Possible further expansion on the basis of the results.	Figure 2
IF1	37-6-3553	Surface collection	None	Figure 5
IF2	37-6-3554	Surface collection	None	Figure 3
IF9	37-6-3556	Surface collection	None	Figure 2
IF10	37-6-3557	Surface collection	None	Figure 4
SAC 2	37-6-3561	Surface collection	None	Figure 2

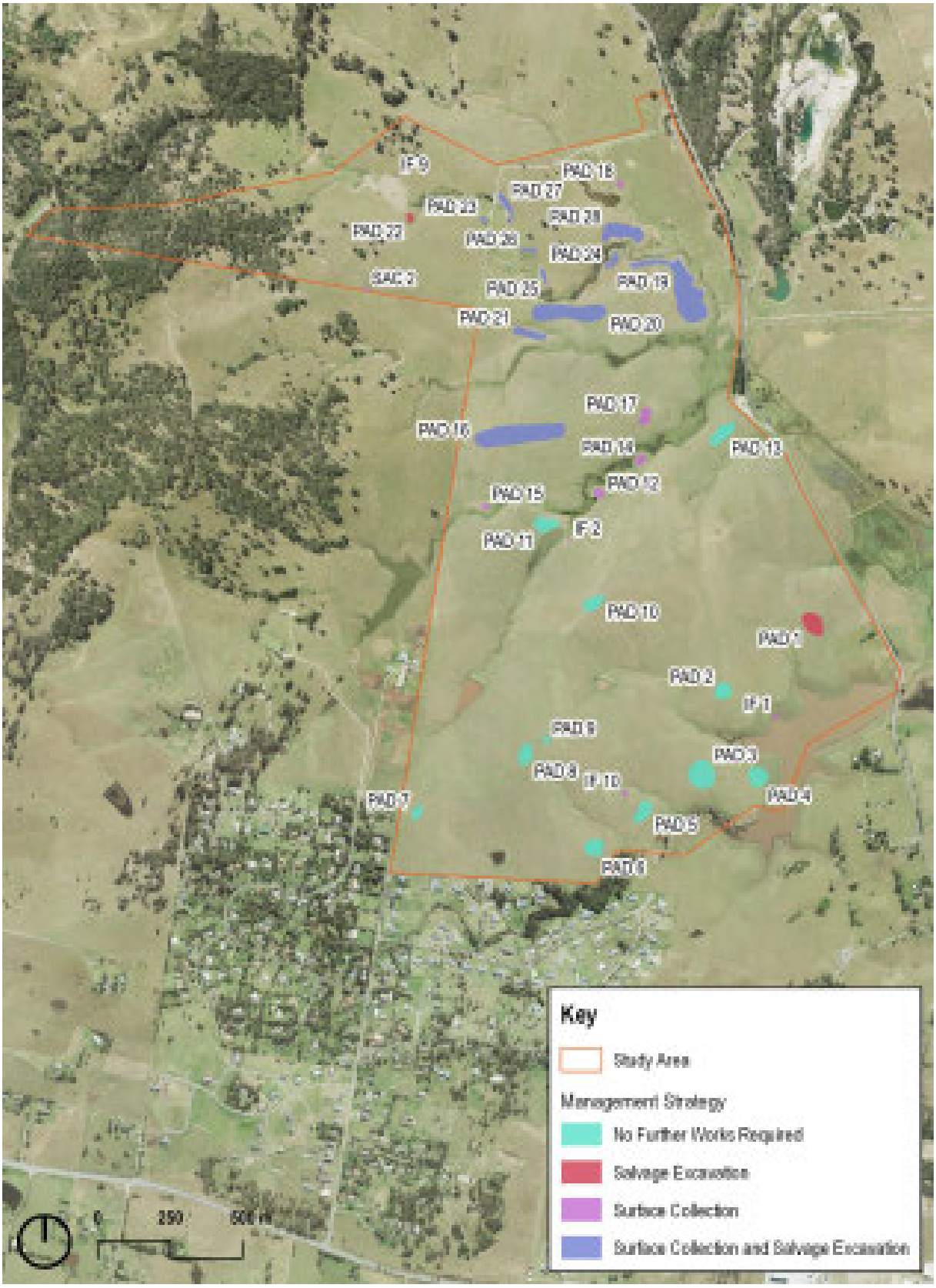


Figure 1 Archaeological management strategies for the study area. (Source: NSW LPI with GML additions, 2021)

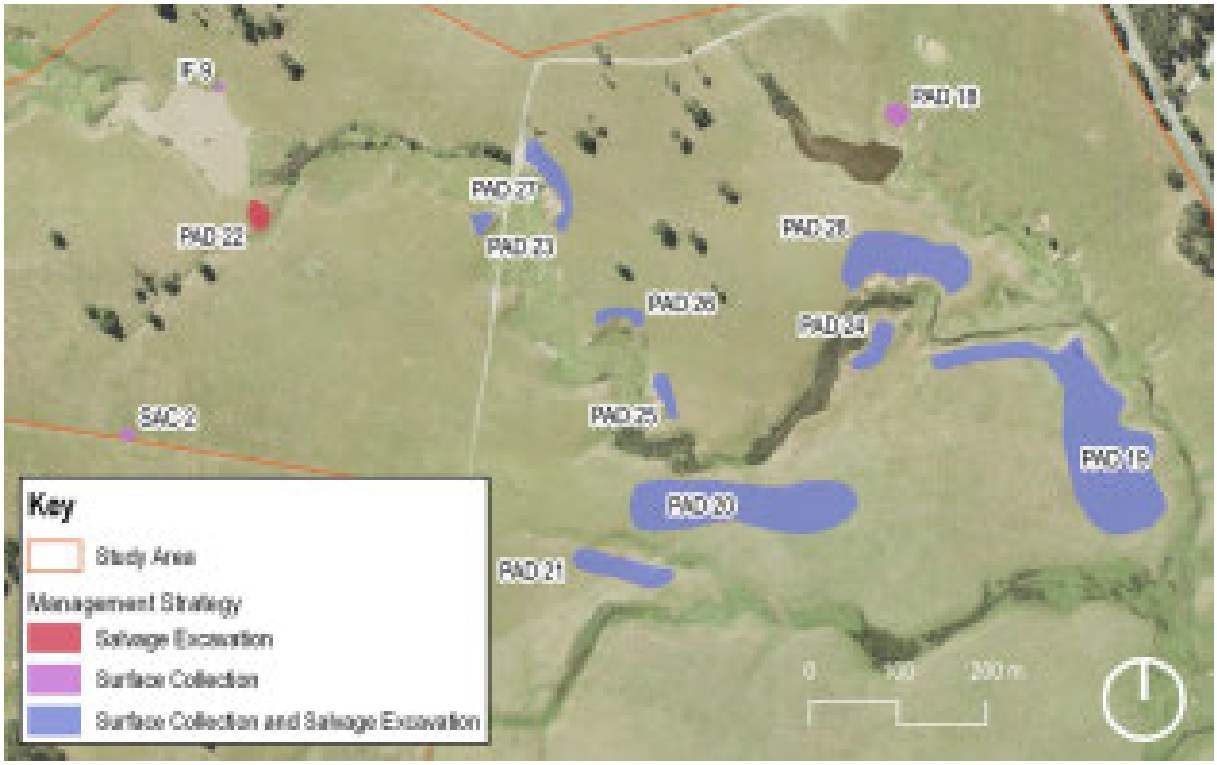


Figure 2 Archaeological management strategies for the northern portion of the study area. (Source: NSW LPI with GML additions, 2021)

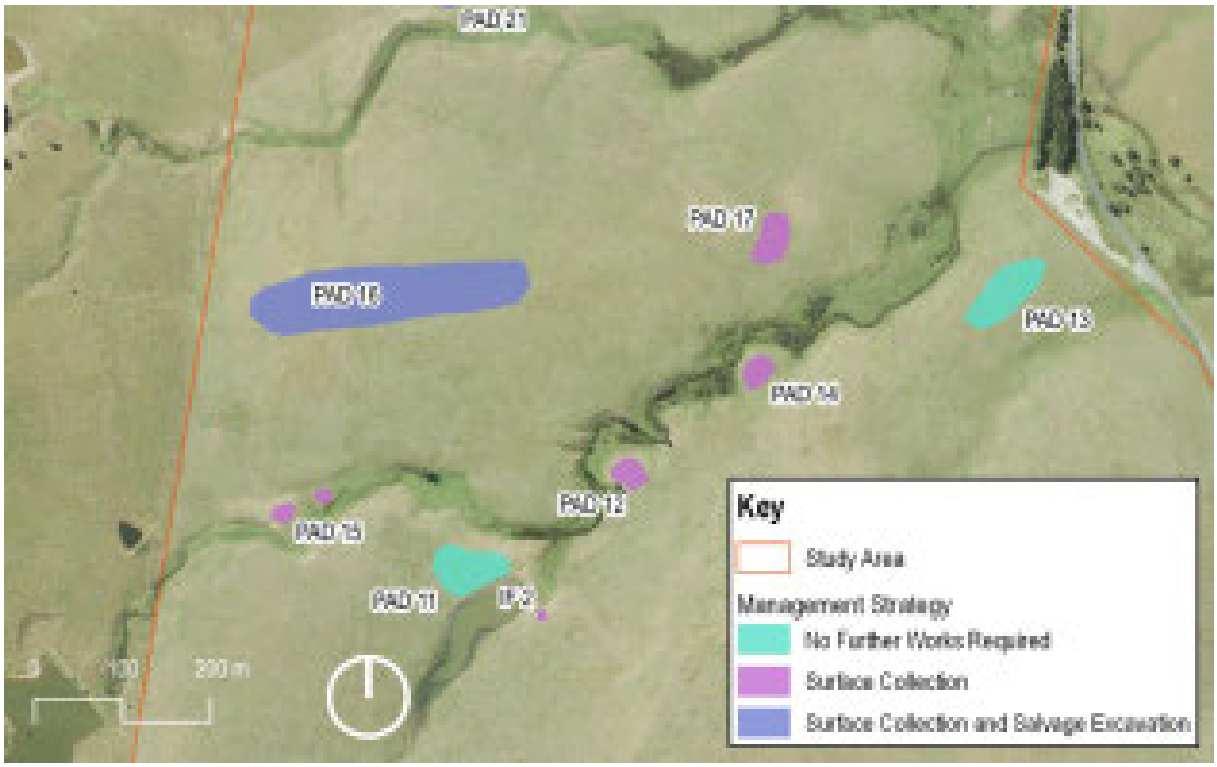


Figure 3 Archaeological management strategies for the middle portion of the study area. (Source: NSW LPI with GML additions, 2021)

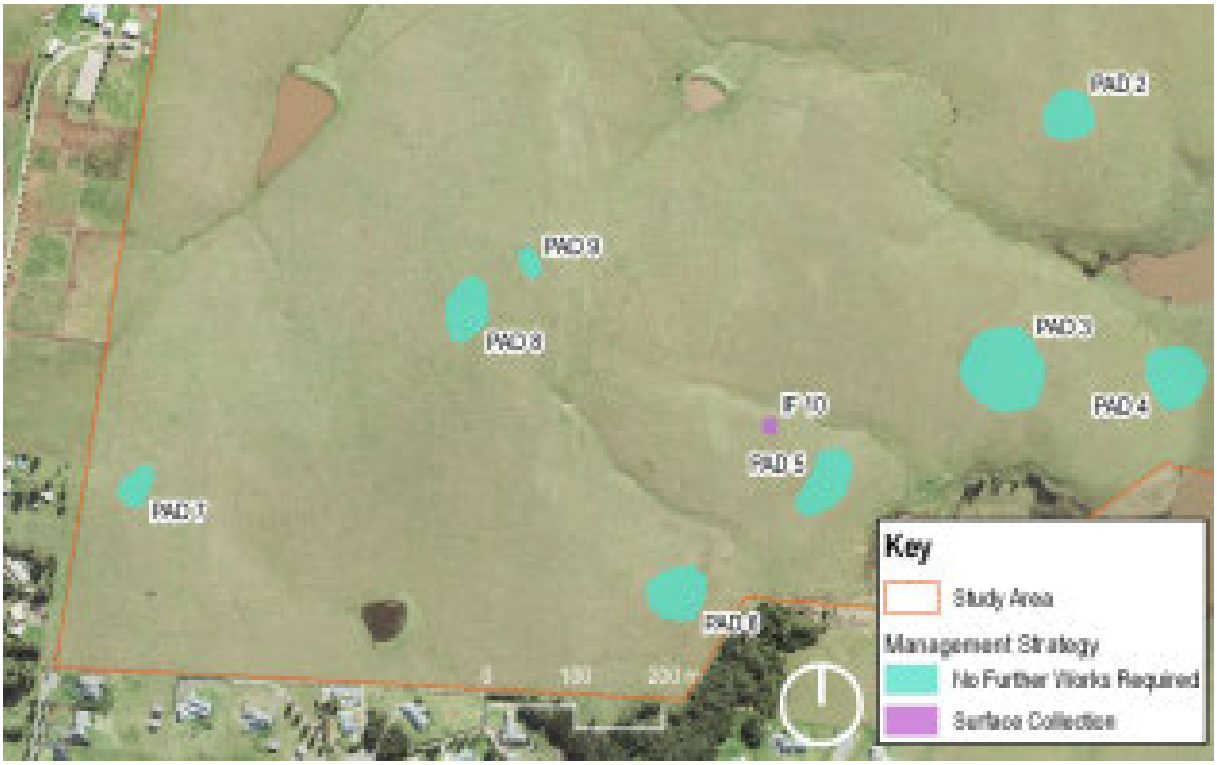


Figure 4 Archaeological management strategies for the southwestern portion of the study area. (Source: NSW LPI with GML additions, 2021)

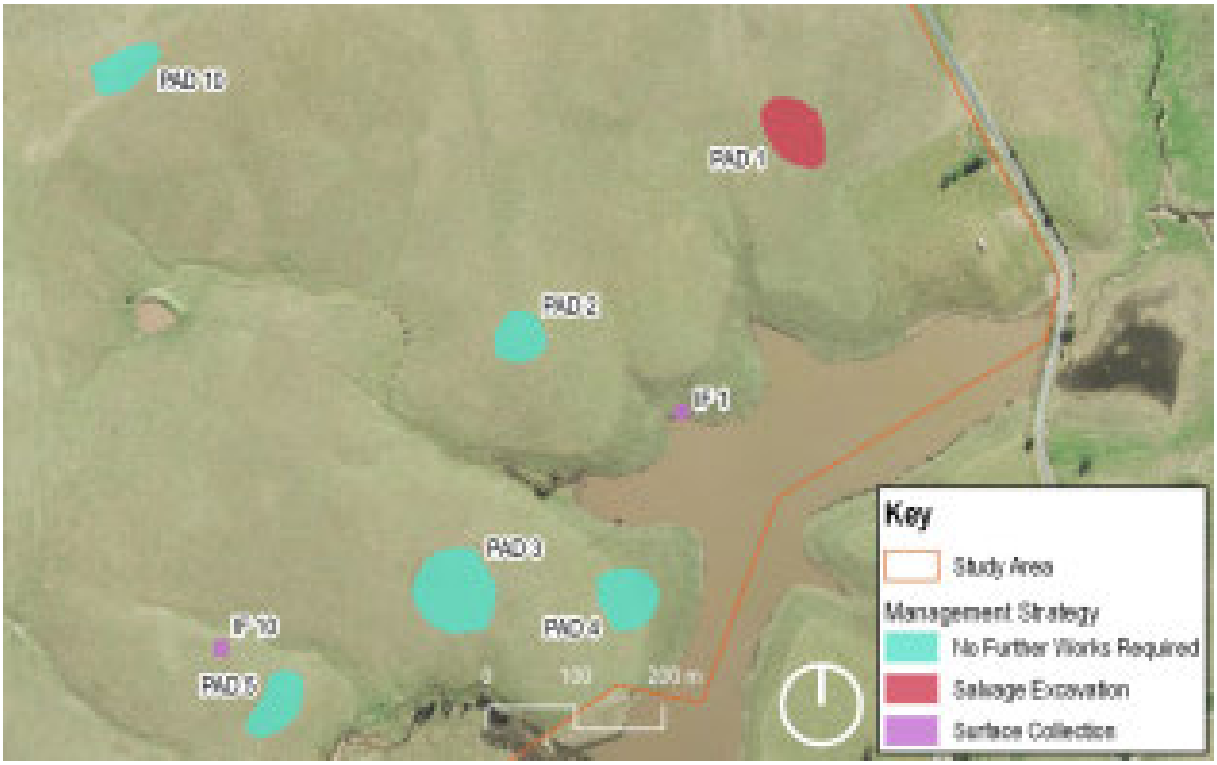


Figure 5 Archaeological management strategies for the southeastern study area. (Source: NSW LPI with GML additions, 2021)

Endnotes

1 Orton, C. 2000. *Sampling in Archaeology.* Cambridge Manuals in Archaeology. Cambridge University Press. Cambridge.
2 Orton 2000:27–39.
3 Orton 2000:29.
4 Orton 2000: Figure 4.7, 4.8, Pages 90–92.
5 Orton 2000: 90.
6 NSW *Work Health and Safety Regulation 2011*, under the NSW *Work Health and Safety Act 2011.*
7 Orton 2000: 29.

Appendix E

Archaeological Research Design

Anambah Aboriginal Heritage

Aboriginal Archaeological Research Design

Draft Report

Report prepared for Roche Group Pty Limited

April 2021

Sydney Office Level 6, 372 Elizabeth Street Surry Hills NSW Australia 2010 T +61 2 9319 4811
Canberra Office 2A Mugga Way Red Hill ACT Australia 2603 T +61 2 6273 7540
GML Heritage Pty Ltd ABN 60 001 179 362
www.gml.com.au

Report Register

The following report register documents the development and issue of the report entitled Anambah—Aboriginal Archaeological Research Design, undertaken by GML Heritage Pty Ltd in accordance with its quality management system.

Job No.	Issue No.	Notes/Description	Issue Date
21-0037	1	Draft Report for Client Review	16 April 2021
21-0037	2	Draft Report for RAP Review	30 April 2021
21-0037	3	Final Report	

Quality Assurance

GML Heritage Pty Ltd operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2016.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Copyright

Historical sources and reference material used in the preparation of this report are acknowledged and referenced at the end of each section and/or in figure captions. Reasonable effort has been made to identify, contact, acknowledge and obtain permission to use material from the relevant copyright owners.

Unless otherwise specified or agreed, copyright in this report vests in GML Heritage Pty Ltd ('GML') and in the owners of any pre-existing historic source or reference material.

Moral Rights

GML asserts its Moral Rights in this work, unless otherwise acknowledged, in accordance with the (Commonwealth) *Copyright (Moral Rights) Amendment Act 2000*. GML's moral rights include the attribution of authorship, the right not to have the work falsely attributed and the right to integrity of authorship.

Right to Use

GML grants to the client for this project (and the client's successors in title) an irrevocable royalty-free right to reproduce or use the material from this report, except where such use infringes the copyright and/or Moral Rights of GML or third parties.

Contents Page

1.0 Introduction 1
1.1 Statutory Context 1
1.2 Proposed Residential Development 1
1.3 Endnotes 1

2.0 Archaeological and Environmental Context 5
2.1 Ethnohistorical Background 5
2.2 Post-contact History 5
2.2.1 The Convict Station 1801–1820 5
2.2.2 1821–1850 European Occupation 5
2.2.3 1850–Present Day 5
2.3 Archaeological Context 5
2.3.1 Aboriginal Heritage Information Management System Search 5
2.3.2 Relevant Local Literature 5
2.4 Landscape Context 5
2.4.1 Landforms and Landscape Features 5
2.4.2 Geology and Soils 5
2.4.3 Hydrology 5
2.4.4 Fauna and Flora 5
2.4.5 Land Use History 5
2.5 Summary of Archaeological and Environmental Context 5
2.6 Endnotes 5

3.0 Aboriginal Community Consultation 28
3.1 Previous Aboriginal Community Consultation 28
3.1.1 Cultural Heritage Assessment Programme 28
3.1.2 Survey and Test Excavation 28
3.2 Aboriginal Community Consultation 2021 28
3.3 Cultural Heritage Assessment Program 28
3.4 Roles and Expectations 28
3.5 Endnotes 28

4.0 Anambah Assessment Methodology 36
4.1 Completion of Test Excavation Reporting 36
4.2 Anambah Inspection 36
4.3 Significance Assessment 36
4.4 Impact Assessment and Management Strategies 36
4.5 Reporting 36
4.6 Community Input 36
4.7 Endnotes 36

5.0 Appendices **39**

Appendix A

New South Wales Legislation

Appendix B

AHIMS Extensive Search

Appendix C

Anambah Rezoning Aboriginal Heritage Report

1.0 Introduction

Roche Group (Roche) has recently purchased a number of lots in Anambah, NSW, which comprise the lots previously owned by Stockland Development. These lots are located in the Maitland Local Government Area (LGA) south of the Hunter River (Figure 1.1 and Figure 1.2). The lot and DP numbers include:

- Lot A, DP 431640;
- Lot 1, DP 1110433;
- Lot 2, DP 1110433;
- Lot 6, DP 19925;
- Lot 178, DP 874171; and
- Lot 56, DP 874170.

Between 2012 to 2015 GML Heritage Pty Ltd (GML) with several local Aboriginal stakeholder groups commenced the process of Aboriginal heritage assessment across these lots. The work included archaeological pedestrian survey and archaeological test excavation. In 2013 this work was halted and not completed.

Roche intend to continue the process of residential development within these lots, and propose to prepare a development masterplan to guide this process. GML has been engaged to continue the preparation of the Aboriginal cultural heritage assessment report (ACHAR). We identify that the ACHAR will be used to support a future Development Application (DA), and Aboriginal Heritage Impact Permit (AHIP), under Section 90 of the *National Parks and Wildlife Act* 1974 (NPW Act).

In order to restart the Aboriginal heritage assessment process it is necessary to recommence the formal process of Aboriginal community consultation. This document is the Aboriginal Archaeological Research Design (ARD) which outlines the methodology and parameters for the continued investigation into Aboriginal heritage. Succinctly we intend to:

- complete reporting on the test excavation which was undertaken in 2013;
- undertake a site re-familiarization inspection with local Aboriginal people to understand and discuss the outcomes from this work, and discuss requirement for future Aboriginal heritage management; and
- finalise the ACHAR.

In 2021 community consultation for the project has restarted, and will include a site visit with local RAPs (who have registered for the project's consultation process in 2021). The aim of consulting with Aboriginal people is to facilitate a process for RAPs to contribute culturally appropriate information, as well as to participate in the determination of the cultural significance of Aboriginal objects and/or places that may be present within the study area. Consultation also provides an opportunity for RAPs to have input into the development of cultural heritage management options.

The objectives of the site visit will be to discuss the results of the 2012 test excavation, to understand the location of any Aboriginal sites (both tangible and intangible) within the study area, to investigate

their landscape connection at the wider level, and to determine their significance to the Aboriginal and archaeological communities.

This methodology fulfils Stage 2 and Stage 3 of the Department of Environment, Climate Change and Water (DECCW) *Aboriginal cultural heritage consultation requirements for proponents* (Section 4, Consultation Stages).[1] The current methodology aims to:

- ensure Aboriginal archaeological constraints and opportunities are adequately addressed and appropriately managed throughout the life of the project;
- consult with the Aboriginal community regarding the cultural significance of the study area; and
- ensure that any risks to Aboriginal heritage values (both intangible and tangible) are appropriately identified and mitigated.

1.1 Statutory Context

In NSW, Aboriginal heritage is principally protected under two Acts (detailed in Appendix A):

- the *National Parks and Wildlife Act 1974* (NPW Act); and
- the *Environmental Planning and Assessment Act 1979* (EP&A Act);

Under Section 90 of NPW Act, the proponent is required to apply for an Aboriginal Heritage Impact Permit (AHIP) should the development activities harm any Aboriginal object or Aboriginal place. Heritage NSW also requires the appropriate management of other Aboriginal heritage social values if they are connected with a study area.

This ARD aims to determine if harm can be avoided to any Aboriginal sites across the study area.

1.2 Proposed Residential Development

The proposed residential development involves the construction of approximately 300 residential lots, along with parks, playing fields, riparian linkages, a school and a commercial/retail centre (Figure 1.3).

The development proposal has a number of opportunities for the integration of identified Aboriginal cultural and heritage values, including conservation of some archaeological sites, and recognition of intangible Aboriginal values through the layout of parks and streets, and interpretation of Aboriginal connections through future design initiatives. Roche seeks to work with the local Aboriginal community to identify those locations, places and values which are important, and to have these recognised through the masterplanning process.

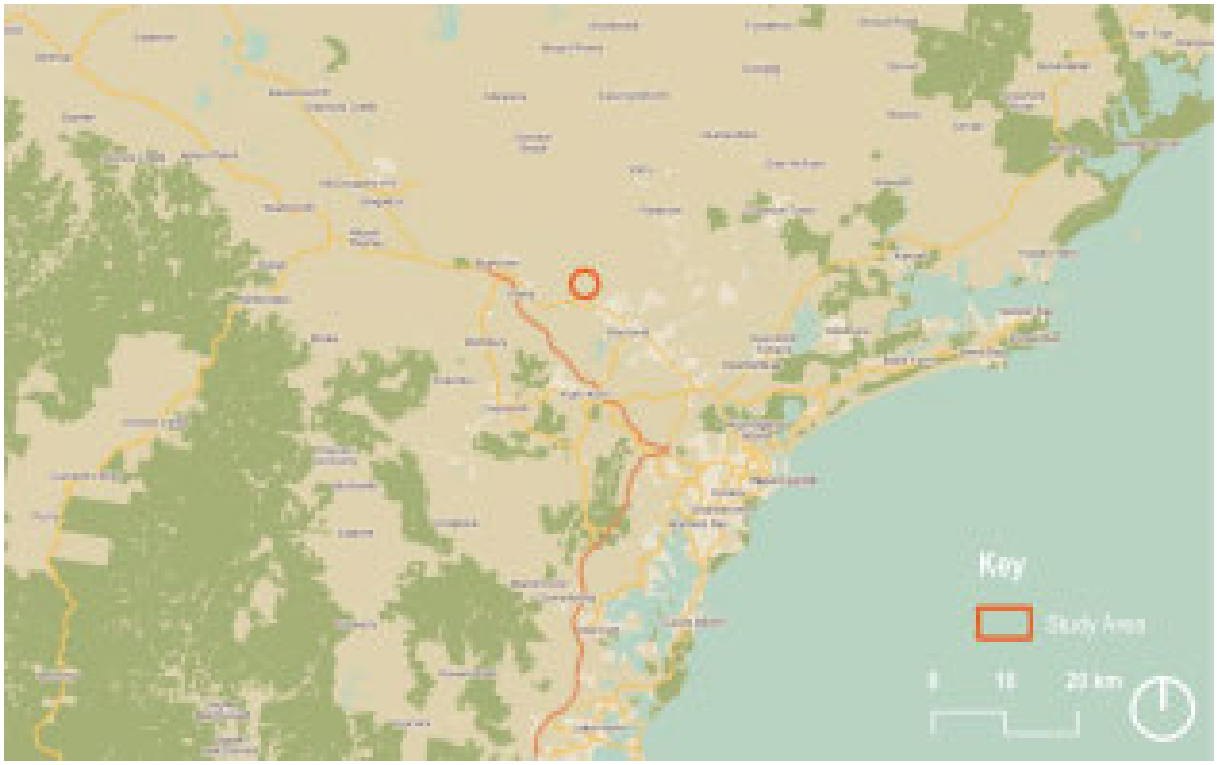


Figure 1.1 The study area's context within the Newcastle region. (Source: Google, with GML additions, 2021)

Figure 1.2 The study area. (Source: NearMaps with GML additions, 2021)

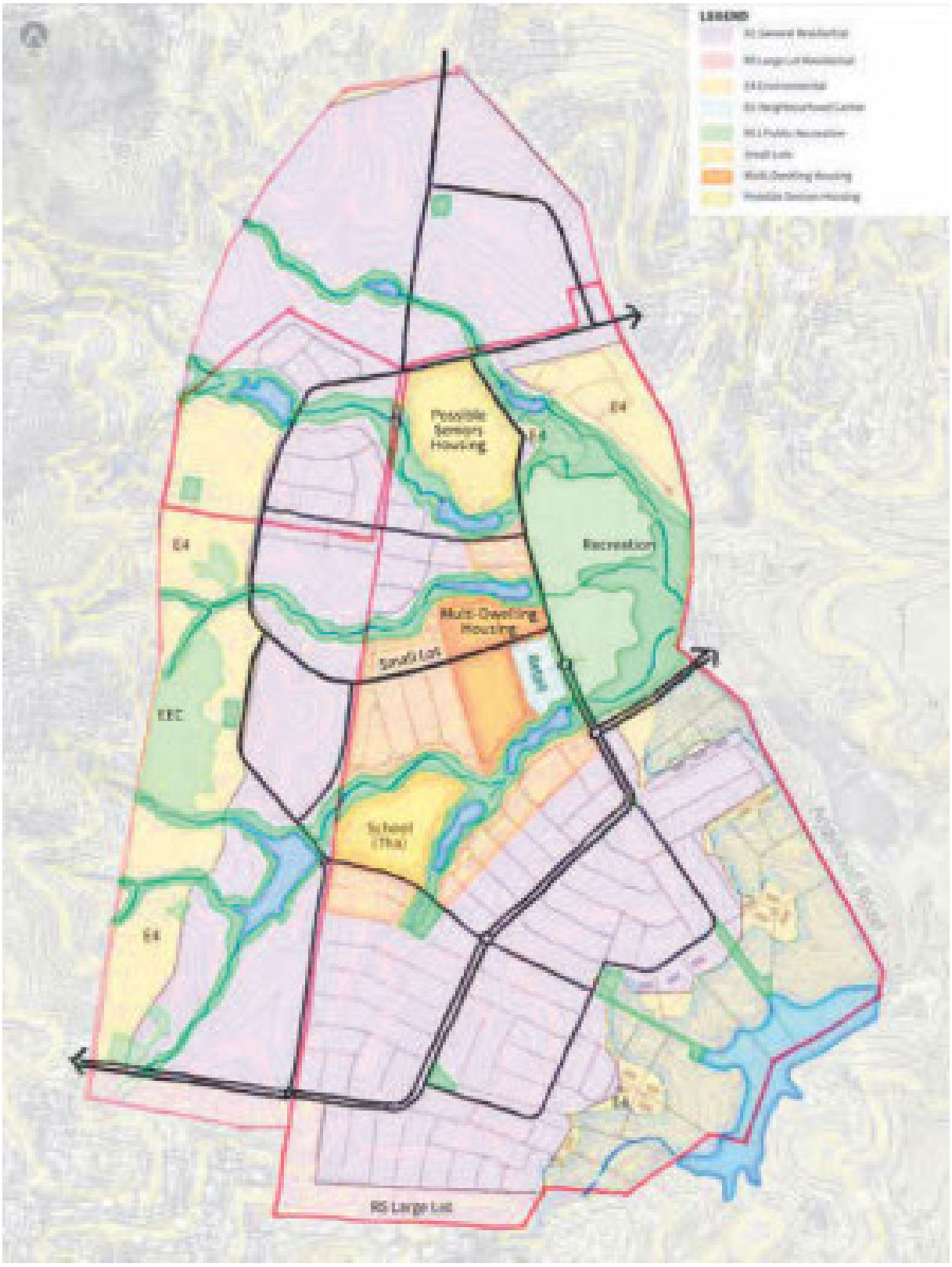


Figure 1.3 Concept Masterplan for Anambah. (Source: Roche, 2021)

1.3 Endnotes

[1] Department of Environment, Climate Change and Water, *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

2.0 Archaeological and Environmental Context

2.1 Ethnohistorical Background

The Anambah area is located on the southern side of the Hunter River, northeast from Cessnock. Anambah is positioned inside the Mindaribba Local Aboriginal Land Council (Local Aboriginal Land Council) boundary, close the traditional language border between the Wonnarua and Awabakal Aboriginal people.[1] Today the boundary between these two groups has been drawn on the basis of the 1940s Norman Tindale map[2], which suggests Anambah is located just inside the Wonnarua (Won:arua) area. We acknowledge that these boundaries may be incorrect, and reflect mapping drawn by non-Aboriginal persons nearly a century ago.

Following Colonial invasion, the Newcastle to Hunter region became significant for its natural resources including coal, timber, fresh water and rich agricultural lands. The colonial discovery of coal was followed by rapid non-Aboriginal occupation—very little was recorded regarding the original Aboriginal inhabitants of the region prior to 1830. By this time, the traditional lifestyle of Aboriginal people in the area had been greatly disrupted as a result of European occupation.[3] The following section provides an overview of the traditional lifestyle of the local Aboriginal inhabitants based on non-Aboriginal observations and ethnographic studies, and later works by historians such as James Wilson Miller, a Wonnarua man, and archaeologist Helen Brayshaw.

All Aboriginal groups in the lower Hunter had a rich and complex spiritual system, created by Baiame, 'the 'Father of All', the most important ancestor and the law-maker'.[4] The Wonnarua Nation Aboriginal Corporation (WNAC) website states:

> *According to the Wonnarua dreamtime the Hunter Valley was created by the great spirit, Baime (Byamee). Before Baime there was nothing, everything was sleeping. Baime awoke and created everything, the mountains, plains, rivers and every living thing.*[5]

Dreamtime and creation ancestors, and spirits were an integral part of life for Aboriginal people in this region. These ancestral beings co-existed alongside people and could influence the quality of life. Some spirits' role was to take physical form by entering a woman's womb to be born. Miller explains what this meant for relationships:

> *Surviving children became full spiritual and physical members of the tribe. Whether the child was male or female, its spiritual being and kinship relationships would already be known to the tribe … All members of the camp stood in some relation to the child. They were his kin. This was the Koori concept of the extended family … Kinship explained the physical relationship between people. As well, a system of moieties, sections and totems connected the human being to his or her spiritual ancestry.*[6]

The Wonnarua lived in groups of two to six extended family units in an allocated area where they could obtain food and resources. Depending on their location, different animals were hunted, including wallabies, emus, possums, various birds, lizards and snakes. Fish, shellfish and eels could also be obtained from rivers and lagoons. A variety of roots, fruits and nectars were also collected. Other materials were used for manufacturing implements, weaponry, clothing and ornaments, including bark, timber, plant fibres, resin, ochre, stone, bones, sinews, fat, furs and skins.[7] Wonnarua people moved according to seasonal availability of resources and interacted with each other and other neighbouring language groups at social gatherings and ceremonies.

The Wonnarua's neighbours at the time of European occupation are recorded to be the Awakbakal, Darkingung, Wiradjuri and Worimi. Trade and social and ceremonial interactions helped to strengthen the Wonnarua's relationships within their own clan and neighbouring groups. The Wonnarua traded a range of resources with their neighbours, such as stone axes, spears and possum skins as well as ceremonial songs and dances. Movement across Wonnarua Country and into neighbouring traditional Country was facilitated by a network of travel and trade routes through the Hunter Valley.

Nineteenth-century European observers suggest fire was used by Aboriginal people in the region to attract game, deter Europeans, and for signalling or ceremonial purposes.[8]

Aboriginal landscape use within the Hunter Valley comprises a range of 'focus' points, which included significant places and landforms, associated with ancestral creation, tradition and ceremony; food and water resources, noting the rich alluvial plains adjacent to the Hunter River would have provided significant ecologically rich zones. The study area contains a number of natural features which may have provided resources for Aboriginal people. These features include:

- the Hunter River and ephemeral streams;
- the flat ridgeline area located in the northwest of the study area, which may have been a strategic vantage point; and
- vegetation formations in proximity to the Hunter River.

2.2 Post-contact History

2.2.1 The Convict Station 1801–1820

First contact between Aboriginal people and Europeans in the Maitland area occurred in the years after 1801, when the first official survey party visited the area. Led by Lieutenant James Grant, the survey party spent six weeks exploring the lower reaches of the river—from its mouth at the future site of Newcastle and up river to Mount Ann (now renamed Mt Hudson) near the present-day town of Dalwood, (upriver from the study area). The party reported a number of encounters with Aboriginal people on this part of the river, noting both the people and the environment they occupied.

Near Mount Ann, Grant noted a lagoon where his party shot a 'brace of ducks' and the presence of Aboriginal people in canoes of different sizes. He recorded several encounters with Aboriginal people during the expedition, describing how fires were lit in canoes so fish could be cooked while still on the water. Of the lagoon, Grant's companion Lieutenant Colonel William Paterson, noted that it afforded food for the Aboriginal people in the area and that the ground around it and near the river was 'grubbed up, particularly where roots of fearns (sic), orchises (sic) and a species of arum grow … '.[9] Gifts were exchanged with at least one individual in this part of the river, close to the study site. The man was invited on board the survey boat, an invitation which he accepted. Once on board, his companions—who remained hidden in the forest that lined the river banks—called to him and Grant was surprised by their numbers.[10]

In 1804, a permanent settlement was established on the coast at Newcastle, serving as a penal station for re-offending convicts tried in the colony. The convicts sent there were set to work mining coal, burning shells taken from the extensive Aboriginal middens that fronted the harbour for lime and cutting cedar and other valuable timbers along the river. In the years of the convict station, 1804–1820, the timber getters were sent further upriver to access timber resources and came into increasing contact with Aboriginal people. Although there are few incidents reported of clashes or contacts between these

parties and Aboriginal people, each timber gang included a detachment of soldiers to guard against escape as well as protect from attack.

Aboriginal people were employed as trackers to recapture convicts that absconded from the penal station. For this, they were resented by the convicts and there are records of fatal encounters between Aboriginal people and convicts within and around Newcastle. Aboriginal people were also employed as guides, assisting European explorers, such as John Howe in his 1820 expedition to find a route between Windsor and the Upper Hunter. They also led hunting and fishing parties in the bushland surrounding the Newcastle penal station. European settlers describe entering 'trackless forests', while the local Aboriginal people knew the best ways to move through the region.[11]

From 1812, the first farms were established in the Maitland area along the banks of the Paterson River, approximately 11 kilometres to the east of the study area. These farms, occupied by convicts who were granted the land by governor Macquarie as incentives for good behaviour, were the focus of the Bigge Report into the colonial administration under governor Macquarie. As part of the enquiries in 1820, commissioner Bigge questioned the commandant at Newcastle, Major James Morisset, about European and Aboriginal relationships. Morisset reported that a military guard was in place near the farms to keep order and to protect the farmers from attacks. This was particularly the case around the corn harvest, when Aboriginal groups came into the field and took the ripening corn. However, Morisset also noted that some Aboriginal people assisted the settlers during the harvest, which was also documented by John Allen, a constable stationed at the farm settlement. Allen noted that except for the stealing of corn, the settlers lived on good terms with the local Aboriginal people.[12]

2.2.2 1821–1850 European Occupation

In 1821 the penal station at Newcastle was relocated further north to Port Macquarie, and the Hunter Valley was opened up for European settlement. The rush of people into the valley to take up fertile farmland put increasing pressure on the Aboriginal people living in the area. Yet, despite dislocation and disruption through violence and disease, Aboriginal people continued to live in the region. Accounts of settlers report a mix of traditional customs and adaptation to European practices.

Aboriginal men who had acted as guides for explorers, hunting expeditions and fishing trips, and as trackers to recapture runaway convicts, were now assisting European settlers coming into the Hunter Valley.[13] John de Marquet Blaxland, eldest son of John Blaxland—who had come overland to the Hunter Valley from Sydney in mid-1821—wrote in his journal that he headed up river in boats with Aboriginal men from Wallis Plains (Maitland) on a kangaroo hunt.[14]

The study area falls inside the boundaries of a large grant made out to George Cobb in October 1822, comprising 2100 acres, which he named Anambah. Although George Cobb was granted the site, it was his brother John who lived on the property. The study area is also located within an area dedicated to for use as a church and school (located immediately west of Cobb's grant). The church and school's land was set aside after 1826, when a seventh of all Crown Land was isolated for the support of the Anglican Church in NSW and the educational system under its control. Any revenue raised from the use of this land would have been used for this purpose.

The rapid influx of European settlers to the region was disruptive to the traditional life and customs of Aboriginal people. European farmers occupied traditional hunting, gathering and ceremonial grounds and drastically altered the landscape through by clearing native vegetation and forest, fencing, ploughing and draining swamps and lagoons. This impacted Aboriginal people's access to food and other resources. The displacement from traditional lands, cultural misunderstandings, mistreatment of

Aboriginal people and biased application of European law against Aboriginal people eventually led to an uprising of the Wonnarua against European settlers.[15]

In 1826, the Wonnarua banded with the Wiradjuri to plan several attacks in the Hunter Valley. The Wiradjuri had led an uprising in 1824 in the Bathurst area, which was afterwards placed was under martial law.[16] The Wonnarua uprising targeted specific Europeans to receive judgement under Aboriginal laws.[17] Through careful observation, Aboriginal people learnt what was of economic importance to European settlers. They raided and torched crops and killed horses and livestock. European settlers across the Hunter demanded protection from the government but also directly retaliated against their attackers.

The newly formed mounted troops were eventually sent into the region. These troops had the advantage of being able to respond quickly to any reports of attack and more easily pursue retreating Aboriginal people compared to foot soldiers. The mounted police and European settlers treated the Aboriginal people brutally and many were killed over the next few years.[18]

One recorded massacre occurred in late August 1827 at Paterson River (17 kilometres northeast of the study area). A shepherd on EG Cory's estate killed a dog belonging to the Wonnarua. The Wonnarua retaliated by wounding the shepherd and torching the corn crop. In reprisal, the shepherd gathered a group of workers from the estate to attack the Wonnarua, killing 12 of them.[19]

The Wonnarua people were also affected by disease such as measles and syphilis. Unable to access traditional grounds, many died from starvation.[20] By 1830, the hostiles had ended and the British troops had defeated the Wonnarua.

The Wonnarua were forced to adapt to survive and many worked for European settlers. In 1830, Houston Mitchell, brother to Sir Thomas Mitchell, took up his land on the western boundary of Aberglasslyn, located to the east of the study area. In letters to his brother, Mitchell refers to Aboriginal people living on his land and nearby. In April 1830, he named the lagoon on his property Ýawarang being the name two individual Aboriginal men told him for the place. In May he refers to the western portion of his land as Coolumbundara, again the name being informed by Aboriginal occupants. The following year, in April 1831, he told his brother the hilly portion of his land was called Walka and the nearby lake Potay. Mitchell notes that 'This information I distinctly received from about 50 natives who were seated at their respective fires on the prettiest part of (Walka) my land'.[21] Mitchell's revelation to his brother illustrates the cross-cultural exchange in language and place names that took place in some areas around the study area (Walka remains as an area name in Maitland). It also indicates at least some ongoing cultural practices and traditional life in the region, with Aboriginal groups still meeting and camping on the land around the study area up to 10 years after the European land rush and almost 30 years after the first Europeans arrived in the area.

In 1836, James Backhouse, a missionary and naturalist who was visiting the area, noted that a considerable number of Aboriginal people were working at Maitland for the inhabitants. Aboriginal workers were employed cutting timber and collecting water.[22] Also at this time but further up the river, around Scone, Aboriginal workers were employed on the sheep runs and pastoral estates, suggesting that Aboriginal people were employed across the Hunter Valley during the 1830s and 1840s by settlers and townspeople.[23]

From the 1860s , with ever-increasing pressure on land and resources, the remaining Aboriginal groups were mostly forced from their traditional land, moving into Maitland and other Hunter Valley towns or onto government reserves.

2.2.3 1850–Present Day

During the last decades of the nineteenth century, some European observers thought that Aboriginal people near Maitland had disappeared but they had withdrawn to the Singleton, Gresford and Scone area. Some Aboriginal people continued to work and camp on European pastoral stations while others chose to avoid them to, as much as they could, live a traditional life.

After the formation of the Aboriginal Protection Board in 1883, many Aboriginal people went to live on reserves and missions such as the mission at Broughton Creek near Maitland and St Clair near Singleton. At the reserves and missions, Aboriginal people were provided with food rations, clothing and farming implements and encouraged to adopt European agrarian, moral and religious ideals.

At St Clair, Wonnarua, Awabakal, Worimi and Darkinjung people that would have once lived separately were merged. The Aboriginal families who lived on the reserve, cleared, fenced and successfully cultivated the land. They were considered excellent farmers, growing maize, vegetables and fruit as well as raising livestock. They also built their own slab huts.

Many of the Aboriginal men at St Clair and across the Hunter Valley continued to work for European pastoralists. They undertook a variety of jobs such as fence building, ringbarking and clearing as well as working as shepherds and stockmen. Their contribution was vital to the success of pastoral industry and often for very little payment. [24]

After 1904, the Aboriginal Protection Board handed the management of St Clair to the Australian Inland Mission (AIM). A church, mission hall and school were built there. The AIM missionaries allowed for Aboriginal people to continue aspects of traditional lifestyle alongside new European practices and AIM tried to provide a reasonable standard of living. [25] The AIM missionaries were, and still are, respected by the Wonnarua. [26]

In 1909, the *Aborigines Protection Act* was passed, which gave the Aboriginal Protection Board power to remove Aboriginal children and place them into training houses and apprenticeships. A home for Aboriginal children was established in Singleton and overseen by the AIM. [27]

Many community members departed following the appointment of TH Austin as manager of St Clair (renamed Mount Olive) in 1916. Mount Olive was closed by the Aboriginal Protection Board in the 1923, and the land was given to white former World War I servicemen. [28] Remaining residents moved to other nearby missions such as Redbourneberry Hill in Singleton and Walhollow Station/Caroona Mission in Qurindi. [29]

In 1940, the *Aborigines Protection Act* was amended and the Aborigines Welfare Board (AWB) was created as part of a push for assimilation of Aboriginal people into white society. Under the amended act, Aboriginal children could also be removed under the *Child Welfare Act 1940* and become a ward of the AWB. These children were housed in AWB institutions or non-Aboriginal homes.

Since the 1950s, there has been a push for equality for Indigenous Australians. In 1962, the *Commonwealth Electoral Act 1918* was amended so all Indigenous Australians could enrol to vote in federal elections. In 1967, a referendum was past to count Indigenous Australians in the census and grant the power to Federal Government to create laws that benefited Indigenous people. In 1969, the AWB was abolished, and in 1972, the newly elected Whitlam Government established the Department of Aboriginal Affairs. [30] The Aboriginal Tent Embassy was established the same year in front of Parliament House, Canberra, and along with other Indigenous activists, continues to advocate for self-governance and treaty. [31]

The Wonnarau, like other Aboriginal groups across Australia, have been impacted by Australia's policies of assimilation and child removal. These policies have caused harm to the individual, family relationships, culture and identity, but as Laurie Perry, a Wonnarau man, has stated:

> *We understand that there was a struggle and that struggle was hard but they survived... and we're descendants of these people and we're here to tell the story, we're survivors and we haven't lost our language, our culture or who we are.*[32]

2.3 Archaeological Context

The purpose of this section is to synthesise available information from previous archaeological studies to provide context and a baseline for what is known about Aboriginal cultural heritage in the study area.

2.3.1 Aboriginal Heritage Information Management System Search

A search of the Heritage NSW Aboriginal Heritage Information Management System (AHIMS) database was undertaken on 23 March 2021, reference number 578228 (Appendix B). The search covered a zone from latitude, longitude -32.707, 151.4326 to -32.629, 151.4567 with a 0m buffer. The results of the search are shown in Table 2.1 and Figure 2.3 and Figure 2.4. The search identified 80 sites—two of which have been excluded from Table 2.1 as they have since been determined to not be sites. There is a restricted site which is within the boundaries of the study area. This site (37-6-2777) has been left out of the AHIMS mapping.

The 2012 AHIMS search (Figure 2.5), did not identify any sites within the study area. However, the 2021 AHIMS search confirms the presence of 28 sites within the study area. These sites were identified during the 2012 survey and test excavation and were added to AHIMS by GML.

One site, 37-6-3582 (Anambah SAC 23 and PAD 13) was incorrectly registered as an art site. Like the other sites within the study area, it should have been listed and an artefact site. GML are currently getting the site updated in AHIMS.

Table 2.1 Results of AHIMS Search.

Site Feature	Frequency
Art	1
Artefact	45
Artefact and Quarry	2
Isolated Artefact	16
Isolated Artefact and PAD	2
Modified Tree	1
PAD	10
Restricted Site	1
Total	78

The AHIMS data, Aboriginal site records and the artefact patterning indicates that PADs and isolated stone artefacts dominate the archaeological record. Although these sites may be identified on any landform, such sites appear to be predominantly recorded on ridge crests, in creek flats and on swamp banks.

The density of sites on ridge crests may be due to a preference for manufacturing tools and use of stone objects in locations with a clear view of the surrounding landscape. The patterning of recorded sites on alluvial flats may be due to a need to inhabit areas close to water sources.

The AHIMS record appears to define a pattern of Aboriginal sites on the south of the Hunter River, with few sites on the northern side of the river (within the area searched on AHIMS). We suggest that this patterning is a reflection of an absence of archaeological work and site recording, rather than an absence of Aboriginal sites.

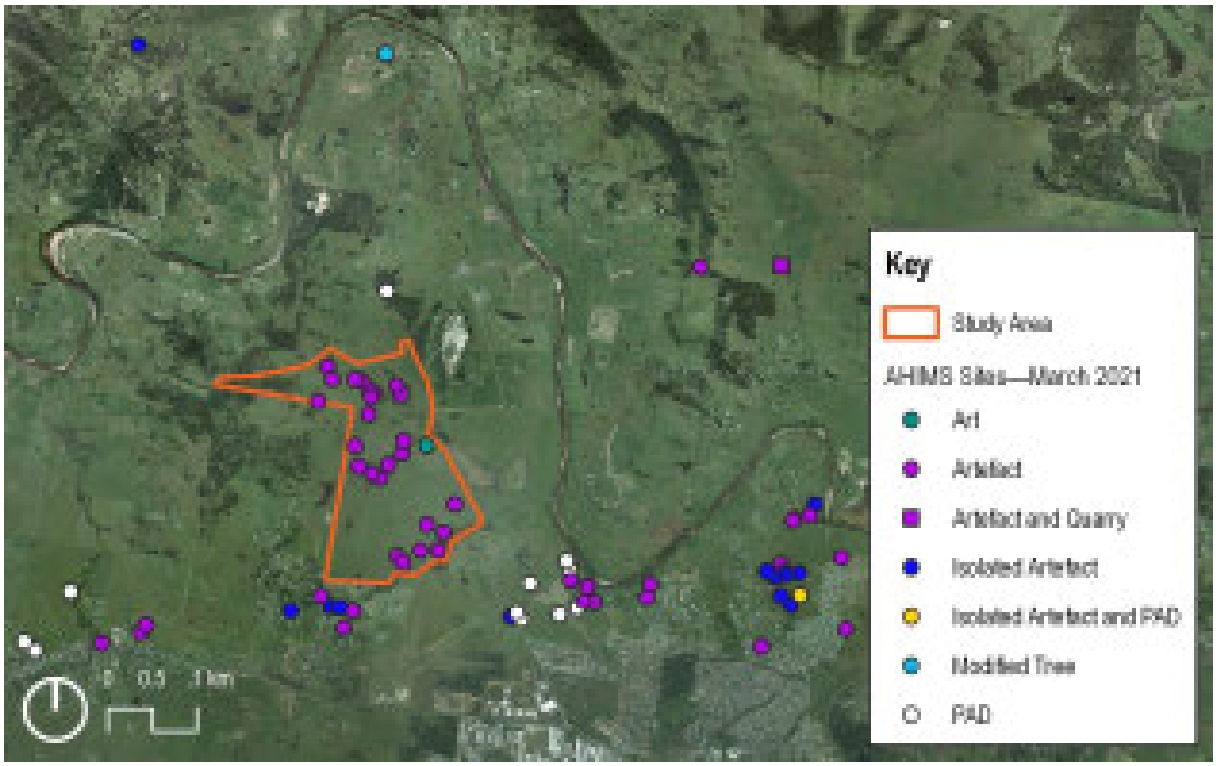


Figure 2.1 2021 AHIMS search results. (Source: NSW LPI with GML additions, 2021)

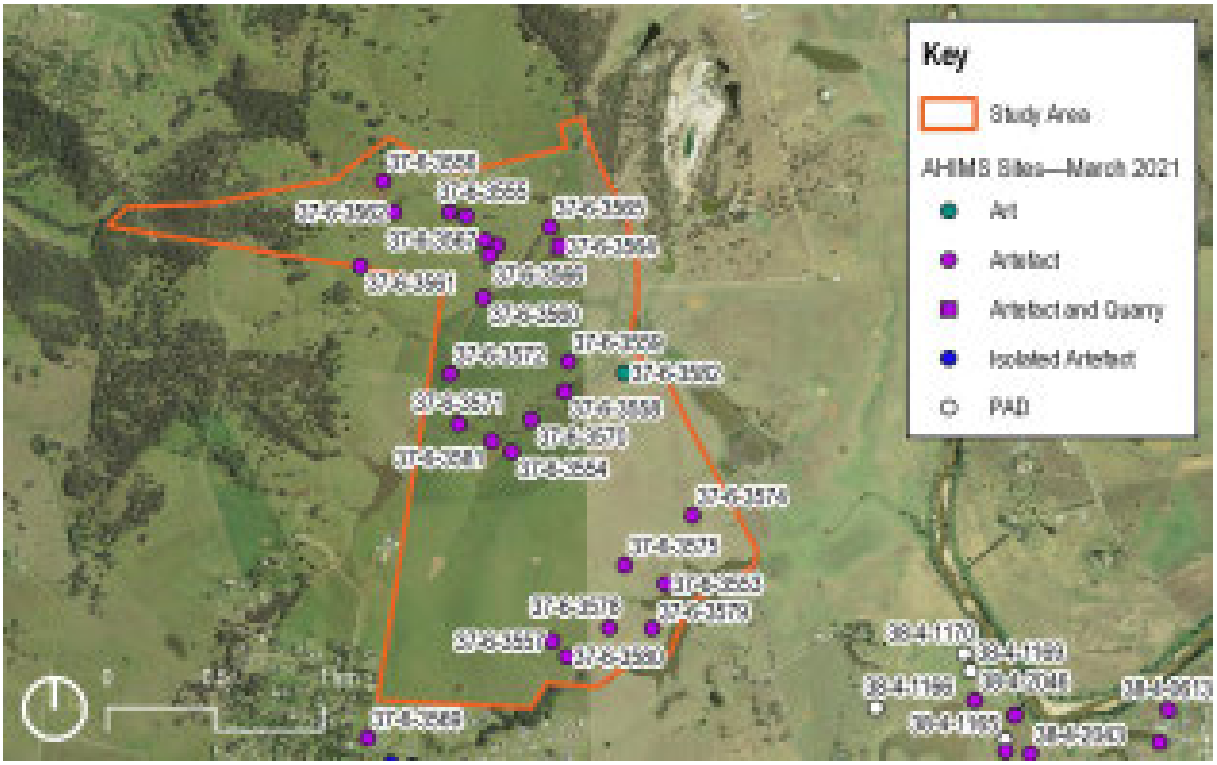


Figure 2.2 Detailed 2021 AHIMS search. (Source: NSW LPI with GML additions, 2021)

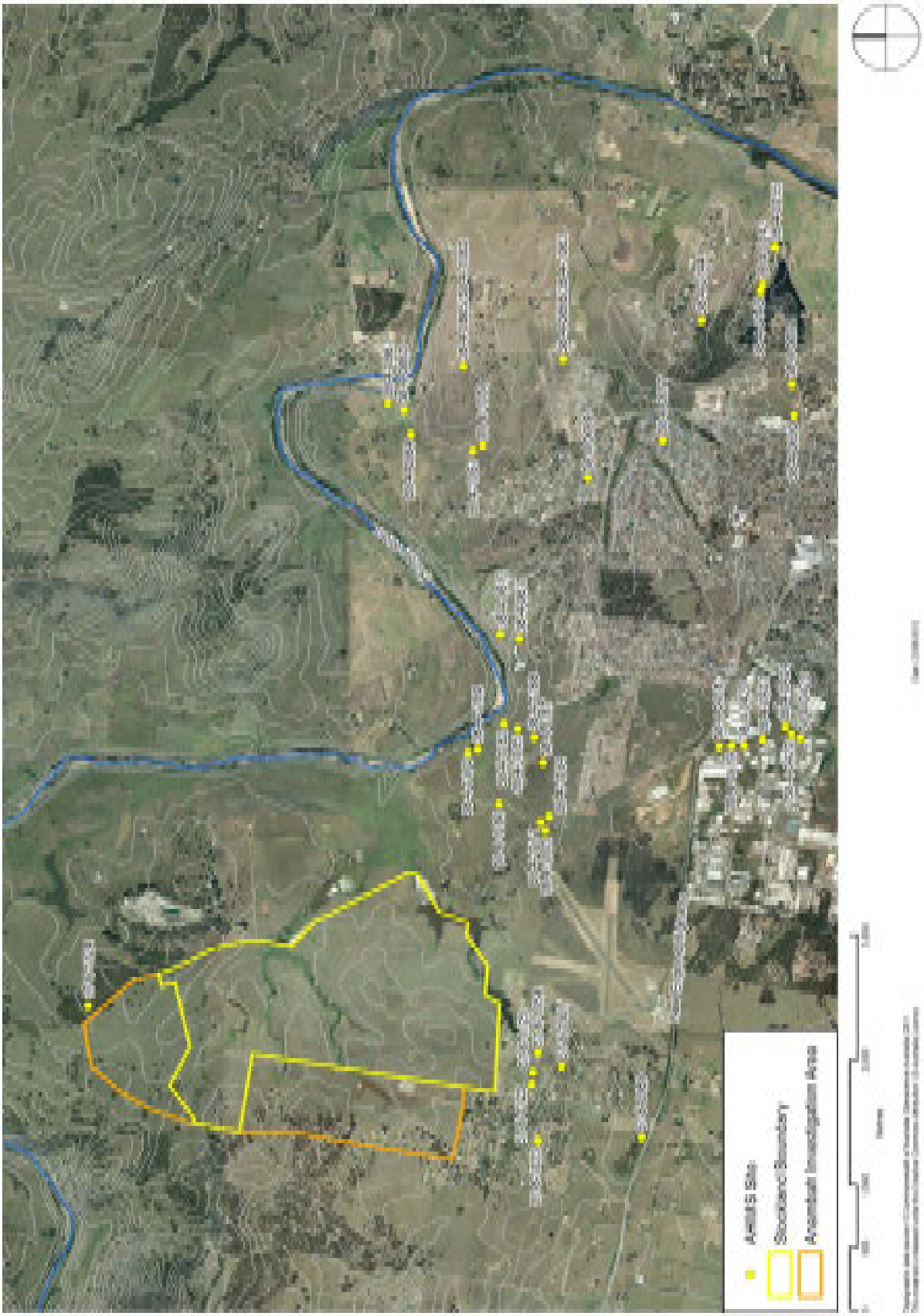


Figure 2.3 2012 AHIMS search. (Source: GML, 2012)

2.3.2 Relevant Local Literature

Rutherford—Archaeological Survey—Mary Dallas Consulting Archaeologists 1997[33]

In 1997, Mary Dallas Consulting Archaeologists (MDCA) produced a report for the archaeological survey undertaken of Lot 71, DP 573183, part Portions 59, 20A and 69. The survey area consisted of 30 hectares, 10 kilometres west of Maitland in Rutherford, Parish of Gosford, County of Northumberland (immediately to the south of the study area).

Prior to the survey, no sites had been recorded in this area. The report aimed to identify, record and assess Aboriginal sites while assessing the impact a proposed development would have on them, determining their significance and advising on mitigation of damage and management.

The study identified the following:

- one exposed open artefact scatter of four artefacts on the western edge of a dam;
- two isolated finds—one at the headwaters of a creek below a low spur, the other identified during a surface scrape; and
- a Potential Artefact Deposit (PAD) located in an aggrading alluvial intermittent creek deposit.

The report suggested that likely locations for sites were along flatter ground such as on ridge crests and along creek flats. The report suggested that a full archaeological survey was needed before the development of the site.

Aberglasslyn—Archaeological Survey—Mary Dallas Consulting Archaeologists 2004[34]

In 2004, MDCA conducted an assessment to locate, record and assess any Aboriginal archaeological evidence for past Aboriginal occupation in a 131.01 hectare area 10 kilometres north of Maitland in Aberglasslyn. The subject site was situated between Aberglasslyn Road and the Hunter River, approximately 2 kilometres north of the New England Highway (~4 km east of the study area). It included Lot 80 and Lot 81 of DP 524028, Lot 41 of DP 611238, Lot 11 of DP 1042562 and Portion 2 of DP 160043 in the parish of Gosforth, County of Northumberland.

The MDCA study separated the area into three topographic criteria. Survey Unit 1 consisted of a ridgeline above the Hunter River and included uppermost reaches of drainage lines. Survey Unit 2 was an area of ridge slopes between the level ridgelines and the lagoon, and Survey Unit 3 comprised the areas on the margins of lagoons. The survey identified two open artefact scatters (AB Site 1 and AB Site 2) and one isolated find (ABisf 1). All finds were located in the northern section of the survey area and in areas of disturbance. The survey also identified three PADs, labelled PAD 1, PAD 2 and PAD 3. PAD 1 was identified on the ridgeline between Survey Unit 1 and Survey Unit 2, while PAD 2 and PAD 3 were identified on the margins of lagoon zones.

The assessment recommended archaeological test excavation for PAD 1 and PAD 2 in order to accurately assess the need for salvage excavation and/or monitoring. AB Site 1, AB Site 2 and PAD 3 were not going to be impacted by the development and thus no further archaeological work was required. A Section 90 permit for ABisf 1 was required to destroy/relocate the artefact on site.

Aberglasslyn—Archaeological Risk Assessment—Giles Hamm Cultural Heritage Consultant, 2004[35]

The Archaeological Risk Assessment Report developed by Giles Hamm Cultural Heritage Consultant (GHCHC) in 2004 aimed to assess the Aboriginal heritage potential, determine if the proposed activity would damage Aboriginal objects, and provide cultural heritage recommendations for the land identified as lots: 1, 2, 10, 12 Part of 15, 1411 and 1412, Aberglasslyn Road, Aberglasslyn (~3.5 km east of the study area).

The survey area was divided into two different sample areas. Transect 1 included land forms of simple slope/ridge, drainage channel and gentle-mid slopes. Two sites were identified within Transect 1. Site 1 consisted of three stone artefacts on the edge of a dam drainage line, while Site 2 was an isolated find similarly located on the edge of a dam feature. Transect 2 consisted of landform units of ridge crests/simple slopes. No sites and/or artefacts were identified within this transect.

The surveyed areas were given an overall low level of archaeological significance, but were identified as having Aboriginal heritage potential. A rezoning proposal with all sites and artefacts mapped was recommended for the area.

Mary Dallas Consulting Archaeologists 2006[36]

In 2006, MDCA developed a research design to apply for a Section 87 Permit for AHIMS PADs 38-8-0865 and 38-8-0866. The research design sought to determine through excavation if subsurface artefacts were present, characterise the archaeological deposits encountered, identify further requirements and provide mitigation recommendations.

The excavation methodology consisted of a machine grader stripping the topsoil up to a depth of 20–30cm across 100-metre transects 'several meters wide'. Every 20 metres, 10x10L buckets were sample sieved. PAD 1 was considered to have sufficient farming and dwelling soil disturbance in areas to destroy any Aboriginal heritage features/artefacts. The extent of PAD 1 was 700 metres x 200 metres with areas of soil destruction limited to former farming and dwelling building areas. PAD 2 consisted, like PAD 1, of localised subsurface disturbance in association with farm tracks and dams. The extent of the PAD was approximately 600 metres x 300 metres. Some areas of PAD 2 were located within a flood zone and were therefore not going to be affected by the development. No mitigation measures were recorded as the report was an application for a Section 87 Permit.

Oakhampton Swamp—Test Excavation—Mary Dallas Consulting Archaeologists, 2008[37]

In February and March 2008, MDCA partially salvaged Aboriginal Campsite 1 (AHIMS #38-8-0866). This was identified in 2007 during test excavations located on the southern side of Oakhampton Road above Oakhampton Swamp at Aberglasslyn, near Maitland. The aim of the subsurface investigation was to identify the areas of dense archaeological concentrations in AB Campsite 1; to understand how the campsite was used by Aboriginal people; to retrieve, if possible, a dateable assemblage; and to undertake a comparison with stone assemblages and behaviour patterns from other sites within the area.

The staged salvage excavations consisted of 47 1 metre x1 metre squares, of which 36 were within a contiguous area. A total of 1111 artefacts were retrieved during the salvage excavations. Two working floors were identified at the site, with 28 backed artefacts identified in the salvage excavation and one

core recovered in the testing phase. A small number of scrapers were recovered resulting in a low diversity of artefacts at the sampled salvaged area that was uncharacteristic for the wider region.

It was concluded AB Campsite 1 was indicative of a small campsite with frequency of site use not distinguishable in the archaeological record. No radiocarbon dates were recovered for the site.

Anambah Release Area—Rezoning Report—Giles Hamm Cultural Heritage, Consultant 2008[38]

In 2008, GHCHC produced a report to determine the Aboriginal heritage constraints for the proposed rezoning for the Anambah Rd, Anambah site, Lot 71, DP 714785 (~0.5km east of the study area). This was carried out by reviewing all available Aboriginal cultural heritage studies identified in the area while undertaking an archaeological risk assessment for the Aboriginal heritage places identified.

GHCHC identified 34 sites within a 3 kilometre radius of the study area boundaries. The survey undertaken identified three Aboriginal objects and eight PADs. It was acknowledged that the artefacts were spread across elevated landforms associated with ridge crests and had been exposed primarily due to erosional processes such as ploughing.

The report found that the study area provided low levels of Aboriginal occupation and was ultimately considered to have low significance. During the consultation process with Aboriginal stakeholders, it was proposed that a conservation buffer zone around parts of the Anambah Lagoon be established to protect Aboriginal heritage resources. The report also states that due to the lack of knowledge in the area, archaeological excavation would be warranted if development went ahead.

Anambah Release Area—Due Diligence—McCardle Cultural Heritage Pty Ltd, 2011[39]

In 2011, McCardle Cultural Heritage Pty Ltd (MCH) undertook a due diligence assessment of the Anambah Release Area (within the current study area), to identify areas of Aboriginal cultural heritage and determine possible impacts. Six areas of PAD were identified that were associated with the streams within the study area.

The draft Indigenous Archaeological Due Diligence Assessment produced by MCH in 2011 made reference to an archaeological test excavation and an archaeological assessment undertaken by MCH in 2005 and 2009 respectively.

McCardle Cultural Heritage Archaeological Test Excavation 2005

Test excavations were undertaken between ‘the southern side of the new England HWY, running south down Station Lane, west along Freeman Drive, across Lochinvar Creek and back onto the New England HWY at Occupation Lane’ (MCH, 2011). The excavations were undertaken for the construction of a sewer main. It was identified that three PADs (PAD 2, PAD 3 and PAD 5) required excavation. Geomorphological analysis of PAD 2 and PAD 3 identified that these sites were on an alluvial floodplain and not conducive of past occupation. The excavation at PAD 5 uncovered two artefacts within a disturbed context. It was deemed no further excavation at any of the sites was required and a consent to destroy permit was considered appropriate.

McCardle Cultural Heritage Archaeological Assessment 2009

MCH undertook a preliminary archaeological assessment for a site of 282.26 hectares on the New England Highway opposite the Rutherford Aerodrome. The area had been cleared for grazing and

included a few remnant vegetation areas. Two major drainage lines ran southeast toward Wentworth Swamp, 2 kilometres southeast of the study area.

During the survey, a total of 10 sites were identified. It was concluded a Section 87 permit was required for sites R11, R15, R16, R17, R18, R19 R110 and PAD 1, PAD 2 and PAD 3 prior to any development works. A Section 90 consent to destroy permit was considered appropriate for sites R12, R13 and R14.

McKeachies Run—Archaeological Topsoil Stripping—Godden Mackay Logan, 2012[40]

In 2012, GML undertook archaeological stripping of the topsoil at McKeachies Run (~3.5km east of the study area). Two sites had been previously identified within this area, with a further seven sites identified during the topsoil stripping. No impact to the newly identified sites was permitted by the existing AHIP and therefore a new AHIP was required for these sites. An ARD for further staged archaeological investigation was prepared for the site to allow investigation and salvage of artefactual material within the area.

2.4 Landscape Context

The purpose of this section is to provide environmental contextual information for use in developing a predictive model of Aboriginal site locations associated with the study area. Interactions between people and their surroundings are of integral importance in both the initial formation and the subsequent preservation of the archaeological record. The nature and availability of resources, including water, flora and fauna, and suitable raw materials for the manufacture of stone tools and other items, had (and continues to have) a significant influence over the way in which people utilise the landscape.

Alterations to the natural environment also impact upon the preservation and integrity of any cultural materials, whether Aboriginal or non-Aboriginal, whilst current vegetation and erosional regimes affect the visibility and detectability of sites and objects. For these reasons, it is essential to consider the environmental context as a component of any heritage assessment.

2.4.1 Landforms and Landscape Features

The Anambah study area is approximately 600 metres south of Gosforth, approximately 1.1 kilometres north of the Maitland Airport and approximately 1.18 kilometres north of the New England Highway. Elevations within the study area are generally between 20–120m with slopes between 0–10% and local relief generally between less than 10 metres and up to 40 metres. Drainage lines, ranging from ephemeral first order streams up to more permanent third order streams, are a common feature and are generally found at intervals of 200–1,000 metres.

The study area presents a series of landforms with localised views to significant places in the vicinity, and a series of raised flats and ridgelines adjacent to lower order water courses (Figure 2.6). Given the study area possesses an erosional landform pattern containing some areas identified as aggrading landscapes, it is likely that archaeological features over the majority of the study area are no longer in their original context or form.

2.4.2 Geology and Soils

The study area sits within the primary geology of a number of formations which are of the Permian period: the Maitland Group, consisting of the Muree Sandstone which is made up of sandstone, conglomerate and siltstone; the Greta Coal Measures, which are made up of lenticular conglomerates,

sandstone and shale that split coal seams; and the Farley Formation, consisting of sandstone, mudstone, siltstone, shale and erratics (Scanned maps 1966 and Matthei, 1995: 108-111).

The primary mode of geomorphological activity within the study area is minor to moderate sheet erosion. This is associated with minor gully erosion and in areas where ground cover has been removed (Matthei, 1995: 108-111).

The study area is located within three soil landscapes as defined by Kovac and Lawrie[41]—the Hunter, Branxton and Rothbury landscapes (Figure 2.7).

The Hunter soil landscape is located within the Hunter River floodplain and comprises soils formed in alluvium. Topsoils are generally brownish black clay loam overlying medium clays. Minor erosion occurs on watercourse banks, and the landscape is an aggrading one. Within the study area, the Hunter soil landscape is located in the southeastern portion.

The Branxton soil landscape comprises undulating low hills and contains small drainage lines. A lack of erosion is associated with this landscape type. Topsoils consist of a brown sandy loam overlying a light brown medium clay with yellow and grey mottles, with a depth of approximately 1 metre to bedrock. The Branxton soil landscape is located in the central portion of the study area.

The Rothbury soil landscape covers the majority of the northwestern portion of the study area and comprises undulating to rolling hills. Minor sheet erosion occurs on slopes, while moderate sheet and gully erosion occurs on lower slopes. The topsoil comprises a dark-brown fine sandy loam overlying a brown fine sandy to clay loam, and the subsoil has a clear change to reddish brown medium clay at a depth of approximately 90 centimetres to bedrock.

2.4.3 Hydrology

The availability of water has significant implications for the range of resources available and the suitability of an area for human occupation. The study area is within the Hunter River catchment area. The study area is located within the periphery of a significant network of high order creeks and a swamp. Stream order has been identified based on Strahler's 1957 stream order classification.

Creeks within the study area flow to the east across the proposed development site toward the Hunter River and the swamp. A number of lower order unnamed streams are present within the study area (Figure 2.8). Second order streams within the study area are fed by a number of first order ephemeral creek lines. Several of these second order streams have been dammed for agricultural purposes, with one dam of significant size located in the south of the study area.

2.4.4 Fauna and Flora

Native vegetation in the study area would have comprised dry sclerophyll forest, including spotted gums, red ironbark and swamp oak in drainage lines. Forest red gums, stringybarks and paperbarks would also have been present, along with smooth and rough-barked apples, white mahogany, red bloodwood, blackbutt, grey gum, Sydney peppermint, *Casuarina*, *Persoonia* and *Acacia* spp.[42] The general location of the study area within the Hunter River catchment area mean Aboriginal populations occupying this area had access to a diverse range of resources and environments.

With the study area being reasonably close to the Hunter River, a range of faunal and plant resources would have been available to the Aboriginal inhabitants. Such resources include small mammals, kangaroo, fish, berries, bark and other plant resources.

2.4.5 Land Use History

A determination of land use history based on aerial photograph analysis (Figure 2.9 to Figure 2.11) provides an indication of historical impacts with reference to the study area's soil horizons. Impacts that have resulted in a substantial loss of soils will have reduced the study area's soil condition (summarised as good, moderate and poor); whilst those that have 'moved' soils, will have reduced the study area's soil integrity (summarised as high, moderate and low). In terms of determining archaeological potential it is important to understand both condition and integrity.

1965 Aerial

The 1965 aerial (Figure 2.9) shows the study area to be generally devoid of canopy vegetation (trees), with a number of dams located across the main watercourses and a crop covering the lower two-thirds of the study area.

Prior to 1965, the study area was subject to holistic vegetation stripping and low-grade agricultural practices, possibly including cropping and animal grazing. The date and mechanism for vegetation (ie tree) removal is not known, but likely involved either chain ripping (that results in a high level of ground disturbance) or cut-and-burn, which results in very low levels of ground disturbance, albeit with localised carbon deposits. In general, early vegetation stripping was undertaken by cut-and-burn. However, the level of impact from vegetation removal on the study area cannot be ascertained until archaeological test excavation is undertaken. Only a few large paddock trees remain within the study area. They are primarily located in the northern area.

The second major, localised, impact (modification) in 1965 appears to be the construction of dams across a number of creeks within the study area. These have been located at strategic landscape locations, where soil could be easily excavated to construct dam banks and where water run-off from multiple creeks occurred. In the northern third of the study area there is one small dam, whereas the southern third contains three small dams and another larger dam that forms the southern boundary of the study area.

Immediately outside the northern boundary (but within the AIA) a small farm complex is present. However the row of trees present along the northeast boundary (see the 1994 aerial) is not present in 1965. The farm complex appears to comprise a house and outbuilding. Two 'patches' of dark vegetation are associated with this farm complex; the nature and impact of these patches cannot be determined through this analysis.

Of greatest interest to this analysis is the pattern of cropping across the study area. The study area can be divided into roughly equal thirds—distinctly divided by fence lines, which create straight boundaries between these thirds. In 1965, only the central (middle) third contains a crop. Neither the northern or southern thirds appear to be cropped at this time. The crop has been planted up to the margins of the open depressions associated with the creek lines—very little 'flat' landform has remained crop free.

1994 Aerial

The 1994 aerial (Figure 2.10) shows a similar patterning within the study area to that in 1965. Of note are the disappearance of some mature trees from the northern third of the site and the construction of a few additional small dams. The location of all major creeks does not appear to have changed and no substantial erosion or other impact appears to have occurred between 1965 and 1994.

2004 Aerial Photograph

The 2004 aerial (Figure 2.11) shows that no further dams or significant disturbance has occurred since 1994. However, the pattern of cropping is very distinct, with a dark-green crop located in the southern third and a mid-green crop across the central third. As in 1965, the northern third does not appear to have been subject to cropping. The 2004 crop has, in general, been planted up to the margins of each creek, although a slightly larger buffer has been allowed between the edge of the crop and the start of each open depression landform, along the creek margins.

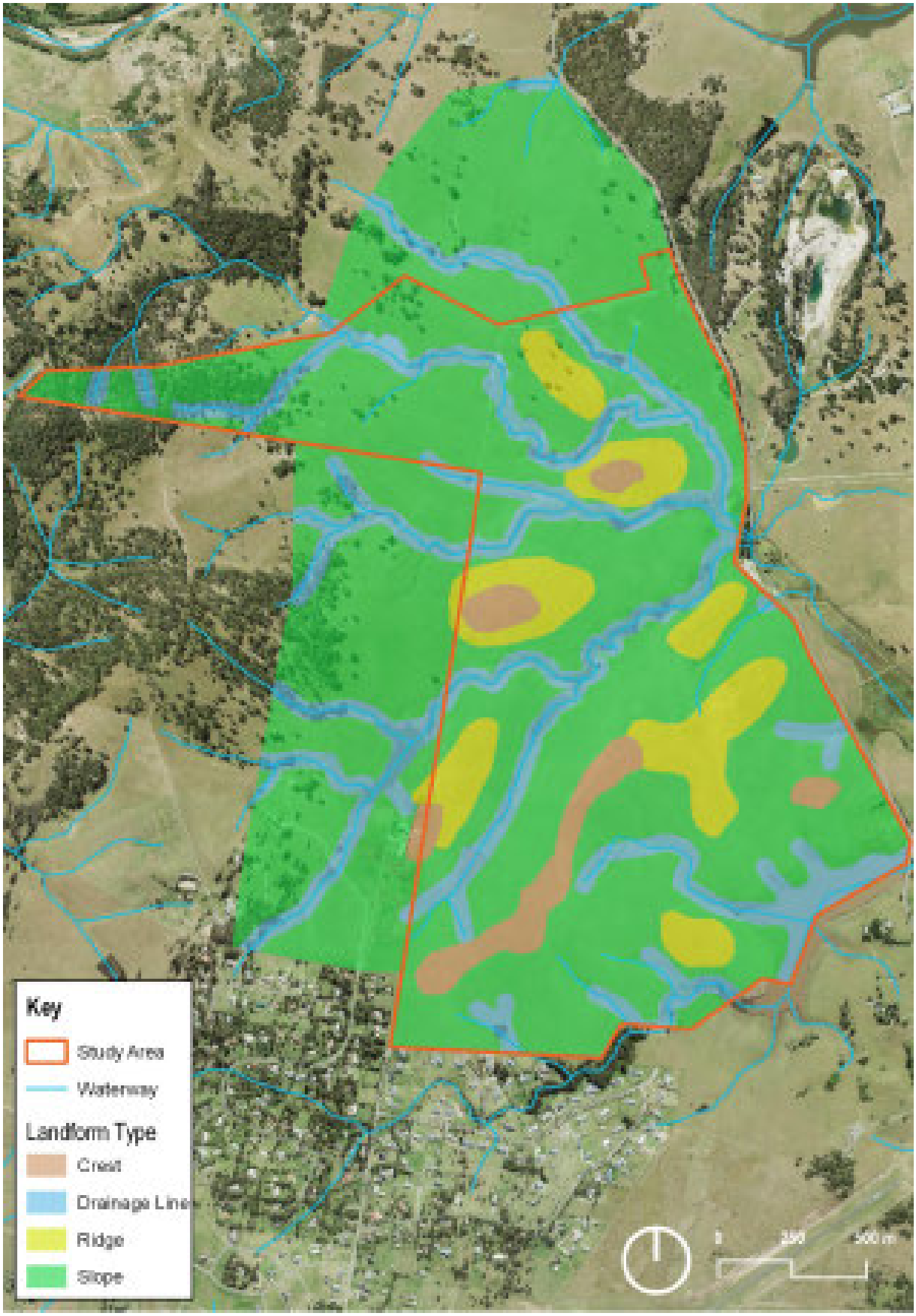


Figure 2.4 Landform features and watercourses within the study area. (Source: NSW LPI with GML additions, 2021)

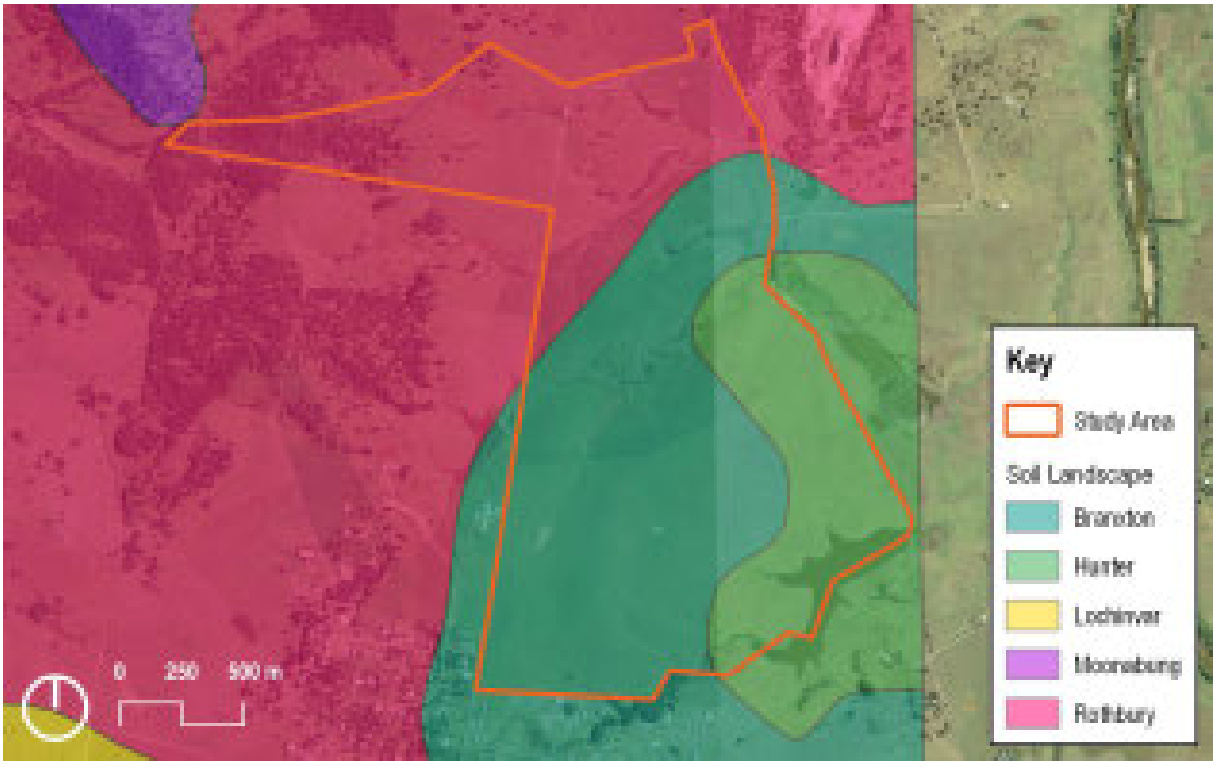


Figure 2.5 Soil landscapes of the study area. (Source: NSW LPI with GML additions, 2021)

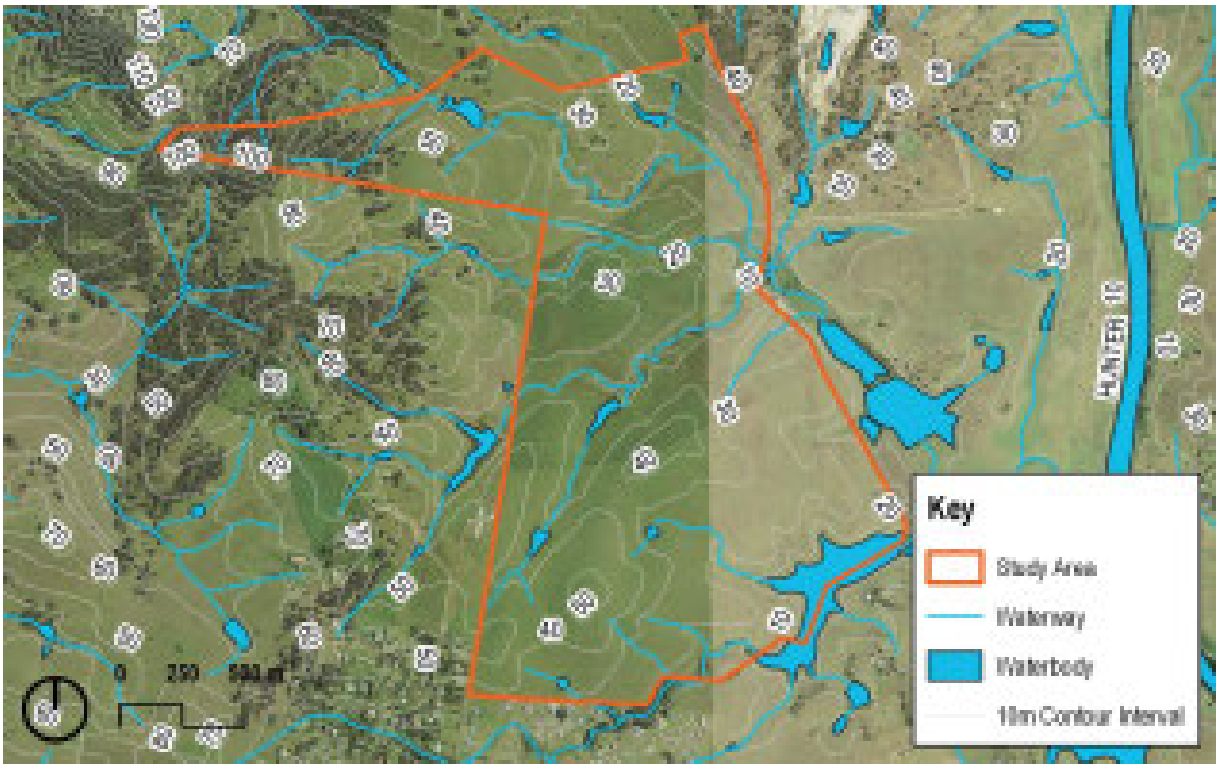


Figure 2.6 Hydrology and contour lines across the study area. (Source: NSW LPI with GML additions, 2021).

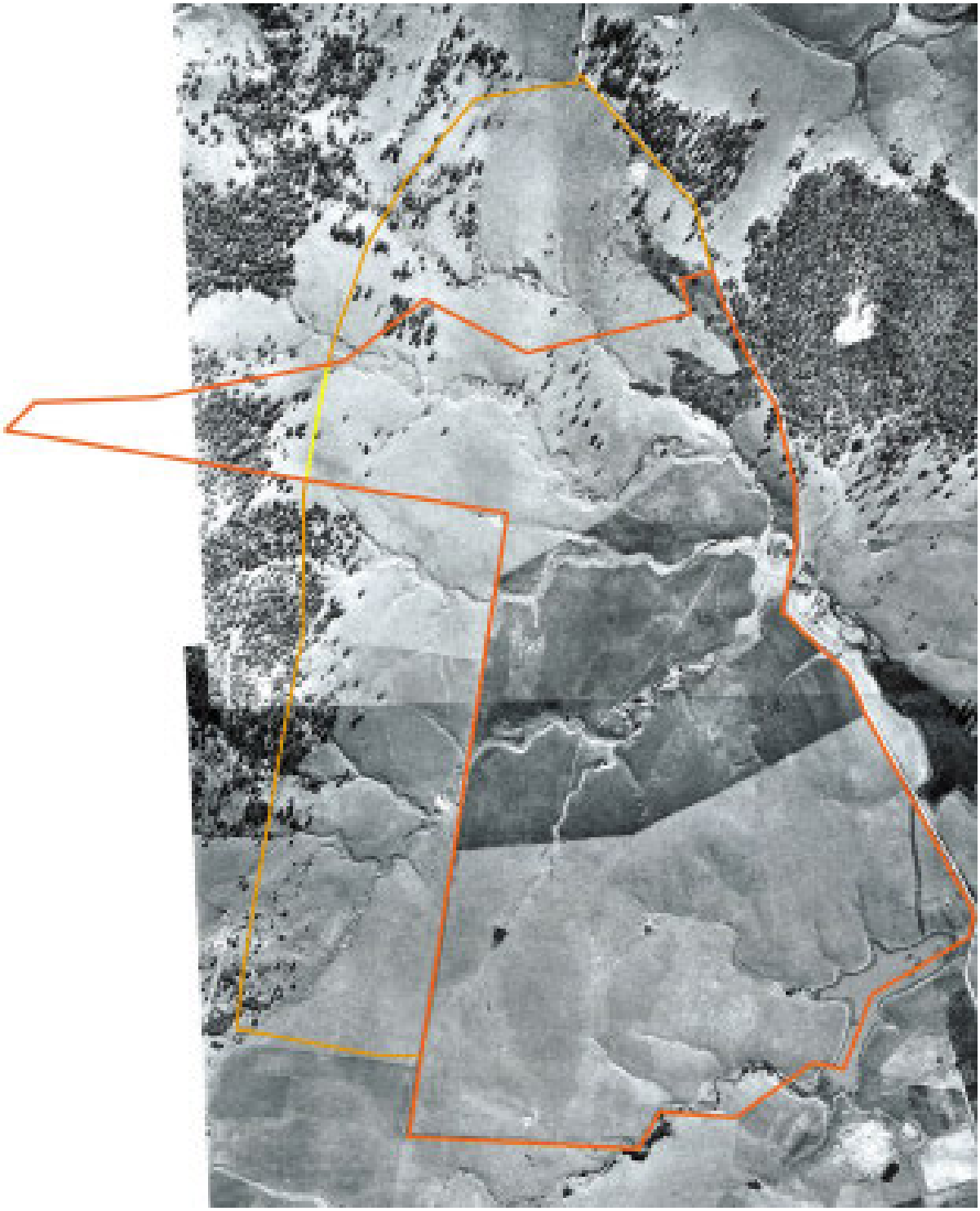


Figure 2.7 1965 historical aerial with the 2021 study area and the 2012 Anambah Investigation Area. (Source: NSW LPI with GML additions 2021)

Figure 2.8 1994 historical aerial with the 2021 study area and the 2012 Anambah Investigation Area. (Source: NSW LPI with GML additions 2021)

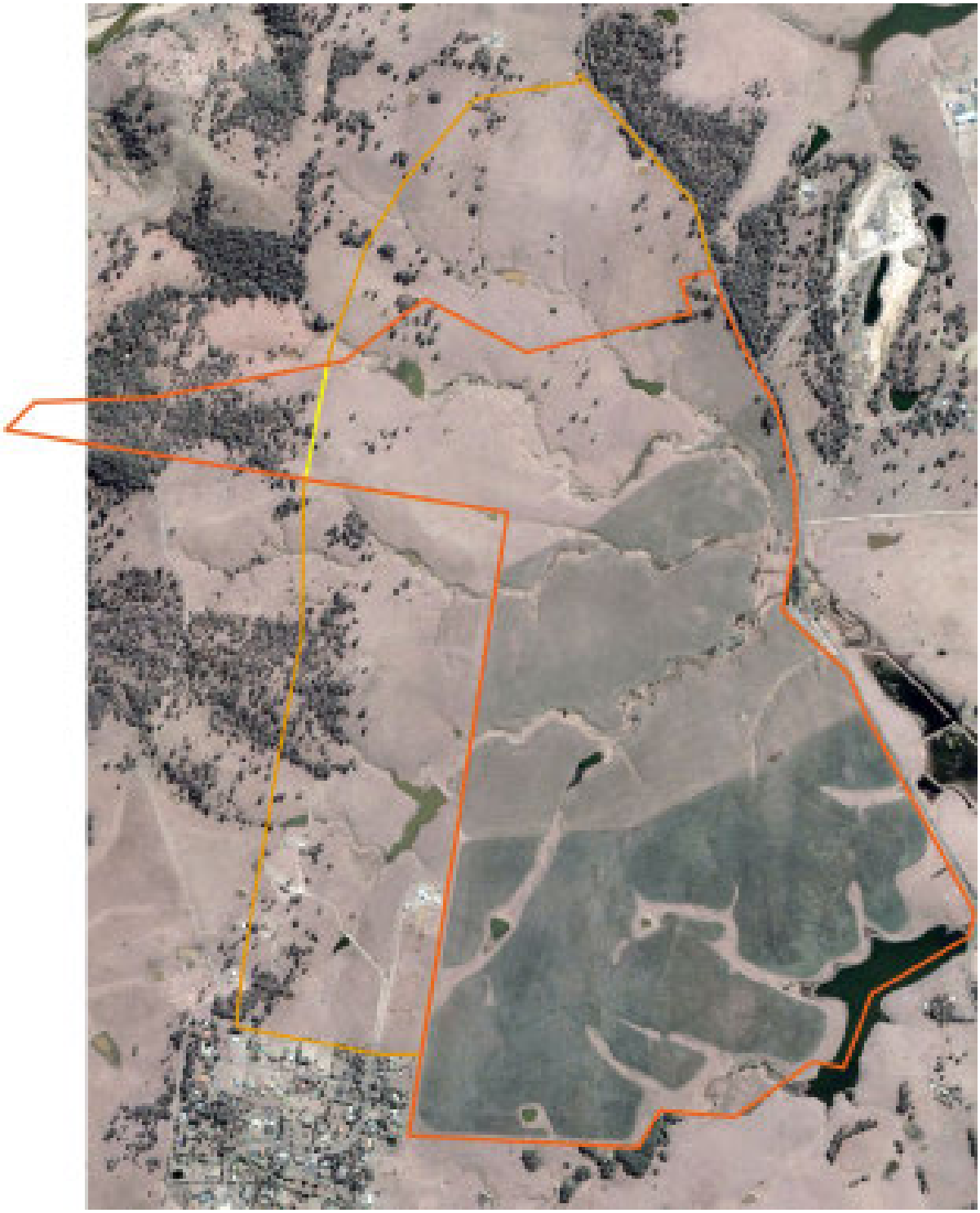


Figure 2.9 2004 historical aerial with the 2021 study area and the 2012 Anambah Investigation Area. (Source: NSW LPI with GML additions 2021)

2.5 Summary of Archaeological and Environmental Context

Elevations within the study area are generally between 20–120 metres with slopes between 0–10% and local relief generally between less than 10 metres and up to 40 metres. Drainage lines, ranging from ephemeral first order streams up to more permanent third order streams, are a common feature and are generally found at intervals of 200–1000 metres.

The study area presents a series of landforms with localised views to significant places in the vicinity, and a series of raised flats and ridgelines adjacent to lower order water courses. Given the study area possesses an erosional landform pattern containing some areas identified as aggrading landscapes, it is likely that archaeological features over the majority of the study area are no longer in their original context or form.

With the study area being reasonably close to the Hunter River, a range of faunal and plant resources would have been available to the Aboriginal inhabitants. Such resources include small mammals, kangaroo, fish, berries, bark and other plant resources. Creeks within the study area flow to the east across the proposed development site toward the Hunter River and the swamp. A number of lower order unnamed streams are present within the study area. Second order streams within the study area are fed by a number of first order ephemeral creek lines. Several of these second order streams have been dammed for agricultural purposes, with one dam of significant size located in the south of the study area.

The study area is likely to have been regularly visited by Aboriginal people in the past, given its proximity to a wide range of resources, including permanent freshwater, a variety of flora and fauna and excellent views of the surrounding landscape. The study area is located within a major catchment and close to a fifth order river. It is likely to have been visited and traversed during resource gathering activities and for short and long-term camping.

The study area has been subject primarily to land clearing, ploughing and pastoral grazing of cattle and other livestock since European colonisation. These land use activities are likely to have resulted in a moderate impact to Aboriginal heritage places and sites, such as disruption of site integrity through the scattering of artefacts.

2.6 Endnotes

1 Horton 1996. https://aiatsis.gov.au/explore/map-indigenous-australia

2 Tindale 1940. Map showing the distribution of the Aboriginal tribes of Australia. https://nla.gov.au/nla.obj-230054338/view

3 Brayshaw, H 1987, *Aborigines of the Hunter Valley: A Study of Colonial Records*, Scone & Upper Hunter Historical Society, Scone NSW, p 10.

4 Heritage NSW, 'Baiame Cave', NSW State Heritage Register, Listing no. 01942, viewed 31 March 2021, <https://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5061940#:~:text='According%20to%20the%20Wonnarua%20dreamtime,rivers%20and%20every%20living%20thing.&text=Everything%20was%20sleeping.>.

5 Wonnarua Nation Aboriginal Corporation, Overview, viewed 31 March 2021, <http://www.wonnarua.org.au/history.html>.

6 Miller, J, 'About the Wonnarua', p 2, viewed 31 March 2021, <http://wonnarua.org.au/images/about%20the%20wonnarua%202.pdf>.

7 Eureka Heritage, Aboriginal Cultural Heritage Preliminary Due Diligence Assessment Report, City Administration Centre, Maitland City Council, 263-281 High Street, Maitland, pp 27-30.

8 Brayshaw, H 1987, *Aborigines of the Hunter Valley: A Study of Colonial Records*, Scone & Upper Hunter Historical Society, Scone NSW; Facett, J W 1898 , "Notes on the Customs and Dialect of the Wonnah-Ruah Tribe" in *Science*, 23 August 23 1898, pp 152 - 154.

9 Paterson, W 'The First Exploration of the Hunter and Paterson.' *The Maitland Weekly Mercury* 31 October 1896, p 13, viewed 31 March 2021, <http://nla.gov.au/nla.news-article126328391>.

10 Grant, J 1973, *The Narrative of a Voyage of Discovery, Performed in His Majesty's Vessel The Lady Nelson, of Sixty Tons Burthen, with Sliding Keels, in the Years 1800, 1801, and 1802, to New South Wales.* Libraries Board of South Australia, Adelaide.

11 Dunn, M, 'Aboriginal Guides in the Hunter Valley, NSW' in Shellam, T & et al (eds) 2016, *Brokers and Boundaries: Colonial Exploration in Indigenous Territory*, ANU Press and Aboriginal History INC, Canberra, pp 64-65.

12 Turner, John (ed.) 1973, *Newcastle as a Convict Settlement: The Evidence before J.T. Bigge in 1819–1821*, Newcastle History Monographs No. 7, Newcastle Public Library, Newcastle.

13 Dunn, M 2016, 'Aboriginal Guides in the Hunter Valley, NSW' in Shellam T & et al (eds), *Brokers and Boundaries: Colonial Exploration in Indigenous Territory*, ANU Press and Aboriginal History INC, Canberra, p 65.

14 Blaxland, J M 1821, Journal, State Library of NSW, SAFE/C128.

[15] Eureka Heritage, Aboriginal Cultural Heritage Preliminary Due Diligence Assessment Report, City Administration Centre, Maitland City Council, 263-281 High Street, Maitland, p 31.

[16] Veale, S 2001, *Remembering Country: History and Memories of Towarri National Park*, NSW National Parks and Wildlife Services, p 13.

[17] Nolan, R, ''We Want to Do What They Did': History at St Clair, University of Sydney, Department of History, unpublished Honours Thesis, 2012, p 17.

[18] Veale, S 2001, *Remembering Country: History and Memories of Towarri National Park*, NSW National Parks and Wildlife Services, p 13.

[19] University of Newcastle, Paterson River, Hunter Valley, Colonial Frontier Massacres in Australia, 1788-1930 website, 2019, viewed 1 April 2021, <https://c21ch.newcastle.edu.au/colonialmassacres/detail.php?r=625>.

[20] Wilson-Miller, J 2005, 'Conflict in the Valley: the Triumph of the Wonnarua'. Australian Association For Research In Education 2005 Conference Papers, pp 5-6, viewed 1 April 2021, <http://www.aare.edu.au/05pap/wil05317.pdf>.

[21] Mitchell, T L, Papers, State Library of NSW.

[22] Backhouse, J 1843, *A Visit to the Australian Colonies*, London.

[23] Eyre, E J, Autobiographical Narrative of Residence and Exploration in Australia 1832-1841, State Library of NSW, A1806.

[24] Veale, S 2001, *Remembering Country: History and Memories of Towarri National Park*, NSW National Parks and Wildlife Services, pp 25-30.

[25] Veale, S 2001, *Remembering Country: History and Memories of Towarri National Park*, NSW National Parks and Wildlife Services, pp 25-30.

[26] Wilson-Miller, J, Interview, 23 August 2012, quoted in Nolan, R, ''We Want to Do What They Did': History at St Clair, University of Sydney, Department of History, unpublished Honours Thesis, 2012, p 25.

[27] Veale, S 2001, *Remembering Country: History and Memories of Towarri National Park*, NSW National Parks and Wildlife Services, pp 25-30.

[28] Eureka Heritage, Aboriginal Cultural Heritage Preliminary Due Diligence Assessment Report, City Administration Centre, Maitland City Council, 263-281 High Street, Maitland, p 32; Wilson-Miller, J 2005, 'Conflict in the Valley: the Triumph of the Wonnarua'. Australian Association For Research In Education 2005 Conference Papers, p 10, viewed 1 April 2021, <http://www.aare.edu.au/05pap/wil05317.pdf>.

[29] Nolan, R, ''We Want to Do What They Did': History at St Clair, University of Sydney, Department of History, unpublished Honours Thesis, 2012, p 25.

[30] Human Rights and Equal Opportunity Commission Report, *Bringing them Home: Report of the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children from Their Families*, Commonwealth of Australia, 1997, Chapter 3, viewed 1 April 2021 <https://humanrights.gov.au/our-work/bringing-them-home-chapter-3#Heading30>.

[31] Australian Museum, Aboriginal Tent Embassy, viewed 2 April 2021, <https://www.nma.gov.au/defining-moments/resources/aboriginal-tent-embassy>.

[32] Perry, L, Interview, 12 July 2012, quoted in Nolan, R, ''We Want to Do What They Did': History at St Clair, University of Sydney, Department of History, unpublished Honours Thesis, 2012, p 50.

[33] Dallas, M & R. Kerr 1997, Archaeological Survey of Proposed Subdivision of Rural Land Lot 71, DP 573183, Rutherford, Hunter Valley, NSW. Report to Pulver Cooper & Blackley Pty Limited.

[34] Dallas, M 2004, Aboriginal Archaeological Assessment, Lots 80 and 81 in DP 524028, 41 in DP 611238, 11 in DP 1042562 and Portion 2 in DP 160043, Aberglasslyn, NSW. Report to Stockland Development Pty Limited.

[35] Hamm, G 2004, Archaeological Assessment of Lots: 1, 2, 10, 12, Part of 15, 1411 and 1412. Aberglasslyn Road, Aberglasslyn. Report to Andrews Neil Environmental Pty Limited.

[36] Mary Dallas Consulting Archaeologists 2006, Application for a S87 Permit and Accompanying Research Design—Areas of Potentail Archaeological Deposit (AHIMS #38-8-0865 and #38-8-0866) at Aberglasslyn Road, Aberglasslyn, NSW. Application to NSW Department of Environment & Conservation.

[37] Mary Dallas Consulting Archaeologists 2008, Aboriginal Archaeological Excavation—Partial Salvage of AB Campsite 1 (AHIMS #38-8-0866) at Oakhampton Road, Aberglasslyn, NSW. Report to Pulver Cooper Blackley Pty Ltd on behalf of Stockland Developments Pty Ltd.

[38] Hamm, G 2008, Aboriginal Cultural Heritage & Archaeological Assessment for re-zoning Application for Land Identified as: Lot 71, DP: 714785 Anambah Road, Anambah. Report to L & A Wells Property Pty Limited

[39] McCardle Cultural Heritage 2011, Anambah Release Area, LGA: Maitland, Indigenous Archaeological Due Diligence Assessment. Report to ADW Johnson.

[40] Godden Mackay Logan 2012, McKeachies Run Top Soil Stripping, Archaeological Technical Report. Report to Stockland.

[41] Kovac & Lawrie 1991.

[42] Kovac & Lawrie 1991.

3.0 Aboriginal Community Consultation

3.1 Previous Aboriginal Community Consultation

Below are the Aboriginal community consultation details for the testing program carried out by GML in 2012.

Aboriginal community consultation was initiated in accordance with the DECCW *Aboriginal cultural heritage consultation requirements for proponents* 2010. Stage 1.1 letters were sent to the following statutory bodies on 11 May 2012 requesting contact details for Aboriginal people who may have an interest in the study area:

- The Office of Environment and Heritage (OEH);
- Mindaribba Local Aboriginal Land Council;
- Office of The Registrar, Aboriginal Lands Right Act 1983 (The Registrar);
- National Native Title Tribunal (NNTT);
- NTSCorp;
- Maitland City Council; and
- Hunter-Central Rivers Catchment Management Authority.

Following the receipt of responses from the OEH, The Registrar, NNTT, NTSCorp, and Maitland City Council, a number of potential Aboriginal stakeholders were identified. Stage 1.2 letters were sent to the identified Aboriginal people on 21 May 2012, and an advertisement was placed in the *Maitland Mercury* on 23 May 2012. Both the Stage 1.2 letters and the advertisement invited Aboriginal people with an interest in the Anambah area to register as a stakeholder in order for consultation to occur. Registrations were accepted until 6 June 2012.

Twenty-five Aboriginal parties have registered an interest in the project. The following list of stakeholders are the Registered Aboriginal Parties (RAPs) for the AIA project:

- Aboriginal Native Title Elders Consultants;
- Amanda Hickey;
- Cacatua Culture Consultants;
- Culturally Aware;
- D F T V Enterprises;
- DRM Cultural Management;
- Gidawaa Walang Cultural Heritage Consultancy;
- Gomeroi Namoi Traditional Owners;
- Hunter Valley Cultural Surveying;

- Kawul Cultural Services;
- Lower Hunter Aboriginal Incorporated;
- Lower Hunter Wonnarua Council Inc;
- TA Wallangan Cultural Services;
- Mindaribba Local Aboriginal Land Council;
- Myland Cutural and Heritage Group;
- Ngarramang-Kuri Aboriginal Culture & Heritage Group;
- T & G Culture Consultants;
- Upper Hunter Wonnarua Council Inc;
- Warragil Cultural Services;
- Wattaka Wonnarua C.C. Service;
- Widescope Indigenous Group Pty Ltd;
- Wonn1 Contracting;
- Wonnarua Culture Heritage;
- Wonnarua Nation Aboriginal Corporation; and
- Yinarr Cultural Services.

All registrations of interest were acknowledged either via email or fax.

3.1.1 Cultural Heritage Assessment Programme

The OEH has defined a number of stages during the Aboriginal consultation process. The following table provides a synopsis of the stages undertaken as part of the 2012 consultation.

Stage	Status
Write to statutory bodies to obtain contact details for Aboriginal people who may have an interest in the project	Completed
Write to identified Aboriginal people, inviting them to register an interest in the project	Completed
Place an advertisement in local print media, inviting Aboriginal people with cultural knowledge of the area to register an interest in the project	Completed
Proponent records names of Aboriginal people who have registered an interest in the project	Completed
Proponent advises Local Aboriginal Land Council (LALC) and OEH of RAP details (subject to privacy requests)	Completed
Proponent presents information regarding proposed project to RAPs	Completed
Proponent provides methodology for the cultural heritage and archaeological assessment to RAPs	Completed

Stage	Status
RAPs invited to provide input for the assessment methodology	Completed
RAPs invited to identify: • whether any Aboriginal objects of cultural value are present within the study area; and • whether any places of cultural value are present within the study area	Completed
RAPs invited to comment on potential management outcomes	Project put on hold before this could be completed
Proponent prepares draft Aboriginal Cultural Heritage Assessment Report (ACHAR) and provides to RAPs for comment	Project put on hold before this could be completed
RAPs provide comment and proponent incorporates comments into final ACHAR	Project put on hold before this could be completed
Final ACHAR (and AHIP application) provided to RAPs, LALC and the OEH	Project put on hold before this could be completed

3.1.2 Survey and Test Excavation

The field survey for the assessment was undertaken from 20 to 23 September 2012. The field survey aimed to inspect the entirety of Stockland's land holdings within the Anambah Investigation Area where ground surface visibility existed. The survey methodology and project was discussed with the Aboriginal stakeholders prior to and on the day of the survey. A total of 18 local Aboriginal community representatives participated in the survey:

- Cacatua Culture Consultants;
- Culturally Aware;
- D F T V Enterprises;
- DRM Cultural Management;
- Gidawaa Walang Cultural Heritage Consultancy;
- Gomeroi Namoi Traditional Owners;
- Hunter Valley Cultural Surveying;
- Kawul Cultural Services;
- Lower Hunter Wonnarua Council Inc.;
- Mindaribba LALC;
- Myland Cultural and Heritage Group;
- Ngarramang-Kuri Aboriginal Culture & Heritage Group;
- T&G Culture Consultants;
- TA Wallangan Cultural Services;

- Warragil Cultural Services;
- Widescope Indigenous Group Pty Ltd;
- Wonnarua Culture Heritage; and
- Wonnarua Nation Aboriginal Corporation.

The results of the survey and the test excavation methodology were documented in the Anambah Aboriginal Heritage Rezoning Report (Appendix C) and issued to the RAPs for review.

Test excavation was completed in two seasons. Season One was undertaken between 22 November to 7 December 2012, a total of 12 days. Season Two was undertaken between 13 and 20 March 2013, six days in total. The following RAPs were involved in the test excavation:

- Cacatua Cultural Consultation;
- Culturally Aware;
- D.F.T.V Enterprises;
- DRM Cultural Management;
- Gomeroi Namoi Traditional Owners;
- Gidawaa Walang Cultural Heritage Consultancy;
- Hunter Valley Cultural Surveying;
- Kawul Cultural Services;
- Lower Hunter Wonnarua Council Inc;
- Mindaribba Local Aboriginal Land Council;
- Myland Cutural and Heritage Group;
- Ngarramang-Kuri Aboriginal Culture & Heritage Group;
- T&G Culture and Consultants;
- TA Wallangan Cultural Services;
- Upper Hunter Wonnarua Council Inc;
- Warragil Cultural Services;
- Wattaka Wonnarua Cultural Consultancy Services;
- Wonnarua Culture Heritage;
- Widescope Indigenous Group Pty Ltd;
- Wonnarua Nation Aboriginal Corporation;

- Wonn1 Contracting; and
- Yinarr Cultural Services.

Following the field phase of archaeological test excavation, the project was put on hold. The analysis of the results from test excavation was not completed, although the assemblages and records from the excavation have been securely held by GML since 2013.

It is the intention of this project to complete the post excavation analysis and reporting on the Aboriginal objects recovered from test excavation. The results from this process will be disseminated to the 2021 RAPs, and form part of the future assessment process for this project.

3.2 Aboriginal Community Consultation 2021

Aboriginal community consultation was initiated in accordance with the DECCW *Aboriginal cultural heritage consultation requirements for proponents*.[1] Stage 1.1 letters to statutory bodies were sent on 17 March 2021 requesting contact details for Aboriginal people who may have an interest in the study area. These statutory bodies included:

- Heritage NSW;
- Mindiaribba Local Aboriginal Land Council;
- The Registrar;
- NNTT;
- Native Titles Service Corporation;
- Maitland City Council; and
- Hunter Local Land Services.

Following the receipt of responses from Stage 1.1, a number of potential Aboriginal stakeholders were identified. Stage 1.2 letters were sent to the identified Aboriginal people on 31 March 2021, and an advertisement was placed in the *Maitland Mercury* on 2 April 2021. Both the Stage 1.2 letters and the advertisement invited Aboriginal people with an interest in the study area to register as a stakeholder in order to be involved in consultations. Registrations were accepted until 16 April 2021.

Fourteen Aboriginal parties registered an interest in the project. The following list of stakeholders are the RAPs for the project:

- AGA Services;
- Anonymous RAP;
- Awabakal Traditional Owners Aboriginal Corporation;
- Cacatua Culture Consultants;
- Culturally Aware;
- Didge Ngunawal Clan;

- Jarban & Mugrebea;
- Kawul Pty Ltd. (Trading as Wonn1 Sites);
- Mindaribba Local Aboriginal Land Council;
- Wallangan Cultural Services;
- Widescope Indigenous Group;
- Wonnarua Elders Council;
- Wonnarua Nation Aboriginal Corporation; and
- Yarrawalk (Tocomwall).

All registrations of interest were acknowledged via phone or email.

3.3 Cultural Heritage Assessment Program

Heritage NSW has defined a number of stages during the Aboriginal consultation process.[2] The following table provides a synopsis of the process to date.

Stage	Status
Write to statutory bodies to obtain contact details for Aboriginal people who may have an interest in the project	Completed
Write to identified Aboriginal people, inviting them to register an interest in the project	Completed
Place an advertisement in local print media, inviting Aboriginal people with cultural knowledge of the area to register an interest in the project	Completed
Record names of Aboriginal people who have registered an interest in the project	Completed
Advise the LALCs and Heritage NSW of RAP details (subject to privacy requests)	Completed
Present information regarding proposed project to RAPs	This document
Provide methodology for the cultural heritage and archaeological assessment to RAPs	This document
Invite RAPs to provide input for the assessment methodology	Pending
Invite RAPs to identify: • whether any Aboriginal objects of cultural value are present within the study area; and • whether any places of cultural value are present within the study area	Completed in 2012, to be updated in 2021
Invite RAPs to comment on potential management outcomes	Forthcoming
Prepare draft ACHAR and provide to RAPs for comment	Forthcoming
Incorporate RAPs' comments into final ACHAR	Forthcoming
Provide final ACHAR (and AHIP application) to the RAPs, LALC and Heritage NSW	Forthcoming

3.4 Roles and Expectations

The Heritage NSW[3] Consultation Requirements list a number of responsibilities and expectations for both the Aboriginal community and the proponent regarding the assessment of the study area's cultural heritage.

The Aboriginal community is responsible for determining who is authorised to speak for Country and its associated cultural heritage. If there is a dispute regarding who has the right to speak for Country, it is up to the Aboriginal community, not the proponent nor Heritage NSW, to resolve the dispute in a timely manner.[4]

RAPs are also responsible for providing information relating to Aboriginal cultural heritage relevant to the study area to assist in managing its cultural significance in an appropriate manner.[5]

It is expected that:

- Aboriginal people providing knowledge regarding the cultural heritage of the study area are trusted and allowed by the rest of the Aboriginal community to speak for Country;[6]
- people speaking for Country hold knowledge about the cultural significance of their heritage and are able to provide input into appropriate management strategies;[7]
- RAPs have an understanding of the commercial environment in which the proponent is operating and the constraints associated with this environment;[8] and
- RAPs understand that the Chief Executive of Heritage NSW is the final decision maker relating to the consideration of applications under Part 6 of the NPW Act, and that these decisions may not be consistent with the views of the RAPs.[9]

The proponent is responsible for consulting with the Aboriginal community and managing the consultation process in accordance with the consultation requirements.[10]

It is expected that:

- the proponent will develop and implement appropriate consultation methods, in accordance with the consultation requirements;[11]
- Aboriginal views are considered and appropriately incorporated into the assessment process;[12] and
- the consultation process is accurately documented, including both the consultation undertaken and the input from the RAPs.[13]

Heritage NSW is responsible for assessing any application under Part 6 of the NPW Act and is the decision maker regarding whether an AHIP application is refused or granted. Heritage NSW is responsible for ensuring any conditions attached to an AHIP are complied with by the AHIP holder.[14] Internal policies for assessing AHIP applications will be followed by Heritage NSW and all information provided as part of an AHIP application will be considered.

3.5 Endnotes

1 Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW).

2 Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW).

3 Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW).

4 Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 15.

[5] Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 15.

[6] Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 8.

[7] Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 8.

[8] Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 16.

[9] Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 15.

[10] Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 16.

[11] Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 6.

[12] Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 16.

[13] Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 16.

[14] Department of Environment Climate Change and Water NSW 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents*, Department of Environment, Climate Change and Water (NSW), p 15.

4.0 Anambah Assessment Methodology

The process of Aboriginal heritage assessment for Anambah halted in 2013. It is our intention to recommence the process and complete the assessment and reporting, albeit within the context of 2021 Aboriginal cultural heritage standards and expectations. A number of stages will be undertaken, which are described below.

4.1 Completion of Test Excavation Reporting

We hold the test excavation records and stone artefacts associated with the archaeological text excavation work completed in 2013. The first stage of the project will be to complete the analysis of these objects and prepare reporting on the outcomes of the test excavation.

The test excavation was guided by a place specific Archaeological Research Design, with several questions associated with understanding Anambah and contextualising the place within the wider region. We intend to address these questions, and present the outcomes as part of the ongoing assessment for Anambah.

Once reporting on the test excavation has been completed, we will provide the results to the RAPs for both information purposes, comment and to underpin the next stage of the project. The Aboriginal objects recovered through test excavation are currently held by GML in accordance with Heritage NSW requirements. We seek your feedback an opinion on the future management options for these objects. This will be discussed with all RAPs during ongoing project consultation.

4.2 Anambah Inspection

The test excavation results will further refine the archaeological understanding of the Anambah area, notably those locations which hold dense deposits, connected with long term Aboriginal use of this place.

Once we have completed the test excavation reporting and provided this document to all RAPs, we propose to undertake a site re-familiarization inspection with local Aboriginal people. The purpose will be to understand and discuss the outcomes of the past work, and discuss requirement for future ongoing Aboriginal heritage management.

We propose to visit and inspect locations across the Anambah study area for the purpose of understanding their current condition, and connection with local Aboriginal cultural heritage. Prior assessment had identified some locations with specific culturally restricted values. We would seek to further our understanding of these places and their values, and determine how the local Aboriginal people want these places managed through the development process.

4.3 Significance Assessment

Management of Aboriginal cultural heritage with Anambah should be based on an assessment of its significance.[1] Generally, an assessment of the significance of Aboriginal cultural heritage considers two factors—archaeological (or scientific) values, and the cultural values identified by the RAPs.

Anambah contains a number of tangible (ie physical or archaeological sites), but also intangible places and values, which need to be discussed. Appropriate and suitable management for these values and places needs to be documented and put in place. It is our intention to gain the opinion of the RAPs on why these places and values are important, how these places and values should be managed through the development process.

Consideration of these Aboriginal heritage values will allow an assessment of the significance of cultural heritage within the study area. An assessment of the cultural significance of any objects or places identified within the study area will be sought from the RAPs prior to the finalisation of the ACHAR. Should any restrictions apply to the cultural knowledge supplied (for example, male-only information), these will be strictly adhered to by the proponent.

The significance of Aboriginal objects or places identified within Anambah will be assessed in accordance with *The Burra Charter: the Australia ICOMOS Charter for Places of Cultural Significance* (the Burra Charter).[2]

4.4 Impact Assessment and Management Strategies

The potential of the development to impact the identified Aboriginal cultural values within the study area will be assessed. Statements of impact will be provided and recorded in the ACHAR.

Based on the proposed impact and the assessed significance (both cultural and archaeological) of the site, management strategies will be produced in consultation with the RAPs. Input from the RAPs will be considered and documented in the final ACHAR, and an explanation of how suggestions were considered and/or implemented in the final management recommendations for the site will be provided.

4.5 Reporting

A report detailing the results of all work (both from 2012/2013 and 2021) will be produced in accordance with the Consultation Requirements, Heritage NSW's *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW,*[3] and the Code of Practice.[4] The draft of this report would be provided to the RAPs for their review and comment prior to the finalisation of this report. The ATR will expand this initial document to include the outcomes of the survey, test excavation, significance assessment and impact assessment.

4.6 Community Input

This methodology has been provided to all RAPs for their review and comment. Any input from the RAPs will be considered in the final methodology for the project.

In accordance with Heritage NSW guidelines, please provide written and/or oral comments by 30 May 2021. Please advise when commenting if you wish to be involved in the physical archaeological site inspection and test excavation phases of this project. All participants will be required to have a good level of physical fitness and be able to walk up to 10 kilometres per day.

4.7 Endnotes

1 Department of Environment, Climate Change and Water 2010, *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.

2 Marquis-Kyle, P and Walker, M 2004, *The Illustrated Burra Charter*, third revision, Australia ICOMOS.

3 Office of Environment and Heritage, *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW*, Sydney, Office of Environment and Heritage, April 2011.

4 Department of Environment Climate Change and Water NSW, Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, 2010.

5.0 Appendices

Appendix A

New South Wales Legislation

Appendix B

AHIMS Extensive Search

Appendix C

Anambah Rezoning Aboriginal Heritage Report

Appendix A

New South Wales Legislation

Appendix A—New South Wales Legislation

National Parks and Wildlife Act 1974

Section 90 of the NPW Act provides statutory protection for all Aboriginal 'objects' consisting of any material evidence of the Indigenous occupation of New South Wales. It also enables under Section 84 the declaration of 'Aboriginal places' which are areas of cultural significance to the Aboriginal community.

Aboriginal objects and places are given automatic statutory protection in New South Wales and it is an offence to harm an Aboriginal object or declared Aboriginal Place without the Ministers consent.

The NPW Act defines an Aboriginal object as:

> *any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.*

Protection of Aboriginal objects and places applies irrespective of the level of their significance or issues of land tenure. Sites of traditional significance that do not necessarily contain material remains may be gazetted as 'Aboriginal Places' and thereby be protected under the NPW Act. Areas are only gazetted if the Minister is satisfied that enough evidence exists to demonstrate that the location was and/or is of special significance to Aboriginal culture.

A strict liability offence applies for harm to an Aboriginal object or declared Aboriginal Places. This means that even if an Aboriginal object is unwittingly harmed, a crime has been committed and prosecution can still occur. The definition of 'harm' under the NPW Act includes destroying, defacing, damaging or moving an Aboriginal object or declared Aboriginal Place. The strict liability offence of harming Aboriginal objects has a number of defences. The two defences relevant to the proposed development are the statutory defence of due diligence through complying with an adopted industry code, or compliance with the conditions of an Aboriginal Heritage Impact Permit (AHIP).

Environmental Planning and Assessment Act 1979

The EP&A Act provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items through inclusion in schedules to planning instruments such as Local Environmental Plans (LEPs) or Regional Environmental Plans (REPs). Heritage items in planning instruments can include Aboriginal objects and places, historic sites, landscapes and parks. The EP&A Act requires that appropriate measures be taken for the management of the potential archaeological resource consistent with the requirements of the NPW Act.

The study area is located within the Maitland Local Government Area (LGA), and is subject to the Maitland Local Environmental Plan (LEP) 2011. The heritage conservation objectives of the Maitland LEP 2011 are:

a) to conserve the environmental heritage of Maitland,

b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,

c) to conserve archaeological sites,

d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

Appendix B

AHIMS Extensive Search

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 21-0037

Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0002	Rosebrook;	AGD	56	361810	6385071	Open site	Valid	Artefact : -	Open Camp Site	102158,102229
	Contact	**Recorders**	ASRSYS					**Permits**		
38-4-0003	Rosebrook.	AGD	56	362724	6385088	Open site	Valid	Stone Quarry : -, Artefact : -	Quarry	102158,102218,102229
	Contact	**Recorders**	Moore					**Permits**		
38-4-0611	ABER 2	AGD	56	361210	6381350	Open site	Valid	Artefact : -		98364,102158,102229
	Contact	**Recorders**	Mrs.Angela Besant					**Permits**	1595	
38-4-0613	ABER 1	AGD	56	361250	6381500	Open site	Valid	Artefact : -		102158,102229
	Contact	**Recorders**	Mrs.Angela Besant					**Permits**		
37-6-1607	Lochinvar 1	AGD	56	355515	6380960	Open site	Valid	Artefact : 2		99841
	Contact Searle	**Recorders**	Ms.Penny Mccardle					**Permits**	2456,3963	
38-4-0689	AD1	AGD	56	362500	6380800	Open site	Valid	Artefact : 2		101043,102158,102229
	Contact	**Recorders**	Wildthing Environmental Consultants					**Permits**	1741	
37-6-1054	R-1	AGD	56	357900	6381200	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
37-6-1122	ISF 1 Rutherford	AGD	56	357650	6381250	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
37-6-1123	ISF 2 Rutherford	AGD	56	357200	6381200	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
37-6-1124	PAD 1 Rutherford	AGD	56	358280	6384800	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102158,102229
	Contact	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
37-6-1125	ISF 3 Rutherford	AGD	56	357750	6381240	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
38-4-0865	AB PAD 1, same as 38-4-1062	AGD	56	363400	6381800	Open site	Valid	Artefact : 1		100253,100668,100770,100784,102158,102229
	Contact T Russell	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**	2598,2806,2809,2851	
38-4-0866	AB PAD2, same as 38-4-1063	AGD	56	363450	6381000	Open site	Valid	Artefact : 124		100253,100668,100770,100784,101515,102158,102229,102388

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.

Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : 21-0037
Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact T Russell	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**	2598,2809,2851	
38-4-0867	AB PAD 3	AGD	56	363100	6382400	Open site	Valid	Artefact : 1		100253,100770,102158,102229
	Contact T Russell	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**	2806	
38-4-0863	AB Site 1	AGD	56	363044	6382272	Open site	Valid	Artefact : 4		100253,100770,102158,102229
	Contact Searle	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
38-4-0864	AB Site 2	AGD	56	362855	6382216	Open site	Valid	Artefact : 6		100253,100770,102158,102229
	Contact Searle	**Recorders**	Mary Dallas Consulting Archaeologists (MDCA)					**Permits**		
38-4-1062	ABPAD1, same as 38-4-0865	AGD	56	363400	6381800	Open site	Valid	Artefact : -		102158,102229
	Contact	**Recorders**	Ms.Mary Dallas					**Permits**		
38-4-1063	ABPAD2, same as 38-4-0866	AGD	56	363450	6381000	Open site	Valid	Artefact : -		102158,102229
	Contact	**Recorders**	Ms.Mary Dallas					**Permits**		
38-4-1057	Site 1 Open Camp Site	GDA	56	362825	6381909	Open site	Valid	Artefact : 3		102158,102229
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**	2961,3534	
38-4-1058	Site 2 Isolated Find	GDA	56	362865	6381829	Open site	Valid	Artefact : 1		102158,102229
	Contact	**Recorders**	Ms.Penny Mccardle					**Permits**	2961,3534	
38-4-1163	Anambah-ISF2	GDA	56	359783	6381328	Open site	Valid	Artefact : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1164	Anambah PAD 1	GDA	56	359900	6381300	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1165	Anambah PAD 2	GDA	56	360600	6381550	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1166	Anambah PAD 3	GDA	56	360000	6381700	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.
Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 21-0037

Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-1167	Anambah PAD 4	GDA	56	360330	6381350	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1168	Anambah PAD 5	GDA	56	360530	6381420	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1169	Anambah PAD 6	GDA	56	360440	6381870	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1170	Anambah PAD 7	GDA	56	360410	6381950	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1171	Anambah PAD 8	GDA	56	359850	6381370	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
38-4-1162	Anambah-AS2	GDA	56	360643	6381665	Open site	Valid	Artefact : 1		101566,102158,102229
	Contact	**Recorders**	Mr.Giles (dup ID#12832) Hamm					**Permits**		
37-6-1907	R1 (Greta)	GDA	56	357900	6381200	Open site	Valid	Artefact : 4		4119
	Contact	**Recorders**	Ms.Mary Dallas					**Permits**		
37-6-2188	Lochinvar Rail 2	GDA	56	355591	6387760	Open site	Valid	Artefact : 1		
	Contact	**Recorders**	South East Archaeology					**Permits**		
37-6-2219	PAD 2 Lochinvar URA	AGD	56	354720	6381415	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
	Contact	**Recorders**	Mr.Paul Irish,Ms.Mary Dallas					**Permits**		
37-6-2228	LCC1 and PAD	GDA	56	355673	6381234	Open site	Partially Destroyed	Artefact : 15, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Mrs.Angela Besant,Umwelt (Australia) Pty Limited - Individual users,Mr.Kirwan Wi					**Permits**	3936,3963,4694,4697	
37-6-2774	DA2	AGD	56	358270	6387470	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	**Recorders**	Ms.Mary Dallas					**Permits**		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.

Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : 21-0037
Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-1512	MCKEACHIES AS 1	GDA	56	362866	6381792	Open site	Valid	Artefact : 1		103462
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1513	MCKEACHIES AS 2	GDA	56	363031	6381816	Open site	Valid	Artefact : 1		
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1514	MCKEACHIES AS 3	GDA	56	363040	6381566	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1515	MCKEACHIES AS 4	GDA	56	362934	6381456	Open site	Valid	Artefact : 1		103462
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1516	MCKEACHIES AS 5	GDA	56	362825	6381558	Open site	Valid	Artefact : 1		103462
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1517	MCKEACHIES AS 6	GDA	56	362759	6381768	Open site	Valid	Artefact : 1		103462
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1518	MCKEACHIES AS 7	GDA	56	362667	6381839	Open site	Valid	Artefact : 1		
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits	3534	
38-4-1528	McKeachies AS 7a	GDA	56	362667	6381839	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		103462
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits		
38-4-1525	MCKEACHIES AS 3A	GDA	56	363040	6381566	Open site	Valid	Artefact : 1, Potential Archaeological Deposit (PAD) : 1		
Contact	Recorders	GML Heritage Pty Ltd - Surry Hills						Permits		
37-6-2777	Anambah SAC 3	GDA	56	357212	6383869	Open site	Valid	Aboriginal Ceremony and Dreaming : 1, Artefact : 1		
Contact	Recorders	Doctor.Tim Owen						Permits		
37-6-2963	26 Windemere Rd Site 1 (PAD 1)	GDA	56	354426	6380945	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -		
Contact Mindaribba Local Aboriginal L	Recorders	Archaeological Risk Assessment Services (ARAS),Ms.Penny Mccardle						Permits		
37-6-2964	26 Windemere Rd Site 2 (PAD 2)	GDA	56	354305	6381044	Open site	Not a Site	Potential Archaeological Deposit (PAD) : -		
Contact Mindaribba Local Aboriginal L	Recorders	Archaeological Risk Assessment Services (ARAS),Ms.Penny Mccardle						Permits		
37-6-3553	Anambah IF 1	GDA	56	359024	6382274	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.
Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : 21-0037
Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
37-6-3554	Anambah IF 2	GDA	56	358313	6382885	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3555	Anambah IF 8 & PAD 23	GDA	56	358025	6383995	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3556	Anambah IF 9	GDA	56	357717	6384140	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3557	Anambah IF 10	AGD	56	358397	6381819	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3558	Anambah IF 11	GDA	56	358558	6383163	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3559	Anambah IF 12	GDA	56	358575	6383304	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3560	Anambah SAC 1 and PAD 21	GDA	56	358183	6383600	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3561	Anambah SAC 2	GDA	56	357612	6383746	Open site	Valid	Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3562	Anambah SAC 4 and PAD 22	GDA	56	357770	6383996	Open site	Valid	Potential Archaeological Deposit (PAD) : -, Artefact : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3563	Anambah SAC 5 and PAD 20	GDA	56	358246	6383842	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3564	Anambah SAC 6&7 + PAD 24&19	GDA	56	358536	6383837	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -, Stone Quarry : -		
Contact	Recorders	Miss.Diana Cowie						Permits		
37-6-3567	Anambah SAC 10 and PAD 26	GDA	56	358188	6383868	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
Contact	Recorders	Miss.Diana Cowie						Permits		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.
Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
37-6-3568	Anambah SAC 11 and PAD 27	GDA	56	358102	6383978	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3565	Anambah SAC 8 and PAD 28	GDA	56	358491	6383928	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3566	Anambah SAC 9 and PAD 25	GDA	56	358210	6383796	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3569	Anambah SAC 12	GDA	56	357645	6381559	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3570	Anambah SAC 13 and PAD 12	GDA	56	358404	6383034	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3571	Anambah SAC 14 and PAD 15	GDA	56	358068	6383015	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3572	Anambah SAC 15 and PAD 16	GDA	56	358028	6383247	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3573	Anambah SAC 16	GDA	56	358025	6383995	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3574	Anambah SAC 17 and PAD 1	GDA	56	359151	6382591	Open site	Valid	Artefact : -, Potential Archaeological Deposit (PAD) : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3575	Anambah SAC 18	GDA	56	358837	6382360	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3578	Anambah SAC 19	GDA	56	358764	6382070	Open site	Valid	Artefact : -		
	Contact	**Recorders**	Miss.Diana Cowie					**Permits**		
37-6-3579	Anambah SAC 20	GDA	56	358965	6382068	Open site	Valid	Artefact : -		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.
Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref/PO Number : 21-0037
Client Service ID : 578228

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Miss.Diana Cowie					Permits		
37-6-3580	Anambah SAC 21	GDA	56	358568	6381937	Open site	Valid	Artefact : -		
	Contact	Recorders	Miss.Diana Cowie					Permits		
37-6-3581	Anambah SAC 22 and PAD 11	GDA	56	358220	6382935	Open site	Valid	Artefact : -		
	Contact	Recorders	Miss.Diana Cowie					Permits		
37-6-3582	Anambah SAC 23 and PAD 13	GDA	56	358834	6383251	Open site	Valid	Art (Pigment or Engraved) : -		
	Contact	Recorders	Miss.Diana Cowie					Permits		
37-6-3654	Cantwell Rd 1	GDA	56	355173	6381028	Open site	Destroyed	Artefact : -		
	Contact	Recorders	Umwelt (Australia) Pty Limited - Individual users,Umwelt (Australia) Pty Limited -					Permits		
38-4-2043	Lot 1 AS 2	GDA	56	360716	6381487	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS),Mr.Giles (dup ID#12832) Hamm					Permits		
38-4-2044	Lot 1 AS 3	GDA	56	360602	6381498	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS),Mr.Giles (dup ID#12832) Hamm					Permits		
38-4-2045	Lot 1 AS 4	GDA	56	360646	6381665	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS),Mr.Giles (dup ID#12832) Hamm					Permits		
38-4-2046	Lot 1 AS 5	GDA	56	360458	6381733	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS),Mr.Giles (dup ID#12832) Hamm					Permits		

Report generated by AHIMS Web Service on 23/03/2021 for Talei Holm for the following area at Lat, Long From : -32.701, 151.4326 - Lat, Long To : -32.629, 151.5467 with a Buffer of 0 meters.
Additional Info : ACHAR. Number of Aboriginal sites and Aboriginal objects found is 80

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Appendix C

Anambah Rezoning Aboriginal Heritage Report

Godden Mackay Logan
Heritage Consultants

Anambah Aboriginal Heritage

Rezoning Report

Final Report

Report prepared for Stockland

November 2012

Godden Mackay Logan Pty Ltd
ABN 60 001 179 362

Sydney
78 George Street Redfern
NSW Australia 2016
T +61 2 9319 4811

Canberra
2A Mugga Way Red Hill
PO Box 3171 Manuka
ACT 2603
T +61 2 6273 7540

www.gml.com.au

Report Register

The following report register documents the development and issue of the report entitled Anambah Aboriginal Heritage—Rezoning Report, undertaken by Godden Mackay Logan Pty Ltd in accordance with its quality management system. Godden Mackay Logan operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2008.

Job No.	Issue No.	Notes/Description	Issue Date
12-0226	1	Draft report for Stockland review	September 2012
12-0226	2	Report for Aboriginal community review	October 2012
12-0226	3	Final report for land rezoning	November 2012

Copyright

Historical sources and reference material used in the preparation of this report are acknowledged and referenced at the end of each section and/or in figure captions. Reasonable effort has been made to identify, contact, acknowledge and obtain permission to use material from the relevant copyright owners.

Unless otherwise specified or agreed, copyright in this report vests in Godden Mackay Logan Pty Ltd ('GML') and in the owners of any pre-existing historic source or reference material.

Moral Rights

GML asserts its Moral Rights in this work, unless otherwise acknowledged, in accordance with the (Commonwealth) Copyright (Moral Rights) Amendment Act 2000. GML's moral rights include the attribution of authorship, the right not to have the work falsely attributed and the right to integrity of authorship.

Right to Use

GML grants to the client for this project (and the client's successors in title) an irrevocable royalty-free right to reproduce or use the material from this report, except where such use infringes the copyright and/or Moral Rights of GML or third parties.

Contents Page

Executive Summary i

Abbreviations iii

1.0 Introduction 1

1.1 Project Background 1
1.2 Study Area 1
1.3 Project Proposal 1
1.4 Objectives for the Aboriginal Heritage Assessment 2
1.5 NSW Legislation Relevant to Aboriginal Heritage 2
1.5.1 Approach to Aboriginal Heritage Management 4
1.5.2 Due Diligence Approach 4
1.5.3 Reporting Approach 5
1.6 Investigators and Contributors 5
1.7 Endnotes 8

2.0 Archaeological Context 9

2.1 Previous Archaeological Work 9
2.1.1 Previous Archaeological Reports 9
2.1.2 Aboriginal Heritage Information Management System (AHIMS) Search 14
2.1.3 Wider AHIMS Search Results 14
2.2 Landscape Context 15
2.2.1 Geology and Geomorphic Activity 15
2.2.2 Soil Landscape 16
2.2.3 Landforms and Landscape Features 16
2.2.4 Significant View Corridors 16
2.2.5 Hydrology 17
2.2.6 Fauna and Flora 18
2.2.7 Land Use History 18
2.3 Regional Character 21
2.4 Preliminary Archaeological Zoning Plan (AZP) 21
2.5 AIA Non-Stockland Land Predictive Model 22
2.6 Endnotes 32

3.0 Archaeological Field Survey 33

3.1 Survey Sampling Strategy 33
3.1.1 Field Methods 33
3.1.2 Archaeological Potential 34
3.2 Survey Results—Survey Units & Landforms 35
3.3 Survey Results—Aboriginal Sites and Areas of PAD 41
3.4 Survey Results—Aboriginal Landscape Use 48
3.4.1 Hill–Slope Shade Analysis 48
3.4.2 Key View Corridors 52
3.5 Survey Results—Other Aspects 55
3.5.1 Sources of Raw Stone Materials 55
3.5.2 Alluvial Terraces 58

3.6 Analysis and Discussion ... 59
3.6.1 Observed Landform and Aspect ... 59
3.6.2 Soil Conditions (Integrity and Condition) ... 59
3.6.3 Environmental Focus ... 60
3.6.4 Observed Aboriginal sites ... 60
3.7 Endnotes ... 60

4.0 Anambah—Archaeological Research Design ... 61

4.1 Introduction ... 61
4.2 Mechanism for Archaeological Test Excavation ... 61
4.3 Test Excavation Sampling Strategy ... 61
4.3.1 Archaeological Sampling Strategy ... 62
4.4 Endnotes ... 72

5.0 Preliminary Scientific Values and Significance Assessment ... 73

5.1 Preamble ... 73
5.2 Approach to Assessing Aboriginal Heritage Significance ... 73
5.3 Method for Identifying and Assessing Cultural Significance ... 74
5.4 Method for Assessing and Grading Scientific Significance ... 74
5.5 Social or Cultural Significance ... 75
5.6 Historical Significance ... 76
5.7 Scientific Significance ... 76
5.8 Aesthetic Significance ... 79
5.9 Endnotes ... 79

6.0 Impact Assessment ... 81

6.1 The Indicative Layout Plan ... 81
6.2 Approach to Aboriginal Heritage Impact Assessment ... 81
6.2.1 Principles of Ecologically Sustainable Development ... 82
6.3 Impact Assessment ... 83
6.3.1 Proposed Impacts ... 83
6.3.2 Aboriginal Sites that Could be Impacted ... 84
6.3.3 Cumulative Impact ... 84
6.3.4 Conservation of Aboriginal Sites ... 84
6.3.5 AIA Non–Stockland Land Possible Impacts ... 85

7.0 Management, Mitigation & Recommendations ... 87

7.1 Further Heritage Assessment ... 87
7.1.1 Stockland's Landholdings ... 87
7.1.2 AIA Non-Stockland Land Holdings ... 87
7.2 Further Definition of Conservation and Impact ... 88
7.3 Conclusions ... 88

8.0 Appendices ... 89

Appendix A ... 91
AHIMS Search Results ... 91
Appendix B ... 93
RAP Consultation and Participation in the Field Survey ... 93
Appendix C ... 95

Review of Local and Regional Stone Material Sources *95*

Executive Summary

Godden Mackay Logan (GML) Pty Ltd was engaged by Stockland to prepare an Aboriginal Heritage Assessment (HA) for Stockland's land, with a wider desktop assessment for the remainder of the Anambah Investigation Area (AIA), Anambah, NSW. This report forms part of the Environmental Assessment for the study area prepared under the *Environmental Planning and Assessment Act 1979.*

The HA identifies items, places and objects of Aboriginal heritage significance, assesses potential impacts from future development and provides recommendations to ensure that significant heritage items are conserved in the long term. This report will inform the land rezoning and planning process and the preparation of the AIA's future development footprint.

Stockland's land holdings within the AIA comprise six Lots, described in Table A1. The study area is located within the Maitland Local Government Area (LGA) and Gosforth parish, in the County of Northumberland.

Table A.1 Lot and DP numbers comprising the Anambah Investigation Area.

Lot	Deposited Plan	Lot	Deposited Plan
A	431640	6	19925
1	1110433	178	874171
2	1110433	56	874170

This archaeological report is a standalone technical report which provides information about the ongoing investigation of the Anambah study area in relation to material traces of Aboriginal land use as required by the Office of Environment and Heritage's (OEH) guidelines *Applying for an Aboriginal Heritage Impact Permit: Guide for Applicants* (May 2011).

Land history impact mapping was undertaken that assessed the whole study area. This assessment took into account historical activities which could have disturbed and eroded the land surface of the study area. It was found that the whole study area has been subject to vegetation stripping (probably during the 19th century) and that the southern and central thirds have been subject to more intensive agricultural practices, including recent repeated ploughing and cropping. The northern third appears to have been subject to less impact. Agricultural activities would have impacted the integrity and condition of many Aboriginal sites, and areas with potential archaeological deposit (PAD), located across the study area.

Prior to GML's investigations the AIA contained no recorded Aboriginal heritage sites, places or values. In August 2012, field survey of the Stockland landholdings was undertaken by GML and 20 Aboriginal stakeholder representatives, as Stockland wish to proceed to a Section 90 AHIP for their land holdings. The field survey resulted in the recording of 21 Aboriginal sites and 28 areas with PAD within Stockland's landholdings. The remainder of the AIA has been subject to predictive modelling, which would need to be surveyed prior to any further Aboriginal heritage management decisions.

The landscape of the study area could be divided into thirds, where the southern third contained higher hills and the steepest slopes, most with a southerly aspect. This area also possessed the

largest artificial dam, along the southern boundary. The central third also possessed hills and slopes, with greater numbers of water courses. The northern third was, in general, lower in relief, with two hills (in the east and west) between which a large water course flows. These creeks were abutted by elevated flats (terraces), some of which contained evidence for alluvial deposits.

In general it was found that high levels of vegetation cover obscured the ground surface in the southern and central portions of the study area. As such, these area contain few Aboriginal sites (a total of five isolated stone objects were recorded), although a number of areas with PAD were allocated (PAD 1–17). The northern third had a lower grass cover, which combined with erosion cause by animal tracks and water flow, resulted in the identification of Aboriginal stone objects on landforms where such evidence was expected. Twelve stone artefact sites, and four additional isolated finds, were abutted by PADs 18-28.

Management of Aboriginal archaeological sites within the study area was discussed with the Aboriginal stakeholders, Stockland and OEH. Given the low levels of visibility across the study area, archaeological test excavation is warranted. This will be undertaken in accordance with the OEH *Code of Practice* (2010). A test excavation Archaeological Research Design (ARD) has been prepared and is presented as Section 4 of this report. Archaeological test excavation will allow the extent and nature of subsurface deposits to be further determined and should provide additional data for a more detailed significance assessment, and will provide new information that would further inform the planning process.

The preliminary Aboriginal heritage impact assessment and significance assessment, presented in this report, have found that the AIA has the potential to contain relatively intact Aboriginal archaeological deposits. These could provide new information on middle to late Holocene Aboriginal economic and subsistence strategies within the region. The consequence of residential development, within the AIA, will impact a number of areas that possess Aboriginal cultural archaeological deposits. In order to manage and offset this impact, the proponent will be required to undertake the relevant archaeological procedures for recovery of a representative proportion of the deposit. For some locations, an opportunity exists for the in–situ retention of archaeological deposits, either through complete avoidance, or by a process of cover and fill.

To manage Aboriginal heritage within the AIA two Aboriginal heritage reports will be prepared (in addition to this report), in accordance with OEH 2010—the Archaeological Technical Report (ATR) and the Aboriginal Cultural Heritage Assessment Report (ACHAR). These reports will provide a complete review of all Aboriginal heritage work (including field survey [as detailed in this report] and test excavation), along with a record of Aboriginal community consultation, revised significance assessment and impact assessment, and further Aboriginal heritage management requirements, in accordance with the statutory provisions of the *NSW National Parks and Wildlife Act,* 1974 (NPW Act).

Abbreviations

ACHAR	Aboriginal Cultural Heritage Assessment Report
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
ATR	Archaeological Technical Report
AZP	Archaeological Zoning Plan
Burra Charter	Australian best heritage practice reference that provides guidance for the conservation and management of places of cultural significance (cultural heritage places)
CHL	Commonwealth Heritage List
DCP	Development Control Plan
DECC	Department of Environment and Climate Change (now OEH)
DECCW	Department of Environment, Climate Change and Water (now OEH)
DG	Director General
EPA Act	Environmental Planning and Assessment Act, 1979
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
ESD	Ecologically Sustainable Development
EPIs	Environmental Planning Instruments
GML	Godden Mackay Logan
HA	Heritage Assessment
HCA	Heritage Conservation Area
ICOMOS	International Council on Monuments and Sites
LALC	Local Aboriginal Land Council
LEP	Local Environmental Plan
LGA	Local Government Area
NHL	National Heritage List
NPW Act	NSW National Parks and Wildlife Act, 1974
OEH	Office of Environment and Heritage
PAD	Potential Archaeological Deposit
REF	Review of Environmental Factors
SCA	Sydney Catchment Authority
SEPP	State Environmental Planning Policy
SHR	State Heritage Register

1.0 Introduction

1.1 Project Background

Godden Mackay Logan (GML) Pty Ltd was engaged by Stockland to prepare an Aboriginal Heritage (HA) for Stockland's land within the Anambah Investigation Area (AIA), Anambah, NSW (Figure 1.1).

This report forms part of the Environmental Assessment for the study area prepared under the *Environmental Planning and Assessment Act 1979.* The HA identifies items, places and objects of Aboriginal heritage significance, assesses potential impacts from future development and provides recommendations to ensure that significant heritage items are conserved in the long term. This report will inform the land rezoning and planning process and the preparation of the AIA's future development footprint.

The purpose of this report is to present the findings of the archaeological assessment to date, which has determined that the study area possesses Aboriginal heritage archaeological sites, places, objects, landscapes and values, in accordance with the NSW OEH guidelines for Aboriginal heritage assessment (listed below). This report details the results of archaeological field work carried out to date at the study area, including survey carried out under OEH's *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* 2010 (the *Code of Practice*).

This report provides a preliminary significance assessment of the identified archaeological Aboriginal sites, places, landscapes and other values. An impact assessment and management recommendations are provided to assist Stockland with the future responsibilities for the management of Aboriginal cultural heritage within the study area and to inform the rezoning process.

1.2 Study Area

The study area comprises a number of lots and covers an area of approximately 484 hectares (Figure 1.2). The Stockland land holding within the AIA is shown in Table 1.1; in addition the proposed future development will require two pipeline, associated with existing road reserves. The study area is located within the Maitland Local Government Area (LGA) and Gosforth parish, in the County of Northumberland.

Table 1.1 Lot and DP numbers comprising the Stockland landholdings within the Anambah Investigation Area

Lot	Deposited Plan	Lot	Deposited Plan
A	431640	6	19925
1	1110433	178	874171
2	1110433	56	874170

1.3 Project Proposal

The entire AIA entails approximately 484 hectares, with the eventual development proposed to yield approximately 3000 residential lots, along with parks, playing fields, riparian linkages, a school, and a commercial/retail centre.

The development would include all road construction, and would entail substantial earth works and civil works providing for water and sewer servicing, including several sewer pump stations. Civil works external to the site would involve a sewer rising main along Anambah Road to the existing sewer along the New England Highway, as well as water and power connections from the River Road end of the site. These works would primarily be carried out within existing road reserves.

The rezoning being sought for the AIA seeks to rezone the land for urban purposes, facilitating residential development with associated commercial and community uses, and recreation areas. The bulk of the residential zoning is proposed as R1 *General Residential*, facilitating a range of housing types and densities consistent with the objectives of the Lower Hunter Regional Strategy.

The existing 1:100 year flood level within the AIA has driven the need for a tailored approach to particular areas. It is proposed to rezone some areas to E4 - *Environmental Living*, thereby allowing for larger lots to be created, with those large lots comprising an area above the 1:100 level accommodating a building envelope. This strategy enables the flood affected areas primarily to the south east to remain in private ownership, whilst creating large, serviced lots with a flood free building envelope.

1.4 Objectives for the Aboriginal Heritage Assessment

The objectives of this assessment were:

- to understand the number, extent, type, condition, integrity and archaeological potential of Aboriginal heritage sites and places within the study area—based on pedestrian field survey for Stockland's land, and desktop predictive modelling for the remainder of the AIA;
- to determine whether the identified Aboriginal sites and places are a component of a wider Aboriginal cultural landscape;
- to understand how the physical Aboriginal sites relates to Aboriginal tradition within the wider area;
- to prepare a preliminary scientific cultural values assessment for all identified aspects of Aboriginal cultural heritage, as identified within this report;
- to determine how the proposed project could impact the identified Aboriginal cultural heritage;
- to aim to minimise impacts to Aboriginal cultural heritage through sensible and pragmatic site and land management;
- to determine where impacts are unavoidable and develop a series of impact mitigation strategies that benefit Aboriginal cultural heritage and the proponent; and
- to provide clear recommendations for the conservation of archaeological values and mitigation of impacts to these values.

1.5 NSW Legislation Relevant to Aboriginal Heritage

In NSW Aboriginal heritage is principally protected under two Acts:

- the *National Parks and Wildlife Act 1974* (NPW Act 1974); and
- the *Environmental Planning and Assessment Act 1979* (EP&A Act 1979).

NPW Act 1974

The NPW Act provides statutory protection for all Aboriginal 'objects' (consisting of any material evidence of the Indigenous occupation of New South Wales) under Section 90 of the NPW Act, and for 'Aboriginal places' (areas of cultural significance to the Aboriginal community) under Section 84 of the NPW Act. Aboriginal objects and places are afforded automatic statutory protection in New South Wales whereby it is an offence (without the Minister's consent) to harm an Aboriginal object or declared Aboriginal Place.

The NPW Act defines an Aboriginal object as:

> *any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.*

The protection provided to Aboriginal objects and places applies irrespective of the level of their significance or issues of land tenure. Sites of traditional significance that do not necessarily contain material remains may be gazetted as 'Aboriginal Places' and thereby be protected under the NPW Act. However, areas are only gazetted if the Minister is satisfied that sufficient evidence exists to demonstrate that the location was and/or is of special significance to Aboriginal culture.

On 1 October 2010 the mechanisms for the protection and management of Aboriginal heritage places and objects changed with the adoption of the *NPW Amendment (Aboriginal Objects and Places) Regulation 2010.*

New offences relating to the harm to, or desecration of, an Aboriginal object or declared Aboriginal Place were introduced. The definition of 'harm' now includes to destroy, deface, damage or move an Aboriginal object or declared Aboriginal Place. The former Department of Environment, Climate Change and Water (DECCW—now the Office of Environment and Heritage [OEH]) has stated:

> *The most significant change is the introduction of tiered offences and penalties. Offences committed with knowledge, in aggravating circumstances or in relation to an Aboriginal Place will attract higher penalties than previously. There is a new strict liability offence of harming Aboriginal objects and of harming or desecrating Aboriginal Places.*[1]

The strict liability offence of harming Aboriginal objects has a number of defences. The two defences relevant to the proposed development include the statutory defence of due diligence through complying with an adopted industry code or compliance with the conditions of an Aboriginal Heritage Impact Permit (AHIP).

The potential for Aboriginal objects, sites, places and/or values within the study area and whether the proposed development may impact on such objects has been assessed and the results presented in this report.

EP&A Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) provides a statutory framework for the determination of development proposals. It provides for the identification, protection and management of heritage items through inclusion in schedules to planning instruments such as Local Environmental Plans (LEPs) or Regional Environmental Plans (REPs). Heritage items in planning instruments are usually historic sites but can include Aboriginal objects and places. The EP&A Act requires that appropriate measures be taken for the management of the potential archaeological

resource by means consistent with practices and standards adopted in meeting the requirements of the National Parks and Wildlife Act 1974.

The study area is located within Maitland City Council and comes under the following the Maitland Local Environmental Plans 2011. There are currently no listed heritage items in the study area.

1.5.1 Approach to Aboriginal Heritage Management

In order to administer the NPW Act 1974 and EP&A Act 1979, the OEH has issued a series of best practice guidelines and policies. The applicability of these depends upon the approval mechanism for a project. The current rezoning proposal will be assessed and granted approval Part 3 of the EP&A Act 1979. Therefore the approach to the preparation of this document was based on the following current best practice guidelines:

- DECC *Guide to Determining and Issuing Aboriginal Heritage Impact Permits* (*2009*);
- DECC *Operational Policy: Protecting Aboriginal Cultural Heritage* (*February 2009*);
- DECCW *Aboriginal cultural heritage consultation requirements for proponents 2010. Part 6 National Parks and Wildlife Act 1974 (April 2010)*;
- DECCW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (13 September 2010);*
- DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (24 September 2010);*
- *OEH Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (April 2011); and*
- The *Australia ICOMOS Burra Charter 1999* (Burra Charter).

1.5.2 Due Diligence Approach

The OEH adheres to a code of practice guideline that defines a 'due diligence' approach to Aboriginal heritage: DECCW *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (13 September 2010).* This guideline is designed to assist individuals and organisations to exercise due diligence when carrying out activities that may harm Aboriginal objects, and/or Aboriginal Places, and to determine whether they should apply for consent in the form of an AHIP.

The *Due Diligence Code of Practice* sets out the reasonable and practicable steps which individuals and organisations need to take in order to:

- identify whether or not Aboriginal objects are, or are likely to be, present in an area;
- determine whether or not their activities are likely to harm Aboriginal objects (if present); and
- determine whether an AHIP application is required.

The OEH has defined due diligence thus:

> *Due diligence is a legal concept describing a standard of care. Exercising due diligence means turning your mind to the likely risks of your proposed course of action. It is not enough to perform activities carefully. Due*

diligence requires consideration of your obligations under, in this case, the NPW Act, and the consideration and adoption of a course of action that is directed towards preventing a breach of the Act.

In the context of protecting Aboriginal cultural heritage, due diligence involves taking reasonable and practicable measures to determine whether your actions will harm an Aboriginal object and if so avoiding that harm.[2]

The steps that are required to follow the due diligence process are:

- searching the Aboriginal Heritage Information Management System (AHIMS);
- checking for landscape features which may indicate the presence of Aboriginal objects;
- strategies to avoid harming Aboriginal objects; and
- desktop assessment and visual inspection to confirm the presence of Aboriginal objects.[3]

In preparing this report, GML complied with the guidelines set out in OEH *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (13 September 2010).* The extent of land covered by the due diligence process is described as the study area, see below.

1.5.3 Reporting Approach

This archaeological report is a standalone technical report which provides evidence about the material traces of Aboriginal land use that is integrated with the other findings from the assessment of Aboriginal heritage to support the conclusions and management recommendations in the ACHAR.

This report has been prepared following the requirements for reporting as established in DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (24 September 2010).*

1.6 Investigators and Contributors

This report has been prepared by the following GML personnel, with input from the local Aboriginal community.

Table 1.2 Investigators and Contributors

Person (Qualification)	Affiliation	Role
Dr Tim Owen (PhD Aboriginal archaeology, BSc [Hons] International Archaeology)	GML	Primary author, project director
Diana Cowie (BA [Hons] Archaeology and Palaeoanthropology)	GML	Primary author, project manager
Natalie Vinton (BA [Hons] Archaeology and Palaeoanthropology)	GML	Review of the ARR

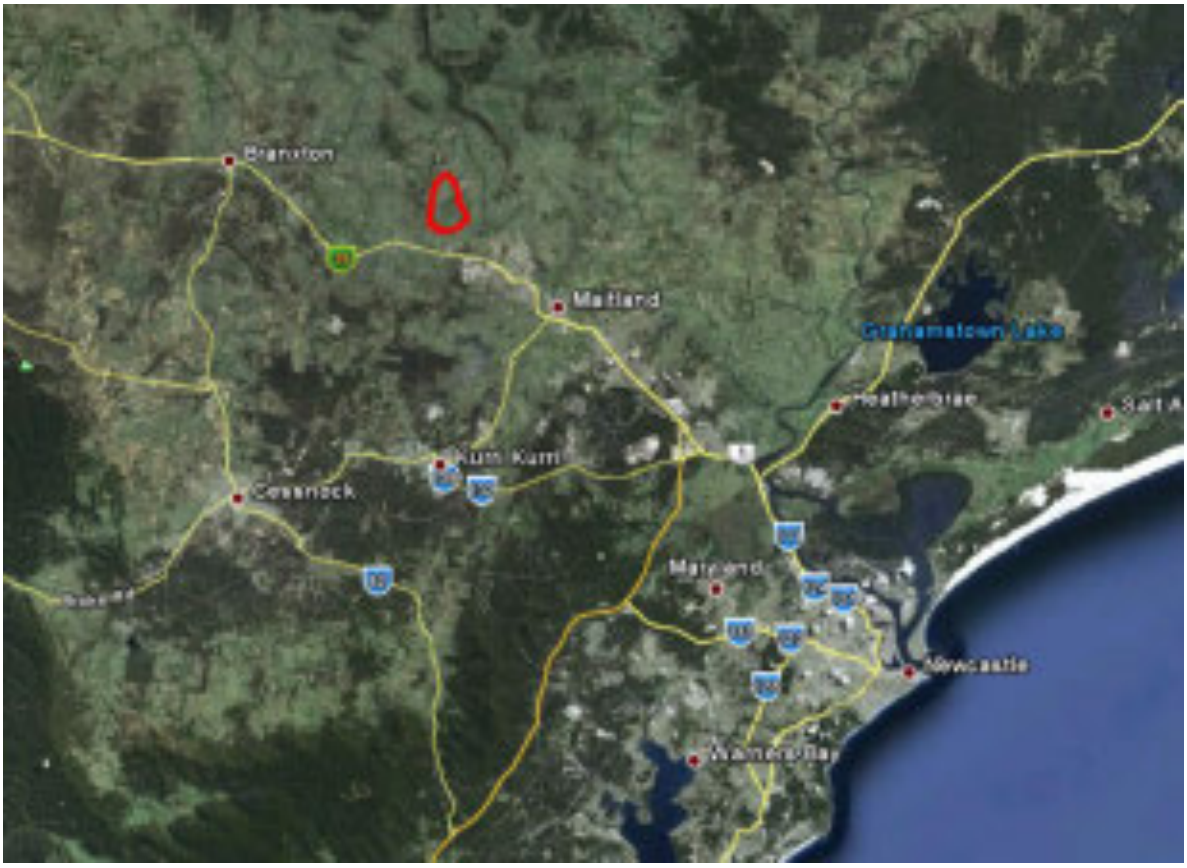


Figure 1.1 General location of study area, shown in red (Source: Google Earth 2012)

Figure 1.2 The Anambah Investigation Area and Stockland development area. (Source: GML 2012, over Google Earth aerial)

1.7 Endnotes

1 DECCW 2010. NPWS Act 1974. *Fact sheet 1*. September 2010.

2 DECCW. 24 April 2009. *Due diligence guidelines for protection of Aboriginal objects in NSW. Accessed Online.*

3 DECCW 2010. NPWS Act 1974. *Fact sheet 2*. September 2010.

2.0 Archaeological Context

In line with OEH reporting requirements[1], this section provides a review of previous archaeological work, the landscape context, regional character and an Aboriginal heritage predictive model.

2.1 Previous Archaeological Work

The purpose of this section is to synthesise available information from previous archaeological and ethno–historical studies to provide a context and baseline for what is known about Aboriginal cultural heritage in the subject area.

2.1.1 Previous Archaeological Reports

A literature review of the NSW OEH library (and additional reports held by GML) was undertaken to understand the broader region's archaeological patterning. This review was targeted to those reports relevant to the study area. A review of key reports is provided, in chronological order, below. Figure 2.1 provides an indication of the localities of these studies.

Jill L. Ruig Archaeology Consultant 1997[2]

In 1996 Jill L Ruig Archaeology Consultant undertook a test excavation of the southern areas of Portions 62 and 63 located at Penn Park 1, Lochinvar in the Parish of Gosford, County Durham (~1.2 km south of the study area). The test excavations were located within 30m either side of the creek running through the site. The test excavation comprised two 50m parallel transects separated by 10m on either side of the creek, with test units of 100cm by 25cm spaced every 5m along each transect, totalling 44 test units excavated.

The excavations uncovered two artefacts from two separate trenches on the northern side of the creek. It was concluded in the report that the site was of low Aboriginal archaeological significance and that the developer should apply for consent to destroy the Penn Park 1 prior to development.

Mary Dallas Consulting Archaeologists 1997[3]

In 1997 Mary Dallas Consulting Archaeologists produced a report for the archaeological survey undertaken of Lot 71, DP 573183, part Portions 59, 20A and 69. The survey area consisted of 30ha 10km west of Maitland in Rutherford, Parish of Gosford, County of Northumberland (immediately to the south of the study area).

Prior to the survey no sites had been recorded in the study area. The report aimed to identify, record and assess Aboriginal sites in the study area while concurrently assessing the impact a proposed development would have on the sites, determining the significance of the sites and advising on the mitigation and management of sites.

The study identified the following:

- one exposed open artefact scatter of four artefacts on the western edge of a dam;
- two isolated finds - one at the headwaters of a creek below a low spur, the other identified during a surface scrape; and
- a Potential Artefact Deposit (PAD) located in an aggrading alluvial intermittent creek deposit.

The report suggested that likely locations for sites were along flatter ground such as on ridge crests and along creek flats. The report suggested that a full archaeological survey was needed before the development of the site.

Mary Dallas Consulting Archaeologists 2003a[4]

In 2003 Mary Dallas Consulting archaeologists (MDCA) produced an archaeological assessment for Lot 2 in DP 812143, Blue Gum Drive. The survey area covered 12.7 hectares approximately 1km north-west of where Aberglasslyn and Oakhampton Roads intersect (~2.5 km east of the study area). The objective of this assessment was to identify new and previously recorded sites.

A previous archaeological investigation was undertaken in the area in 2001 by Insite Heritage. This previous survey identified site #38-4-0611, consisting of 7 artefacts and it was acknowledged that the area possessed archaeological sensitivity. The survey undertaken by MDCA did not relocate the site 38-4-0611 or identify new archaeological sites and/or artefacts as the visibility at the time was less than 1%.

The assessment concluded that preliminary archaeological testing for the site was required and that this would help to identify if further excavation and/or monitoring would be needed.

Mary Dallas Consulting Archaeologists 2003b[5]

Also in 2003 MDCA assessed Lot 51 in DP 840643, an area of 12 hectares was situated on the western side of Aberglasslyn Road, approximately 1.2km from the intersection with the New England Highway (~4 km east of the study area). The survey objective was to identify, record and assess any archaeological evidence for past Aboriginal visitation.

The study area consisted of a central spur ridge, gentle slopes and minor watercourses. The study area had been previously surveyed by Insite Heritage in 2002 with no Aboriginal sites and/or artefacts identified. Likewise, the survey undertaken by MDCA did not identify any sites and/or artefacts. Ground visibility was identified as low and thus contributed to the lack of detectable sites.

The assessment concluded that preliminary archaeological testing for the site was required and that this would help to identify if further excavation and/or monitoring would be required.

Mary Dallas Consulting Archaeologists 2004[6]

In 2004 MDCA conducted an assessment to locate, record and assess any Aboriginal archaeological evidence for past Aboriginal occupation in a 131.01ha area 10km north of Maitland in Aberglasslyn. The subject site was situated between Aberglasslyn Road and the Hunter River approximately 2km north of the New England Highway (~4 km east of the study area). It included Lots 80 and 81 of DP 524028, Lot 41 of DP 611238, Lot 11 of DP 1042562 and Portion 2 of DP 160043 in the parish of Gosforth, County of Northumberland.

The study separated the area into three topographic criteria. Survey Unit 1 consisted of a ridgeline above the Hunter River and included uppermost reaches of drainage lines. Survey Unit 2 was an area of ridge slopes between the level ridgelines and the lagoon, while Survey Unit 3 comprised the areas on the margins of lagoons. The survey identified two open artefact scatters (AB Site 1 and 2) and one isolated find (ABisf 1). All finds were located in the northern section of the survey area and in areas of disturbance. The survey also identified three PADs, labelled PAD 1-3. PAD 1 was identified on the ridgeline between Survey Units 1 and 2, while PADs 2 and 3 were identified on the margins of lagoon zones.

The assessment recommended archaeological test excavation for AB PAD 1 and 2 in order to accurately assess the need for salvage excavation and/or monitoring. AB Site 1, 2 and AB PAD 3 were not going to be impacted by the development and thus no further archaeological work was required. A Section 90 permit for ABisf 1 was required to destroy/relocate the artefact on site.

Giles Hamm Cultural Heritage Consultant 2004[7]

The Archaeological Risk Assessment Report developed by Giles Hamm Cultural Heritage Consultant (GHCHC) in 2004 aimed to assess the Aboriginal potential, determine if the proposed activity would damage Aboriginal objects, and provide cultural heritage recommendations for the land identified as Lots: 1, 2, 10, 12 Part of 15, 1411 and 1412, Aberglasslyn Road, Aberglasslyn (~3.5 km east of the study area).

The survey area was divided into two different sample areas. Transect 1 included land forms of simple slope/ridge, drainage channel and gentle-mid slopes. Two sites were identified within Transect 1. Site 1 consisted of three stone artefacts on the edge of a dam drainage line, while Site 2 was an isolated find similarly located on the edge of a dam feature. Transect 2 consisted of land form units of ridge crests/simple slopes. No sites and/or artefacts were identified within this transect.

The surveyed areas were given an overall low level of archaeological significance while identified as having Aboriginal heritage potential. A re-zoning proposal with all sites and artefacts mapped was recommended for the area.

Mary Dallas Consulting Archaeologists 2006[8]

In 2006 MDCA developed a research design to apply for a s87 Permit for AHIMS PADs 38-8-0865 and 38-8-0866. The research design sought to determine through excavation if subsurface artefacts were present, characterise the archaeological deposits encountered, identify further requirements and provide mitigation recommendations.

The excavation methodology consisted of a machine grader stripping the topsoil, up to 20-30cm in depth across 100m transects ‘several meters wide’. Every 20m, 10x10L buckets were sample sieved. PAD 1 was considered to have sufficient farming and dwelling soil disturbance in areas to destroy any Aboriginal heritage features/artefacts. The extent of PAD 1 was 700mx200m with areas of soil destruction limited to former farming and dwelling building areas. PAD 2 consisted, like PAD 1, of localised subsurface disturbance in association with farm tracks and dams. The extent of the PAD was approximately 600mx300m. Some areas of PAD 2 were located within a flood zone and were therefore not going to be affected by the development. No mitigation measures were recorded as the report was an application for a s87 Permit.

McCardle Cultural Heritage Pty Ltd, 2007a[9]

In 2007 MCH produced an assessment report for an area 38.6ha, three kilometres north of the Maitland CBD and comprising Lots 12 DP 530358, Lot 2 DP 1080705, Lot 2 DP 1067060, Lots 1411 and 1412 DP 717879 and Lot 22 DP 841959 (~3.5 km east of the study area). The assessment aimed to develop a predictive archaeological statement based on data searches and previous archaeological works. The assessment also aimed to identify impacts in relation to known archaeological sites in the study area.

The site was previously surveyed by MDCA in 2004 with PAD 1 and PAD 2 being identified. The survey was conducted at the site by two persons on foot spaced 5-10 metres apart. Four survey

units were identified for survey. No new sites were identified and the two previous PADs 1 and 2 were not relocated.

It was concluded that no development works would affect PADs 1 and 2. A s90 Permit was recommended for collection of the artefacts previously identified at PADs 1 and 2.

McCardle Cultural Heritage Pty Ltd, 2007b[10]

In 2007 MDH undertook test excavations for PADs 1 and 2 for the abovementioned site. The aim of the test excavation was to determine the presence of subsurface artefacts as well as the vertical and horizontal extent of the PAD. The location of test units was guided by the areas of development that would disturb the PAD and excavated in 50cmx50cm shovel test pits spaced at 5m intervals.

One artefact was recovered at a depth of 15cm in Pit 2 of PAD 2. Both PAD 1 (located on a crest) and PAD 2 (located on a slope) were considered to have disturbed soil profiles resulting from past land uses and bioturbation. It was recommended that if any further artefacts were identified during development, an archaeologist would need to be notified in order to prepare a s90 Permit for the site.

Mary Dallas Consulting Archaeologists 2008[11]

In February and March 2008 MDCA partially salvaged Aboriginal Campsite 1 (AHIMS #38-8-0866) that was identified in 2007 during test excavations located on the southern side of Oakhampton Road above Oakhampton Swamp at Aberglasslyn, near Maitland. The aim of the subsurface investigation was to identify the areas of dense archaeological concentrations in AB Campsite 1; to understand how the campsite was used by Aboriginal people; retrieve, if possible, a dateable assemblage; and to undertake a comparison with stone assemblages and behaviour patterns from other sites within the area.

The staged salvage excavations consisted of 47 1mx1m squares of which, 36 were within a contiguous area. A total of 1111 artefacts were retrieved during the salvage excavations. Two working floors were identified at the site with 28 backed artefacts identified in the salvage excavation and 1 core recovered in the testing phase. A small number of scrapers were recovered resulting in a low diversity of artefacts at the sampled salvaged area and thus uncharacteristic for the wider region.

It was concluded AB Campsite 1 was indicative of a small campsite with frequency of site use not distinguishable in the archaeological record. No radiocarbon dates were recovered for the site.

Giles Hamm Cultural Heritage Consultant 2008[12]

In 2008 Giles Hamm Heritage Consultant produced a report to determine the Aboriginal Heritage constraints for the proposed re-zoning for the Anambah Rd, Anambah site, Lot 71, DP 714785 (~0.5km east of the study area). This was carried out by reviewing all available Aboriginal Cultural Heritage works identified for the area while undertaking an archaeological risk assessment for the Aboriginal heritage places identified.

Giles Hamm identified 34 sites within a 3km radius of the study area boundaries. The survey undertaken identified 3 Aboriginal objects and 8 PADs. It was acknowledged that the artefacts were spread across elevated landforms associated with ridge crests and exposed primarily due to erosional processes such as ploughing.

The report found that the study area provided low levels of Aboriginal occupation and was ultimately considered to have low significance. During the consultation process with Aboriginal stakeholders it was identified that a conservation buffer zone around parts of the Anambah lagoon be established to protect Aboriginal heritage resources. Further, the report stated that due to the lack of knowledge in the area, arguments for archaeological excavation were warranted if development went ahead.

McCardle Cultural Heritage Pty Ltd 2011[13]

In 2011 McCardle Cultural Heritage Pty Ltd undertook a due diligence assessment of the Anambah Release Area (within the current study area), to identify areas of Aboriginal cultural heritage and determine possible impacts. Six areas of PAD were identified, in association with the streams within the study area.

The draft Indigenous Archaeological Due Diligence Assessment produced by McCardle Cultural Heritage Pty Ltd (MCH) in 2011 made reference to an archaeological test excavation and an archaeological assessment undertaken by MCH in 2005 and 2009 respectively.

MCH 2005

The excavations were undertaken between *'the southern side of the new England HWY, running south down Station Lane, west along Freeman Drive, across Lochinvar Creek and back onto the New England HWY at Occupation Lane'* (MCH, 2011). The excavations were undertaken for the construction of a sewer main. It was identified that three PADs (PAD 2, 3 and 5) required excavation. Geomorphological analysis of PADs 2 and 3 identified that these sites were on an alluvial flood plain and not conducive of past occupation. The excavation at PAD 5 uncovered 2 artefacts within a disturbed context. It was deemed no further excavation at any of the sites was required and a consent to destroy permit was considered appropriate.

MCH 2009

MCH undertook a Preliminary archaeological assessment for a site 282.26Ha on the New England HWY opposite the Rutherford Aerodrome. The study area had been identified as cleared for grazing with few remnant vegetation areas. The study area was identified as having two major drainage lines running SE toward Wentworth Swamp 2km SE of the study area.

During the survey a total of 10 sites were identified. It was concluded an S87 was required for sites R11, R15, R16, R17, R18, R19 R110 and PADs 1, 2 and 3 prior to any development works; whereas a S90 consent to destroy was considered appropriate for sites R12, R13 and R14.

Godden Mackay Logan 2012[14]

In 2012 GML undertook archaeological stripping of the top soil at McKeachies Run (~3.5km east of the study area), under an AHIP issued from OEH. Two sites had been previously identified within the study area, with a further seven sites identified during the top soil stripping. No impact to the newly identified sites was permitted by the existing AHIP and therefore a new AHIP would be required for these sites. A Research Design for further staged archaeological investigation was prepared for the site to allow investigation and salvage of artefactual material within the study area.

2.1.2 Aboriginal Heritage Information Management System (AHIMS) Search

A search of the OEH AHIMS database, for an area 1km surrounding and covering the study area, was undertaken on 30 April 2012. The results of the search are provided in Table 2.1. The complete results of the AHIMS search are provided in Appendix A. The search identified 17 recorded Aboriginal sites within a 1km radius around the site. The registered sites were predominately isolated finds and Potential Archaeological Deposits (PADs), as shown in Table 2.1.

Table 2.1 Results of the AHIMS search

Site Feature	Frequency	Percentage
Isolated Find	8	47%
Potential Archaeological Deposit	9	53%
Total	17	100%

2.1.3 Wider AHIMS Search Results

In addition, a wider search of the AHIMS database was undertaken to encompass a greater area and hence provide greater information regarding previously identified Aboriginal sites in the vicinity of the study area. A total of 46 AHIMS sites (with an additional 2 duplicate records, not included in the following analysis) have been recorded in an area of approximately 20km by 20km, offset to the east over the study area (Figure 2.2). Table 2.2 shows isolated finds and PADs were the main site types identified in the region, although larger artefact scatters (of two or more artefacts in a localised area) and grinding grooves have also been recorded in the area.

Table 2.2 Results of the wider AHIMS search

Site Feature	Frequency	Percentage
Isolated Find	23	50%
Artefact Scatter	7	15%
Grinding Groove	2	4%
Potential Archaeological Deposit	14	31%
Total	46	100%

2.1.3 Summary of AHIMS Records

The AHIMS data, Aboriginal site records and the artefact patterning indicates that PADs and isolated stone artefacts dominate the archaeological record. Although these sites may be identified on any landform, such sites appear to be predominantly recorded on ridge crests and creek flat and swamp bank landforms.

The density of sites on ridge crests may be due to a preference of Aboriginal people to manufacture tools and use stone objects at sites with clear views of the surrounding landscape, while the patterning of recorded sites on alluvial flats may be due to a need to inhabit areas close to water sources.

Sites are clustered to the south of the Hunter River, with no sites recorded on the northern side of the river (within the area searched on AHIMS), or within the Anambah Investigation Area itself. It is

important to note that this absence of sites should not be taken to indicate a lack of past Aboriginal activity or occupation within these areas, but rather reflects a lack of detailed archaeological investigation over this land. Many of the previously recorded sites have been identified based on development pressures of specific parcels of land and therefore 'clusters' of sites are recorded—however this should be recognised as a product of increased development and assessment, rather than an actual trend in the distribution of sites.

In conclusion the patterning of previously recorded Aboriginal sites provide specific indication that sites within the region are likely to be identified on ridge lines or crests and on alluvial flats. Data from both the reports and the AHIMS searches identify a lack of current research within the study area. Thus, although the AHIMS searches highlight two main landforms as indicative of Aboriginal sites, increased research and investigation within the area may highlight other landforms as areas that may yield higher concentrations of Aboriginal sites.

2.2 Landscape Context

The purpose of this section is to provide contextual information for use in developing a predictive model relating to the remains for evidence of Aboriginal occupation and use of the study area. Interactions between people and their surroundings are of integral importance in both the initial formation and the subsequent preservation of the archaeological record. The nature and availability of resources including water, flora and fauna and suitable raw materials for the manufacture of stone tools and other items had (and continues to have) a significant influence over the way in which people utilise the landscape.

Alterations to the natural environment also impact upon the preservation and integrity of any cultural materials that may have been deposited whilst current vegetation and erosional regimes affect the visibility and detectability of Aboriginal sites and objects. For these reasons, it is essential to consider the environmental context as a component of any heritage assessment.

2.2.1 Geology and Geomorphic Activity

Anambah sits within the primary geology of a number of formations which are of the Permian period and are as follows: Maitland Group, consisting of the Muree Sandstone which is made up of sandstone, conglomerate and siltstone; the Greta coal measures which are made up of lenticular conglomerates, sandstone, shale, splitting coal seams; and the Farley formation consisting of sandstone, mudstone, siltstone, shale and erratics. (Scanned maps 1966 and Matthei, 1995: 108-111).

The primary mode of geomorphological activity within the study area is minor to moderate sheet erosion. This is associated with minor gully erosion and in areas where ground cover has been removed (Matthei, 1995: 108-111).

The study area is located 22 km north west of the Stockton Bight and its complex series of Pleistocene and Holocene dunes. Over time these dunes have slowly shifted and reformed, covering some former land surface primarily with aeolian (i.e. windblown) sands. Such movement had the potential to bury surface-based Aboriginal sites of the period deep below the modern surface level. As such, the identification of surface-based Aboriginal sites on the strand plain dunes, as recorded by recent heritage studies (GML 2010), can be attributed to either Aboriginal sites that have been formed in the past few hundred years or a disturbance impact such as dune destabilisation, erosion or other sand sheet modification (such activities either revealed a buried surface or brought up material from lower in the dune's stratigraphy).

Ancient aeolian sand sheets, which are sometimes buried, have been identified within the Hunter Valley region, including one located approximately 14km south of the current study area and another 55km north west of the study area. These sand sheets have been dated at approximately 85,000 to 80,000 years of age. These sand sheets may extend from the Stockton Bight in the south east right through the study area and continue further inland. These sheets have been identified with Aboriginal archaeological material of a later date.

GML has prepared a review of local and regional stone material sources, near to Anambah. This review is presented in Appendix D.

2.2.2 Soil Landscape

The study area is located within three soil landscapes as defined by Kovac and Lawrie[15]—the Hunter, Branxton and Rothbury landscapes (Figure 2.3).

The Hunter soil landscape is located within the Hunter River floodplain and comprises soils formed in alluvium. Topsoils are generally brownish black clay loam overlying medium clays. Minor erosion occurs on water course banks, and the landscape is an aggrading one. Within the study area, the Hunter soil landscape is located in the south eastern portion.

The Branxton soil landscape comprises undulating low hills and contains small drainage lines. A lack of erosion is associated with this landscape type. Topsoils consist of a brown sandy loam overlying a light brown medium clay with yellow and grey mottles, with a depth of approximately 1m to bedrock. The Branxton soil landscape is located in the central portion of the study area.

The Rothbury soil landscape covers the majority of the north western portion of the study area and comprises undulating to rolling hills. Minor sheet erosion occurs on slopes, while moderate sheet and gully erosion occurs on lower slopes. The topsoil comprises a dark brown fine sandy loam, overlying a brown fine sandy to clay loam, and the subsoil has a clear change to reddish brown medium clay with a depth of approximately 90cm to bedrock.

2.2.3 Landforms and Landscape Features

The Anambah release area is approximately 600 metres south of Gosforth, approximately 1.1km north of the Maitland Airport and approximately 1.18km north of the New England Highway. Elevations within the study area are generally between 20-120m with slopes between 0-10% and local relief generally between less than 10m and up to 40m. Drainage lines, ranging from ephemeral first order streams, up to more permanent third order streams, are a common feature and are generally found at intervals of 200-1,000m.

The study area presents a series of landforms with localised views to significant places in the vicinity, and a series of raised flats and ridgelines adjacent to lower order water courses (Figure 2.4). Given the study area possesses an erosional landform pattern, containing some areas identified as aggrading landscapes, it is likely that archaeological features over the majority of the study area may no longer be in their original context or form.

2.2.4 Significant View Corridors

The study area has some significant view corridors, particularly from the crests of the hills within the study area. The Sugarloaf Ranges (Figure 2.5) and Mount Sugarloaf (Figure 2.6), located approximately 22km south of the study area, are clearly visible. The gently rolling hills of the study

area and nearby surrounds are easily viewed from these crests, suggesting an ideal vantage point for Aboriginal people in the past.

Further view analysis has been undertaken as a component of the field survey (Section 3.4.2).

2.2.5 Hydrology

The availability of water has significant implications for the range of resources available and the suitability of an area for human occupation. The study area is positioned within the Hunter River catchment area. The study area is located within the periphery of a significant network of high order creeks and a swamp. Stream order has been identified based on Strahler's 1957 stream order classification.

Creeks within the study area flow to the east across the proposed development site, toward the Hunter River and the swamp. A number of lower order unnamed streams are present within the study area. Second order streams within the study area are fed by a number of first order ephemeral creek lines. Several of these second order streams have been dammed for agricultural purposes, with one dam of significant size located in the south of the study area.

For ease of reference, the drainage lines and watercourses within the study area have been labelled consecutively from north to south, using the prefix 'ADL' (Anambah Drainage Lines), and are shown in Figure 2.4.

Stream order for the drainage lines within the study area has been identified based on topographic features. It is noted that the Department of Water does not classify all of these streams as watercourses.

- ADL1 is located in the northern most section of the study area and comprises a first order stream which has been dammed in two places. The stream drains from north to south, into the large wetland located adjacent to the eastern boundary of the study area.
- ADL2 is a third order stream located south of ADL1 and drains from west to east into ADL1. ADL2 has been dammed in the western most portion of the study area.
- ADL3 comprises two first order streams which converge to form a second order stream. It is located south of ADL2 and drains from west to east into the large wetland located adjacent to the eastern boundary of the study area. A small dam is located on ADL3 outside of the study area.
- ADL4 is a second and third order stream complex which has been dammed outside the study area. It drains from west to east into the large wetland located adjacent to the eastern boundary of the study area. It becomes a third order stream where ADL6 drains into it.
- ADL5 is a short first order stream located on the eastern boundary of the study area and drains from south west to north east into the large wetland located adjacent to the eastern boundary of the study area.
- ADL6 is a second order stream which drains from south west to north east, into ADL4, at which point ADL4 becomes a third order stream. ADL6 has two small dams located on it, and is found in the south western portion of the study area.

- ADL7 is a small first order stream located on the eastern boundary of the study area and flows into the large wetland located adjacent to the eastern boundary of the study area.
- ADL8 is a second order stream located in the southern portion of the study area. It has been dammed to create the largest dam in the study area.

These lower order streams would have been ephemeral in nature and only flow in periods of wet weather. Clearing and other agricultural use of the surrounding land would have led to additional erosion and destabilisation of the banks of these water courses, as would seasonal flooding.

Whilst these creeks individually have a relative small stream order, most flow into the large wetland located adjacent to the eastern boundary of the study area. This wetland, which becomes a fourth order water course as it drains from the study area, is large, wide and could have been a focus for Aboriginal activities, when water was a consideration.

2.2.6 Fauna and Flora

Native vegetation in the study area would have comprised dry sclerophyll forest, including spotted gums, red ironbark and swamp oak in drainage lines. Forest red gums, stringybarks and paperbarks would also have been present, along with smooth and rough barked apples, white mahogany, red bloodwood, blackbutt, grey gum, Sydney peppermint, *Casuarina*, *Persoonia* and *Acacia* spp[16]. The general location of the study area within the Hunter River Catchment area mean Aboriginal populations occupying this area had access to a diverse range of resources and environments.

With the subject land being reasonably close to the Hunter River, a range of faunal and plant resources would have been available to the Aboriginal inhabitants. Such resources include small mammals, kangaroo, fish, berries, bark and other plant resources.

2.2.7 Land Use History

A determination of land use history based on aerial photograph analysis (Figures 2.7 to 2.9) provides an indication of historical impacts with reference to the study area's soil horizons. Impacts that have resulted in a substantial loss of soils will have reduced the study area's soil condition (summarised as good, moderate and poor); whilst those that have 'moved' soils, will have reduced the study area's soil integrity (summarised as high, moderate and low). In terms of determining archaeological potential it is important to understand both condition and integrity.

1965 Aerial

The 1965 aerial (Figure 2.7) shows the study area to be generally devoid of canopy vegetation (trees), with a number of dams located across the main water courses and a crop covering the lower two thirds of the study area.

Prior to 1965 the study area was subject to holistic vegetation stripping and low grade agricultural practices, possibly including cropping and animal grazing. The date and mechanism for vegetation (ie tree) removal is not known, but involves either chain ripping (that results in a high level of ground disturbance) or cut and burn, which results in very low levels of ground disturbance, albeit with localised carbon deposits. In general early vegetation stripping was undertaken by cut and burn, although the level of impact from this activity cannot be ascertained until archaeological test excavation is undertaken. Only a few large paddock trees remain within the study area. They are primarily located in the northern area.

The second major, localised, impact (modification) in 1965 appears to be the construction of dams across a number of creeks within the study area. These have been located at strategic landscape locations, where soil could be easily excavated to construct dam banks and where water run-off from multiple creeks occurred. In the northern third of the study area there is one small dam, whereas the southern third contains three small dams and a large dam, which forms the southern boundary of the study area.

Immediately outside the northern boundary (but within the AIA) a small farm complex is present; however the row of trees present along the NE boundary (see the 1994 aerial) is not present in 1965. The farm complex appears to comprise of a house and outbuilding. Two 'patches' of dark vegetation are associated with this farm complex; the nature and impact of these patches cannot be determined through this analysis.

Of greatest interest to this analysis is the pattern of cropping across the study area. The study area can be divided into roughly equal thirds—distinctly divided by fence lines, which create straight boundaries between these thirds. In 1965 only the central (middle) third contains a crop. Neither the northern or southern thirds appear to be cropped at this time. The crop has been planted up to the margins of the open depressions associated with the creek lines; very little 'flat' landform has remained crop free.

1994 Aerial

The 1994 aerial (Figure 2.8) shows a similar patterning within the study area to that in 1965. Of note are the disappearance of some mature trees from the northern third of the site and the construction of a few additional small dams. The location of all major creeks does not appear to have changed and no substantial erosion or other impact appears to have occurred between 1965 and 1994.

2004 Aerial Photograph

The 2004 aerial (Figure 2.9) shows that no further dams or significant disturbance has occurred since 1994. However, the pattern of cropping is very distinct, with a dark green crop located in the southern third and a middle green crop across the central third. As in 1965, the northern third does not appear to have been subject to cropping. The 2004 crop has, in general, been planted up to the margins of each creek, although a slightly larger buffer has been allowed between the edge of the crop and the start of each open depression landform, along the creek margins.

Table 2.3 Overview of land use history and consequence of impacts

Activity	When	Extent, Impact and Consequence to Condition and Integrity	Level of Impact
Vegetation stripping	Before 1965	Across the whole study area. A few mature trees remain in the northern third. It is assumed that vegetation stripping was undertaken by cut and burn rather than ripping. Therefore the impact on soil horizons should not be high. Condition of Soils (as a consequence of the activity): good Integrity of Soils (as a consequence of the activity): high	Low

Activity	When	Extent, Impact and Consequence to Condition and Integrity	Level of Impact
Water erosion	Always	All creek courses have been impacted by water erosion. Modern erosion is observable on some outside bends of the creeks, were soils have been eroded and in places clays and bedrock have been exposed. It is suggested that long term (ie over a period of millennia) modification to creek courses could have resulted in a number of creek course changes, where large floods could have deposited significantly large quantities of alluvium to modify the course of a creek (this requires archaeological testing). More recent erosion has resulted in the exposure of a number of archaeological sites at certain locations along the creeks, especially in the northern third of the study area. Condition: moderate in areas of impact Integrity: low to moderate in areas of impact	High in areas of water erosion
Cropping	1965 to 2004	Cropping has been undertaken across the lower two thirds of the study area. This will have resulted in ploughing of A horizon soils and thus loss of the archaeological deposit's integrity. Modern ploughing can 'deep-rip' soils over 500mm in depth and thus have a high level of impact on archaeological deposits. In general ploughing and cropping does not result in a loss of soils, and thus archaeological evidence is retained, albeit not in an original depositional context. It is noted that cropping may be associated with the Branxton soil landscape (Figure 2.3) rather than the mapped extent of Hunter and Rothbury landscapes. Condition: good (all of study area) Integrity: high (northern third), low (central and lower third)	Low (northern third) Moderate (central and southern third)
Animal grazing	1965 to 2004	It can be assumed that the whole of the study area has been subject to animal grazing (apparent in 2012). The primary impacts are erosion along feed locations, dams, some water courses and fence lines where animal tracks occur. Heavy erosion along dam banks was observed in 2012. Condition: moderate in areas of impact Integrity: low to moderate in areas of impact	Low to moderate (albeit in localised zones)
4WD tracks	1965 to 2004	A number of farm tracks are present across the study area. These have not been modified since 1965. It was noted that these tracks have resulted in significant erosion and necessitated the importation of fills and gravels in order to stabilise and repair the tracks. Condition: poor in areas of impact Integrity: low in areas of impact	High
Fence post installation	1965 to 2004	Wooden fence posts have been used to construct fences and divide the study area into thirds. Installation would have necessitated excavating a post hole. Condition: poor in areas of impact Integrity: low in areas of impact	High
Dam construction	1965 to 2004	Most dams were constructed prior to 1965. A few additional dams have been built since. Dam construction necessitates cut and fill with the consequence of impacting on any archaeology that was associated with the location of the dam or redeposition of archaeological material during the construction of the dam banks. Condition: poor Integrity: low	High

In summary the following statements can be made with respect to the levels of impact associated with the study area:

- The northern third does not appear to have been impacted by cropping and in general has a low level of impact as a result of activities over the past 200 years;
- The central and southern thirds have been cropped repeatedly over the past 50 years and have a moderate level of impact;
- Erosion to water courses has resulted in a high level of localised impact;
- All dam construction has resulted in a high level of localised impact;
- All 4WD tracks have resulted in a high level of localised linear impact; and
- Fence construction and animal tracks have resulted in a moderate to high level of impact along their courses.

2.3 Regional Character

This section considers the evidence for Aboriginal landscape (regional) use of the broader study area. The aim is to highlight the main characteristics of Aboriginal land use and the material traces it has produced.

In general, the majority of Aboriginal site locations appear to focus around the margins of swamps or creeks, or on flat ridge top landforms, often with an aspect toward the Hunter River or higher order creeks. However, a number of Aboriginal sites, which are considered significant to the local Aboriginal community, have been recorded on landforms that do not confirm to this model.

The numerous archaeological sub-surface investigations across the local area have recovered mostly small assemblages of artefacts and have addressed research questions, specifically in terms of assemblage material and tool composition. Overall, all excavated Aboriginal sites appear to have been created within the last 5,000 years (which may be attributed to a general intensification in Aboriginal occupation of this area). Assemblages are dominated by either silcrete or tuff, which are obtained from local sources (refer to Appendix D). Stone tool types within assemblages have been dominated by the small tools tradition, principally flakes with reduced and retouched backed artefacts.

2.4 Preliminary Archaeological Zoning Plan (AZP)

This section provides a preliminary analysis of landforms within the study area. The allocation of zones with archaeological potential was based upon an understanding of recent local archaeological excavation results (ie GML 2012 and Dallas 2008); an analysis of historical aerial photographs (1965, 1994 and 2004); an understanding of soil impacts resultant from land use over the past 150 years; a preliminary site inspection; and patterns of Aboriginal occupation of this region over the past 20,000 years.

Zones with archaeological potential have been assessed to have a moderate to good level of potential to allow for the recovery of spatially intact archaeological deposits contained within soil horizons that retain their condition and integrity. The study of such deposits may provide new and

additional evidence for Aboriginal occupation within this region and further archaeological and Aboriginal understanding relating to the local 'pre-colonisation' Aboriginal economy, demography and society. Some zones have been allocated with archaeological potential because archaeological materials could be present, albeit in deposits with higher levels of impact.

Zones have been allocated with archaeological potential, as shown in Figure 2.10. All other landforms have been allocated a lower level of archaeological potential due to their modal terrain slope and/or historical impacts arising from farming activities. However, the potential exists for a low density distribution of artefacts typically consistent with background discard to be present across the whole study area.

The plan of preliminary archaeological potential will be revised and updated following archaeological survey and again following archaeological test excavation. The evolution of this plan of potential can be used to inform future predictive modelling in this region and provides an illustration of how more detailed archaeological studies (ie desktop to field survey through test excavation) result in new and more detailed understanding of the cultural landscape.

2.5 AIA Non-Stockland Land Predictive Model

Following the field survey for Stockland's land, GML was requested to consider predictive modelling for the remainder of the AIA (NB this land could not be surveyed due to land access constraints).

Therefore, a preliminary analysis of landforms within the AIA non–Stockland land has been undertaken (Figure 2.10). Predictive modelling is based upon desktop research and has been informed by the results of the field survey.

A number of broad landscape zones have been allocated with the blanket designation of archaeological potential. Zones with archaeological potential have been assessed to have a moderate to good level of potential to allow for the recovery of spatially intact archaeological deposits contained within soil horizons that may retain their condition and integrity. All other landforms have been allocated a lower level of archaeological potential due to their modal terrain slope and/or historical impacts arising from farming activities. However, the potential exists for a low density distribution of artefacts typically consistent with background discard to be present across the whole study area.

It can be seen that locations connected with the creek lines, flat landforms, shallow slopes near the creek lines and some elevated flats have been designated as possessing archaeological potential. This pattern of potential must be further informed and clarified following an appropriate field survey.

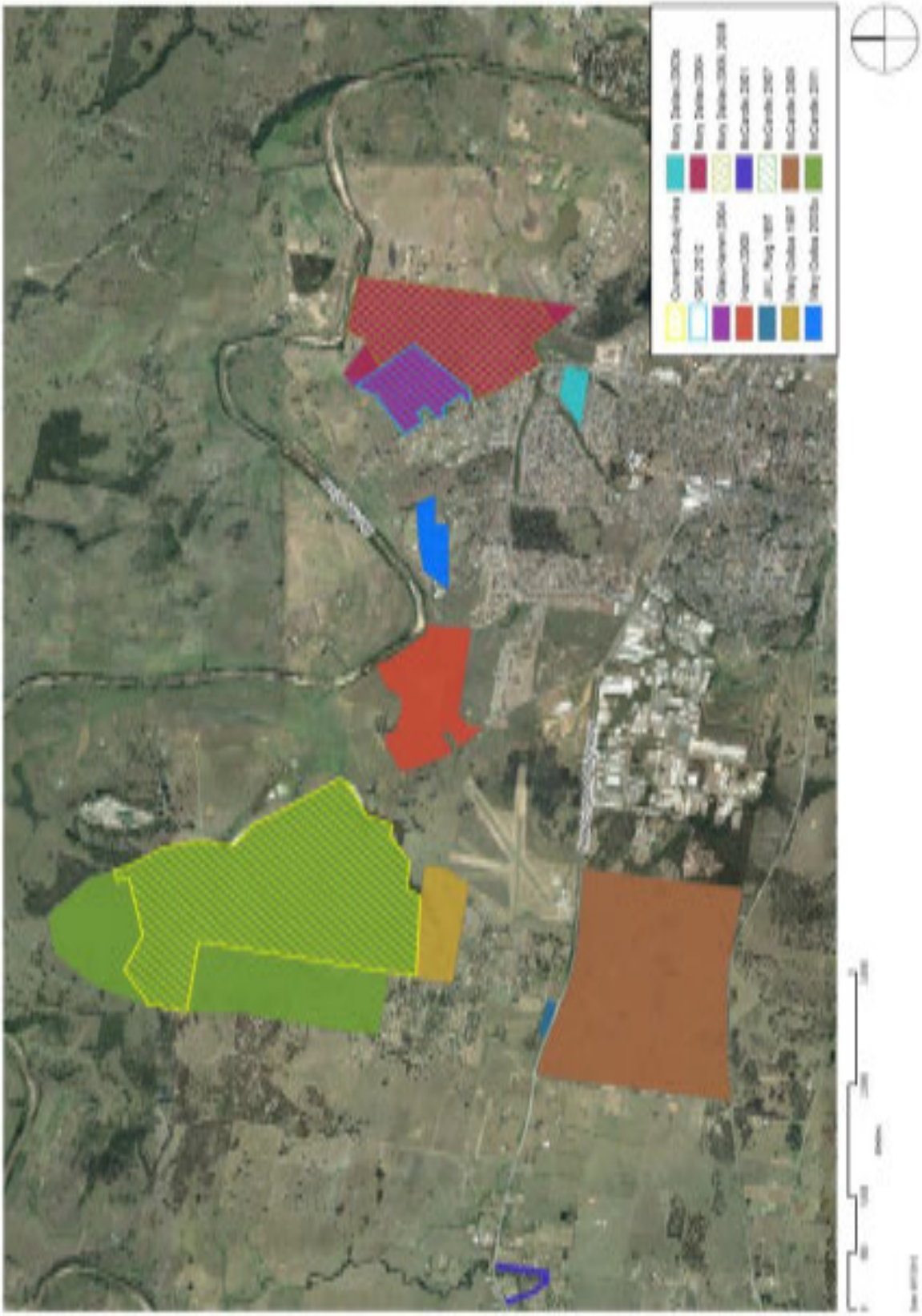


Figure 2.1 Previous archaeological work in the vicinity of the Anambah Investigation Area (Source: GML 2012)

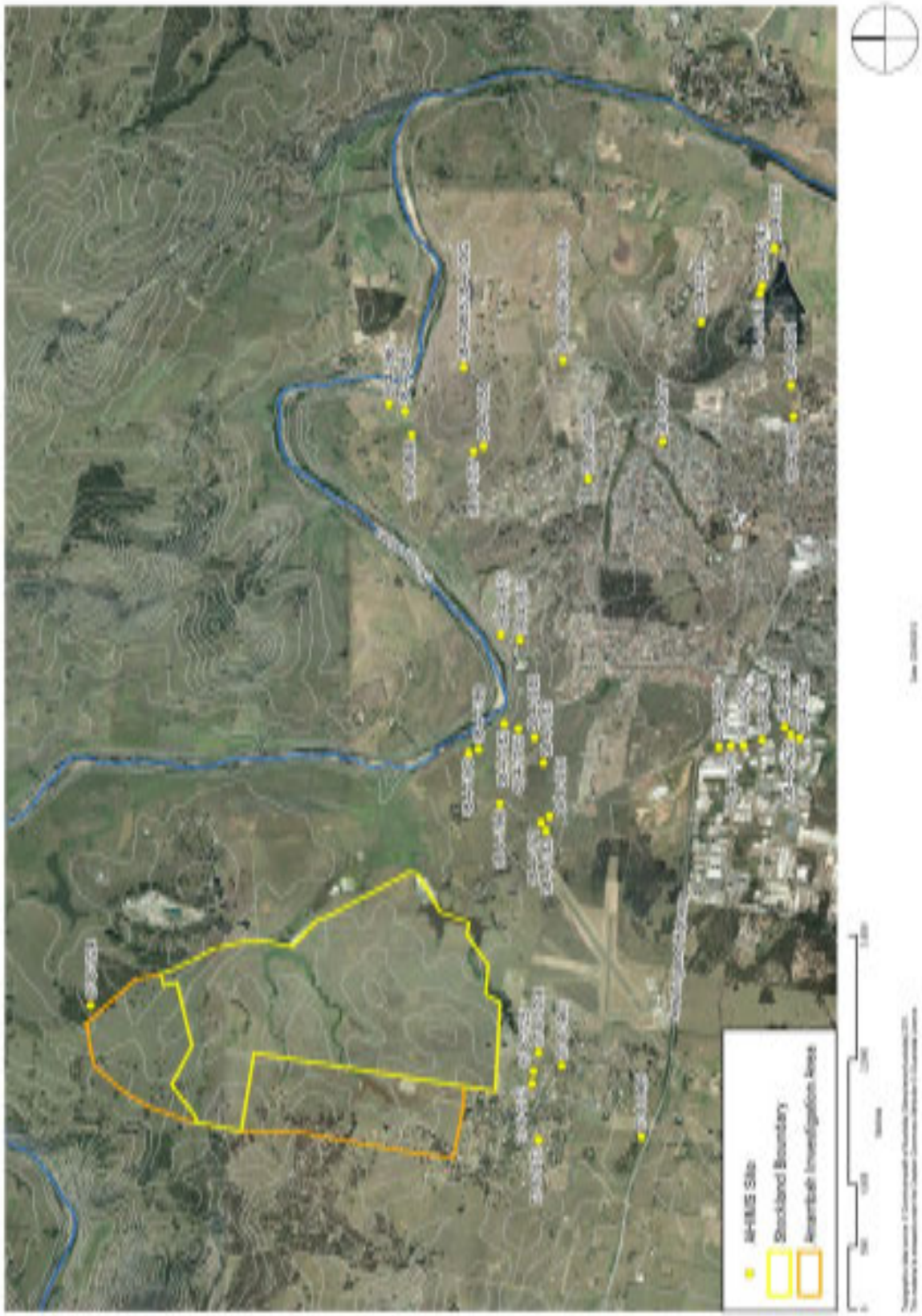


Figure 2.2 AHIMS results for the wider Anambah area (Source: GML 2012)

Figure 2.3 Soil landscapes within the Anambah Investigation Area. The Hunter soil landscape is shown in green, the Branxton in pink and the Rothbury in blue. (Source: Soil Landscapes of the Singleton 1:250,000 Sheet)

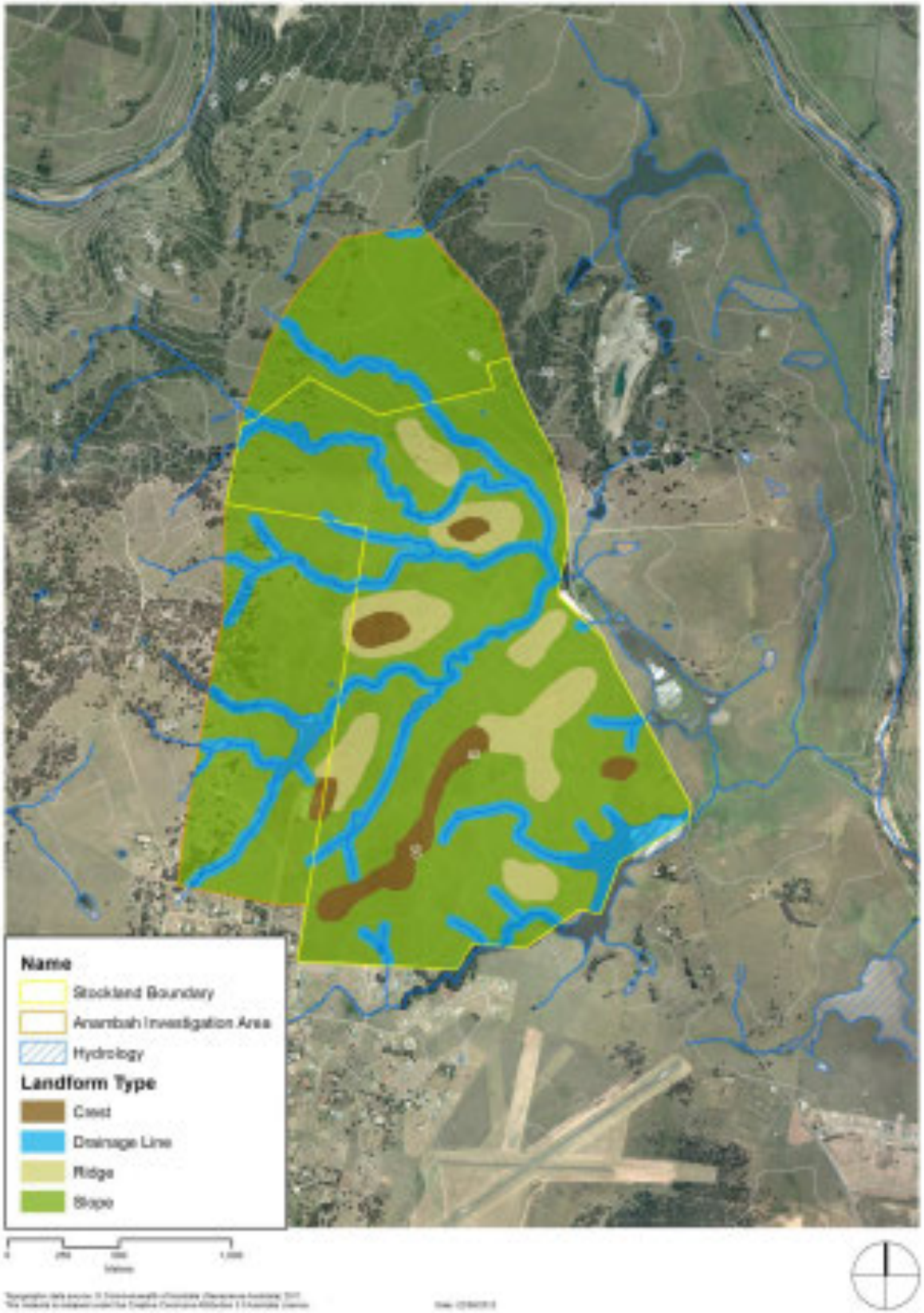


Figure 2.4 Landform features and watercourses within the study area (Source: Google Earth Pro with GML additions)

Figure 2.5 View of the Sugarloaf Range, approximately 22km to the south of the study area. (Source: GML 2012)

Figure 2.6 View from study area through to Mt Sugarloaf, approximately 22km south of the study area. (Source: GML 2012)

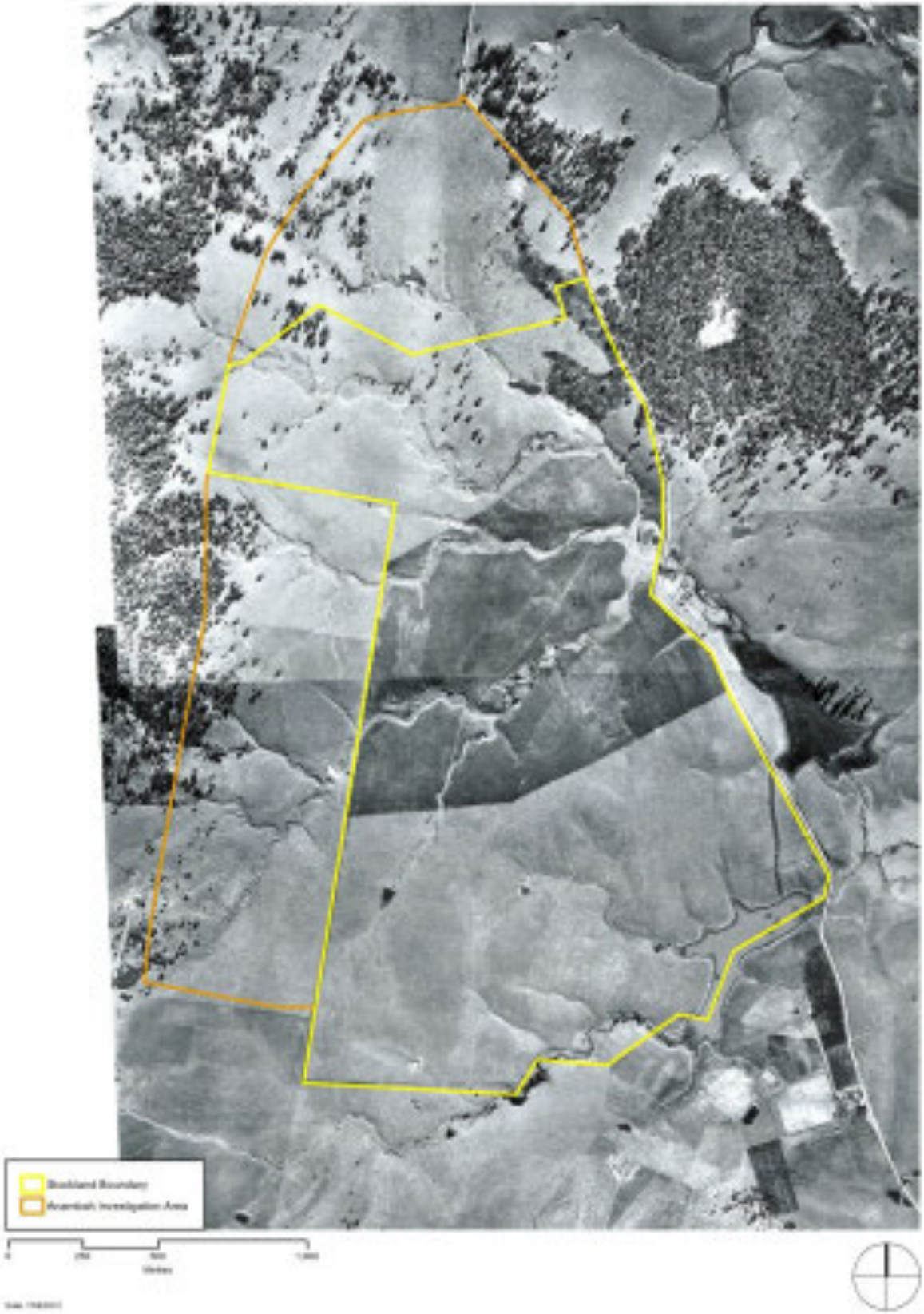


Figure 2.7 1965 aerial photograph, note the distinct cropping pattern in the south and central areas (Source: Department of Lands)

Figure 2.8 1994 aerial photograph (Source: Department of Lands)

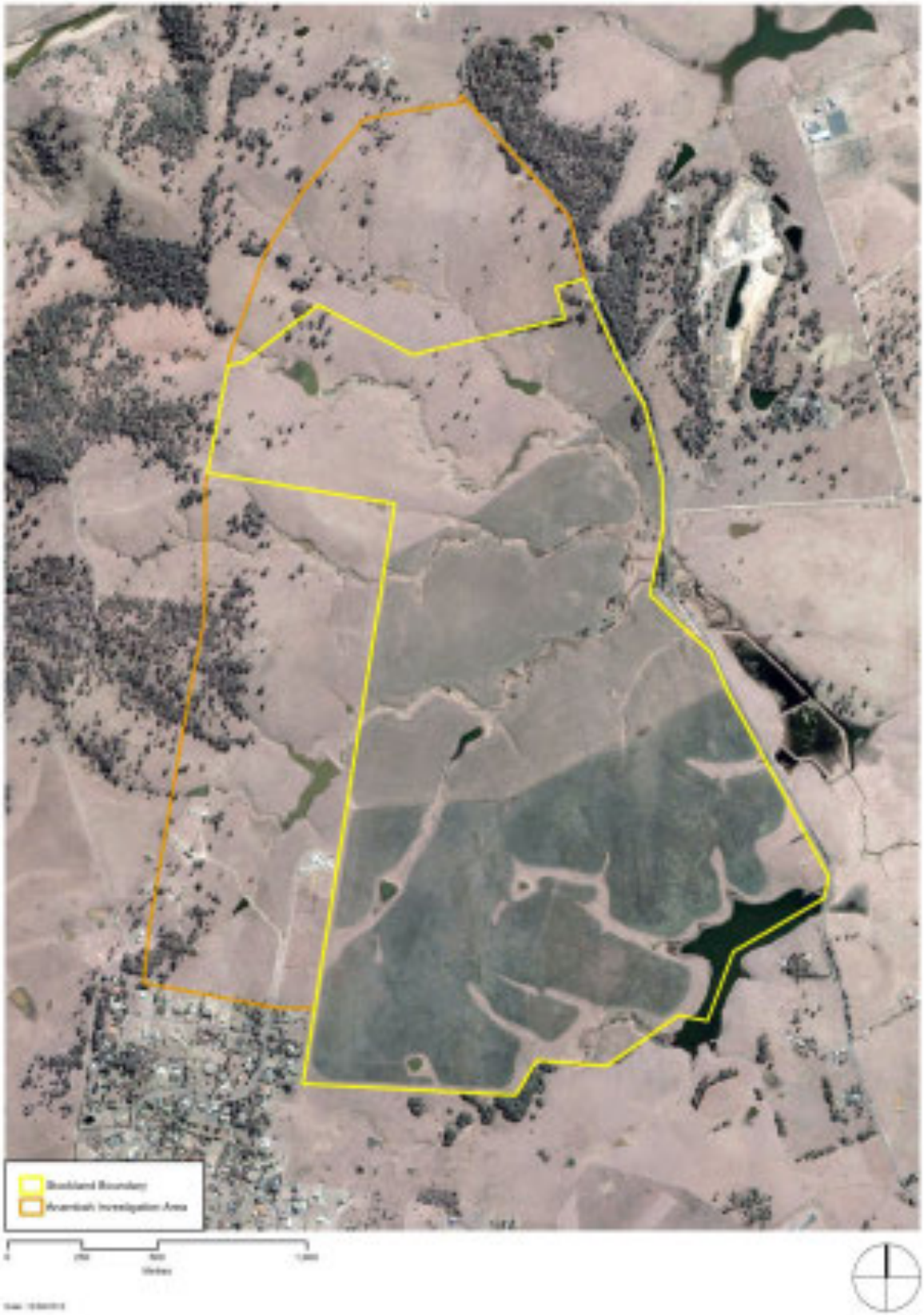


Figure 2.9 2004 aerial photograph (Source: Google Earth Pro with GML additions)

Figure 2.10 Preliminary zones of archaeological potential, based on the desktop assessment (Source: Google Earth Pro with GML additions)

2.6 Endnotes

1 DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (24 September 2010).* Pages 20-21.

2 Ruig, J 1997, Test Excavations on *Penn Park*, Lochinvar, NSW. Report to Mr L McLeod, "Penn Park, New England Highway, Lochinvar, 2320, NSW.

3 Dallas, M & R. Kerr 1997, Archaeological Survey of Proposed Subdivision of Rural Land Lot 71, DP 573183, Rutherford, Hunter Valley, NSW. Report to Pulver Cooper & Blackley Pty Limited.

4 Dallas, M & D Steele 2003a, Aboriginal Archaeological Assessment in support of an Application for a Preliminary Research Permit for NPWS Site #38-4-0611 and Associated Potential Archaeological Deposit (PAD) in Lot 2 DP 812143, Blue Gum Drive, Aberglasslyn, NSW. Report to Conacher Travers Environmental Consultants on behalf of Sunrise Estates Pty Limited.

5 Dallas, M & D Steele 2003b, Aboriginal Archaeological Assessment Report and Research Design in Support of an Application for a Preliminary Research Permit for an Area of Potential Archaeological Deposit (PAD) in Lot 51 DP 840643, Aberglasslyn Road, Aberglasslyn. Report to Conacher Travers Environmental Consultants on behalf of Sunrise Estates Pty Limited.

6 Dallas, M 2004, Aboriginal Archaeological Assessment, Lots 80 and 81 in DP 524028, 41 in DP 611238, 11 in DP 1042562 and Portion 2 in DP 160043, Aberglasslyn, NSW. Report to Stockland Development Pty Limited.

7 Hamm, G 2004, Archaeological Assessment of Lots: 1, 2, 10, 12, Part of 15, 1411 and 1412. Aberglasslyn Road, Aberglasslyn. Report to Andrews Neil Environmental Pty Limited.

8 Mary Dallas Consulting Archaeologists 2006, Application for a S87 Permit and Accompanying Research Design—Areas of Potentail Archaeological Deposit (AHIMS #38-8-0865 and #38-8-0866) at Aberglasslyn Road, Aberglasslyn, NSW. Application to NSW Department of Environment & Conservation.

9 McCardle Cultural Heritage Pty Ltd 2007a, Proposed Residential Subdivision by Woodbury Park Estates Pty Ltd, Aberglasslyn—Indigenous Archaeological Assessment. Report to Andrews Neil Pty Ltd.

10 McCardle Cultural Heritage Pty Ltd 2007b, Proposed Residential Subdivision by Woodbury Park Estates Pty Ltd, Aberglasslyn—S87 Preliminary Research Permit, Archaeological Test Excavation. Report to Andrews Neil Pty Ltd.

11 Mary Dallas Consulting Archaeologists 2008, Aboriginal Archaeological Excavation—Partial Salvage of AB Campsite 1 (AHIMS #38-8-0866) at Oakhampton Road, Aberglasslyn, NSW. Report to Pulver Cooper Blackley Pty Ltd on behalf of Stockland Developments Pty Ltd.

12 Hamm, G 2008, Aboriginal Cultural Heritage & Archaeological Assessment for re-zoning Application for Land Identified as: Lot 71, DP: 714785 Anambah Road, Anambah. Report to L & A Wells Property Pty Limited

13 McCardle Cultural Heritage 2011, Anambah Release Area, LGA: Maitland, Indigenous Archaeological Due Diligence Assessment. Report to ADW Johnson.

14 Godden Mackay Logan 2012, McKeachies Run Top Soil Stripping, Archaeological Technical Report. Report to Stockland.

15 Kovac & Lawrie 1991

16 Kovac & Lawrie 1991

3.0 Archaeological Field Survey

The first aim of an archaeological survey is to identify all visible evidence of past Aboriginal occupation within the study area. The second aim is to determine zones that may/will have buried subsurface archaeological deposits. Combining these two together will allow the creation of an Archaeological Zoning Plan (AZP) that defines where Aboriginal evidence is known, and is likely to be located across the study area. In addition, consideration should be given to locations within the study area that do not contain physical evidence of Aboriginal occupation, but would have been significant to Aboriginal use of the landscape, e.g. walking tracks, ceremonial areas, Dreaming trails etc. These should also be recorded, mapped and considered within the framework for assessment and management of Aboriginal heritage.

It must be noted that practically all archaeological survey is limited by a number of factors such as ground surface visibility, access restrictions and tempered by environmental factors during the period of survey. These influences will affect the outcome of any survey, and introduce biases into the results.

3.1 Survey Sampling Strategy

The study area was surveyed by the study team and Aboriginal representatives from the 20–23 August 2012. A linear pedestrian survey aimed to assess the whole study area, inspecting all soil exposures and zones with low vegetation that contained tracks and paths. The sampling strategy employed during the survey covered all landforms and areas proposed to be impacted by the development.

When heritage sites were identified they were recorded by the survey team including description, GPS location and digitally photographed. Notes were made on the soil conditions, evidence of disturbance and possible extent of the sites and PADs identified.

3.1.1 Field Methods

In accordance with the OEH guidelines,[1] the description of survey coverage includes landform units, the total area surveyed within that landform unit and a quantification of the level of exposure and visibility. OEH have defined exposure and visibility thus:

> *Visibility is the amount of bare ground (or visibility) on the exposures which might reveal artefacts or other archaeological materials. It is important to note that visibility, on its own, is not a reliable indicator of the detectability of buried archaeological material. Things like vegetation, plant or leaf litter, loose sand, stony ground or introduced materials will affect the visibility. Put another way, visibility refers to 'what conceals'*
>
> *Exposure is different to visibility because it estimates the area with a likelihood of revealing buried artefacts or deposits rather than just being an observation of the amount of bare ground. It is the percentage of land for which erosion and exposure was sufficient to reveal archaeological evidence on the surface of the ground. Put another way, exposure refers to 'what reveals'.* [2]

The calculation of effective coverage provides a means with which to describe the proportion of the study area in which it is possible to assess the presence or absence of archaeological material. This measure is expressed as a percentage and can be calculated using a number of different techniques. For this study, effective coverage was calculated by multiplying the area surveyed by

the percentage of exposure and visibility within the survey unit. The area of effective coverage was then expressed as a percentage of the whole survey unit.

3.1.2 Archaeological Potential

Archaeological site formation is a complex combination of scientific factors, such as bioturbation, and environmental factors, such as erosion or burial through soil movement. Once discarded on the ground surface, artefacts are often readily incorporated into the topsoil horizons through the process of bioturbation. Most commonly, dense artefact deposits exist hidden beneath the upper surface, unobservable by the casual observer (c.f. Wandsnider and Camilli 1992[3]; Fanning and Holdaway 2001[4]). Archaeological assessments that do not employ appropriate methods of sub-surface detection or prediction cannot reliably define an area's archaeological content. Most frequently, the eroded component of a larger subsurface deposit is detected and recorded as a site. Where soils are sandy, artefacts can occur at greater depths and erosion may frequently expose artefacts. Therefore, it is crucial that soils, sands and geomorphology of an area are defined in an archaeological assessment and the archaeological implications defined. An understanding of these factors, linked further to the notions of site integrity and condition, yield an understanding of an area or site's archaeological potential.

It is important to note that the level of archaeological potential relates to the likelihood of discovering an Aboriginal object, within a location. Further description should then be made as to the potential condition and integrity of the soil matrix and potential site itself. Only once all these factors have been considered, can scientific value start to be assessed for an area with potential. Therefore, whilst scientific value and potential are linked, it must be noted that these values and potentials are not the same and can differ substantially for any single site or area with potential.

Areas with archaeological potential were identified according to the definitions in Table 3.1.

Table 3.1 Definitions of Archaeological Potential

Rank	Definition	Example
No potential	Artefacts cannot occur in situ and/or are located in a landscape that would not yield archaeological evidence.	Eroded landforms, reconstructed landscapes, hazardous landscape, developed areas.
Low potential	Artefacts are not normally found in comparable contexts but could occur in low densities making detection unlikely. These areas have also been highly eroded and have a low level of condition and integrity, but may contain a low number of artefacts in a disturbed context.	Landforms with no specific focus for use, i.e. with water sources or undifferentiated slopes. Impacted areas, with sporadic Aboriginal use.
Low to moderate	Artefacts are known to occur in comparable landforms in detectable densities (~1 artefacts/m^2) and there is an unknown possibility for detection. These areas may have been eroded and have a low level of condition and integrity, but may contain a low number of artefacts in a disturbed context.	Landforms with an environmental focus which may have seen occasional visitation.
Moderate to low	Artefacts are known to occur in comparable landforms in detectable densities (>5 artefacts/m^2). These areas may have suffered some loss of condition or integrity.	Landforms with an environmental focus which may have seen occasional visitation.

Rank	Definition	Example
Moderate potential	Artefacts are known to occur in comparable landforms in detectable densities (>10 artefacts/m^2). These areas could contain higher densities of artefacts, albeit in a disturbed context, that is with lower integrity or condition.	Landforms with an environmental focus which may have seen occasional visitation.
Moderate to high	Artefacts are consistently found in comparable landforms or similar environmental contexts and thus will certainly be found in any ground breaking works. These landforms may have a high level of condition and integrity and should yield spatially intact archaeological deposits.	Landforms with known environmental focus encouraging repeat visitation to a specific locale, i.e. margins of swamp or near high order creeks.
High potential	Artefacts are consistently found in comparable landforms or similar environmental contexts and thus will certainly be found in any ground breaking works. These landforms have a high level of condition and integrity and should yield spatially intact archaeological deposits.	Landforms with known environmental focus encouraging repeat visitation to a specific locale, i.e. margins of swamp or near high order creeks.

3.2 Survey Results—Survey Units & Landforms

In accordance with OEH recording requirements the study area was surveyed according to survey units, landforms and landscapes. All survey units are described in Table 3.2 and shown in Figure 3.1. Details with respect to landform coverage are provided in Table 3.3.

Table 3.2 Survey Coverage

Survey Unit (SU)	Landform	Survey unit area (SUA) (sq m)	Visibility (V) %	Exposure (E) %	Effective coverage area (ECA) (sq m) (=SUA* V%*E%)	Effective coverage % (=ECA/SUA *100)
1	Slope	7,759	5%	10%	39	0.50
2	Hilltop	1,564	5%	10%	8	0.50
3	Slope	13,369	5%	10%	67	0.50
4	Ridge	4,807	5%	10%	24	0.50
5	Slope	3,781	5%	10%	19	0.50
6	Open Depression	19,617	100%	100%	19617	100.00
7	Slope	3,506	5%	10%	18	0.50
8	Hilltop	1,423	5%	10%	7	0.50
9	Slope	17,285	5%	10%	86	0.50
10	Open Depression	44,659	50%	100%	22329	50.00
11	Upper Flat	16,839	5%	10%	84	0.50
12	Ridge	4,216	5%	10%	21	0.50
13	Slope	23,087	5%	10%	115	0.50

Survey Unit (SU)	Landform	Survey unit area (SUA) (sq m)	Visibility (V) %	Exposure (E) %	Effective coverage area (ECA) (sq m) (=SUA* V%*E%)	Effective coverage % (=ECA/SUA *100)
14	Slope	5,454	5%	10%	27	0.50
15	Hilltop	5,915	5%	10%	30	0.50
16	Slope	3,139	5%	10%	16	0.50
17	Saddle	5,042	5%	10%	25	0.50
18	Slope	4,565	5%	10%	23	0.50
19	Hilltop	3,619	5%	10%	18	0.50
20	Slope	6,866	5%	10%	34	0.50
21	Open Depression	6,643	10%	100%	664	10.00
22	Open Depression	25,600	5%	10%	128	0.50
23	Slope	26,049	5%	10%	130	0.50
24	Ridge	11,167	5%	10%	56	0.50
25	Slope	8,804	5%	10%	44	0.50
26	Open Depression	8,152	100%	100%	8152	100.00
27	Ridge	20,321	5%	10%	102	0.50
28	Slope	9,363	5%	10%	47	0.50
29	Ridge	12,546	5%	10%	63	0.50
30	Ridge	8,023	5%	10%	40	0.50
31	Upper Flat	2,190	5%	10%	11	0.50
32	Slope	7,130	5%	10%	36	0.50
33	Hilltop	8,194	5%	10%	41	0.50
34	Slope	3,482	5%	10%	17	0.50
35	Saddle	4,513	5%	10%	23	0.50
36	Slope	10,325	50%	90%	4646	45.00
37	Flat	4,419	20%	90%	795	18.00
38	Open Depression	4,400	5%	10%	22	0.50
39	Slope	5,329	5%	10%	27	0.50
40	Hilltop	3,260	5%	10%	16	0.50
41	Slope	20,849	5%	10%	104	0.50
42	Slope	22,400	5%	10%	112	0.50
43	Slope	13,840	5%	10%	69	0.50
44	Slope	8,960	5%	10%	45	0.50
45	Flat	6,460	5%	10%	32	0.50

Survey Unit (SU)	Landform	Survey unit area (SUA) (sq m)	Visibility (V) %	Exposure (E) %	Effective coverage area (ECA) (sq m) (=SUA* V%*E%)	Effective coverage % (=ECA/SUA *100)
46	Slope	23,720	5%	10%	119	0.50
47	Upper Flat	10,851	5%	10%	54	0.50
48	Open Depression	7,444	5%	10%	37	0.50
49	Slope	6,138	5%	10%	31	0.50
50	Ridge	5,210	5%	10%	26	0.50
51	Slope	5,008	5%	10%	25	0.50
52	Slope	54,632	20%	100%	10926	20.00
53	Open Depression	54,632	20%	100%	10926	20.00
54	Slope	60,152	20%	100%	12030	20.00
55	Slope	34,115	5%	10%	171	0.50
56	Slope	5,549	5%	10%	28	0.50
57	Slope	2,436	5%	10%	12	0.50
58	Hilltop	7,612	5%	10%	38	0.50
59	Slope	31,415	5%	10%	157	0.50
60	Slope	30,667	5%	10%	153	0.50
61	Slope	12,870	5%	10%	64	0.50
62	Slope	35,104	5%	10%	176	0.50
63	Flat	10,395	5%	10%	52	0.50
64	Open Depression	34,188	5%	10%	171	0.50
65	Slope	10,921	5%	10%	55	0.50
66	Upper Flat	3,262	5%	10%	16	0.50
67	Slope	15,094	5%	10%	75	0.50
68	Slope	8,715	5%	10%	44	0.50
69	Slope	20,639	10%	50%	1032	5.00
70	Hilltop	2,842	5%	10%	14	0.50
71	Slope	9,658	5%	10%	48	0.50
72	Slope	11,786	100%	100%	11786	100.00
73	Open Depression	1,673	40%	90%	602	36.00
74	Slope	51,833	20%	80%	8293	16.00
75	Open Depression	51,837	20%	100%	10367	20.00
76	Slope	11,435	30%	70%	2401	21.00
77	Flat	15,993	30%	70%	3359	21.00

Survey Unit (SU)	Landform	Survey unit area (SUA) (sq m)	Visibility (V) %	Exposure (E) %	Effective coverage area (ECA) (sq m) (=SUA* V%*E%)	Effective coverage % (=ECA/SUA *100)
78	Slope	45,553	30%	70%	9566	21.00
79	Slope	7,425	5%	10%	37	0.50
80	Slope	22,498	5%	10%	112	0.50
81	Slope	2,178	5%	10%	11	0.50
82	Hilltop	1,438	75%	90%	970	67.50
83	Slope	1,473	5%	10%	7	0.50
84	Open Depression	1,845	5%	10%	9	0.50
85	Flat	3,975	5%	10%	20	0.50
86	Slope	1,219	10%	10%	12	1.00
87	Hilltop	509	10%	10%	5	1.00
88	Slope	2,005	10%	50%	100	5.00
89	Flat	1,400	10%	10%	14	1.00

Table 3.3 Landform summary—sampled areas

Landform	Landform area (LA) (sq m)	ECA	% landform effectively surveyed (=ECA/LA *100)	Number of Aboriginal features	Number of artefacts or features
Open Depression	260,691	73,027	28.0		1 IF
Flat	42,642	4,272	10.0	8 PADs	2 SAC
Upper Flat	33,141	166	0.5	4 PADs	1 IF
Slope	749,581	63,194	8.4	10 PADs	10 SAC, 6 IF, 1 quarry (~217 objects)
Hilltop	36,376	1,148	3.2	6 PADs	1 IF
Ridge	66,291	331	0.5		
Saddle	9,554	48	0.5		
Total				28 PAD	1 quarry, 9 IF, 12 SAC

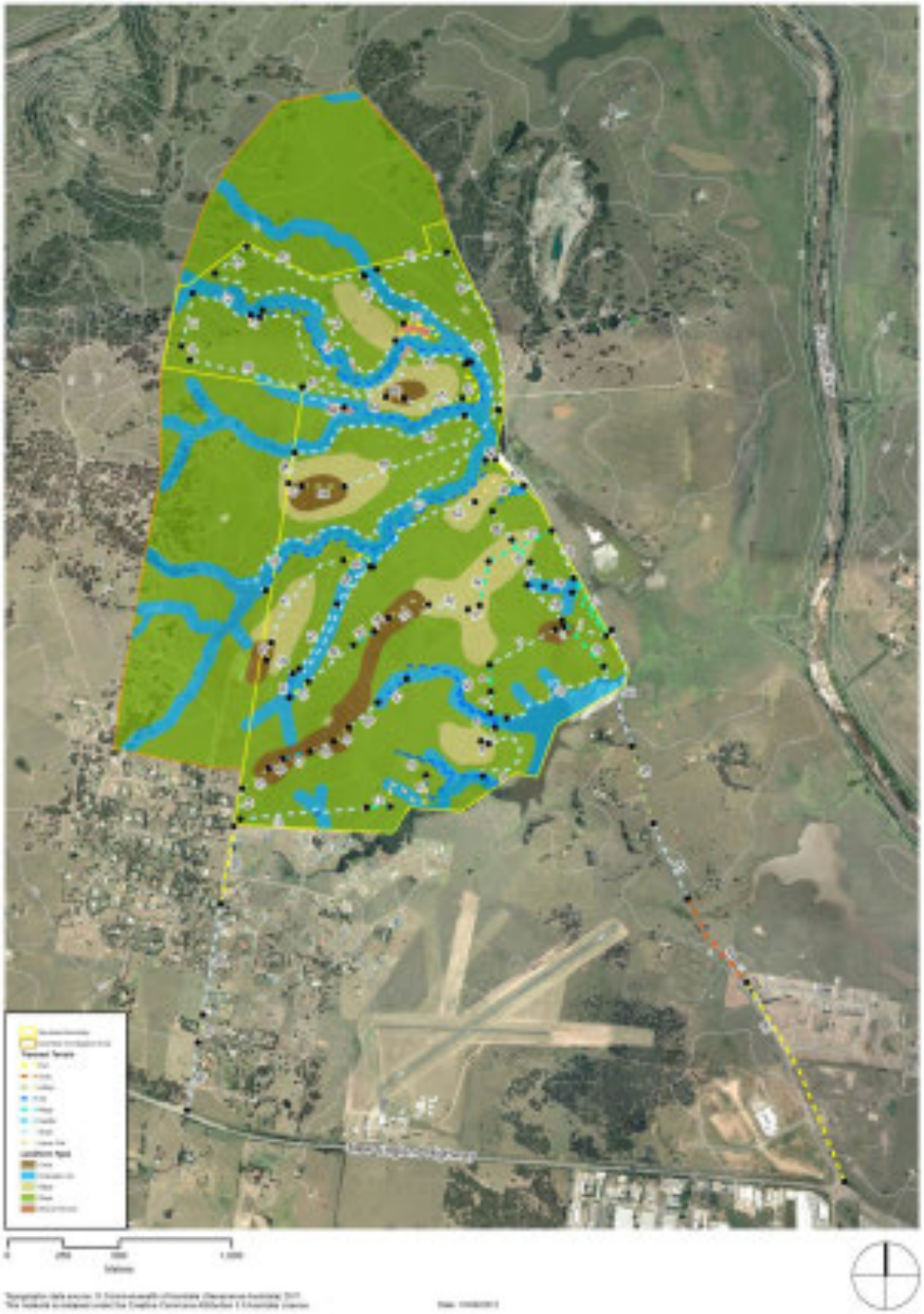


Figure 3.1 Landforms, survey transects and alluvial terraces

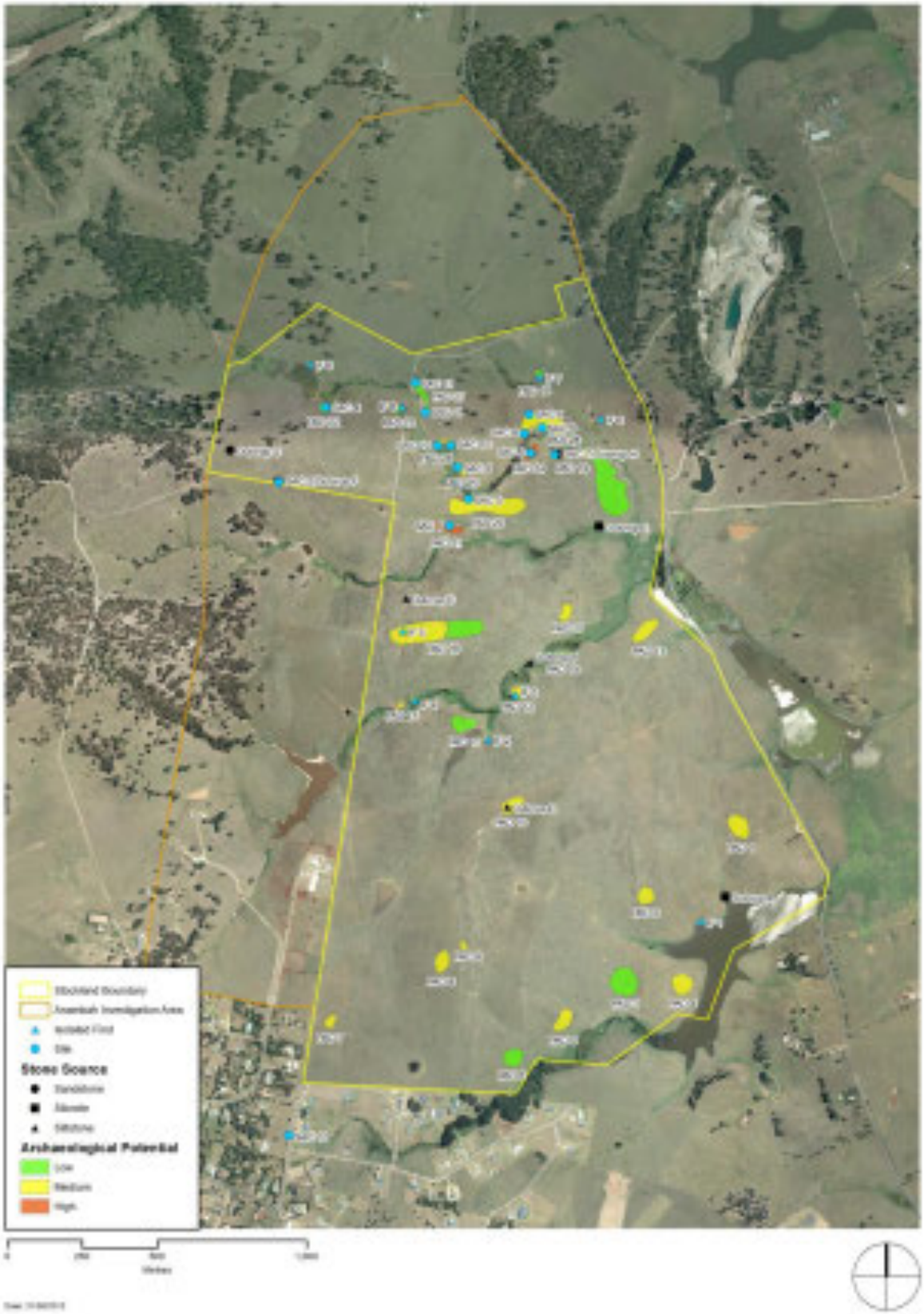


Figure 3.2 Aboriginal sites, PADs and sources (outcrops) of stone materials. (Source: GML 2012 over Google Earth Aerial)

3.3 Survey Results—Aboriginal Sites and Areas of PAD

The archaeological survey identified a total of 21 Aboriginal sites and 28 areas with PAD. An overview of these sites and areas of PAD are provided in Table 3.4. The location of all recorded sites and PADs is shown in Figure 3.2.

Table 3.4 Aboriginal heritage sites and areas with PAD recorded during the survey

Site Name	Features and Archaeological Potential	SU	Landform
IF 1	Red glossy silcrete flake located within animal erosion at the edge of the large dam. No archaeological potential.	23	Slope
IF 2	Possible core of silicious conglomerate material with small quartz particles. Located within the eroded bank of a dammed 2nd order creek. No archaeological potential.	46	Slope
IF 3 & PAD 12	Brown grey mudstone/tuff broken flake in erosion on the southern bank of a creek. PAD 12 is on an elevated flat adjacent to the creek. 36m (N–S) by 38m (E–W). 5m to 3rd order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate potential.	47	Upper Flat
IF 4 & PAD 15	Silcrete (heat treated) flake in erosion scars adjacent to the creek. PAD 15 covers two elevated flats on the lower slope within the open depression of the creek. It is *possible* that alluvium is present on these flats. 16m (N–S) by 21m (E–W) and 25 (N-S) by 30m (E-W). 5m to 2nd order creek. The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	54	Slope
IF 5 & PAD 16	Large silcrete core on a large flat hilltop. PAD16 is on a large flat hilltop and slope to the east, with 270 degree views. 65m (N–S) by 320m (E–W). 150m to 2nd order creek (N) and 165m to 1st order creek (S). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	58 and 59	Hilltop and slope
IF 6	Very fine dark brown/ red chert blade in erosion scar, 20m from 2nd order creek (S). No archaeological potential.	62	Slope
IF 7 & PAD 18	One possible flake of red silcrete with some conglomeration on highly impacted edge of lower slope adjacent to a dam. PAD18 is on an elevated flat above a dam. Soil has a high percentage of alluvial material containing some manuported quartzite, silcrete and gravel. 25m (N–S) by 25m (E–W). 30m to 2nd order creek (S). Low to moderate potential.	62	Slope
IF 8 & PAD 23	Pale yellow silcrete flake on heavily eroded bank. PAD23 is on a raised flat adjacent to the creek. 28m (N–S) by 26m (E–W). 35m to 3rd order creek (NE). Low potential.	75	Open Depression

Site Name	Features and Archaeological Potential	SU	Landform
IF 9	One silcrete flake on the bank of a dam. No archaeological potential.	79	Slope
SAC 1 & PAD 21	Artefacts at three locations within erosion on the margins of the creek bank, which have alluvium present. Fourteen artefacts, six of silcrete including a core, three of tuff including a core and five of mudstone (indurated tuff) were identified (Figure 3.3). PAD 21 is on a low flat alluvial terrace above the creek. Fine sandy soil with a lot of small gravels approximately 300mm deep overlying yellow clay. 25m (N–S) by 112m (E–W). 20m to a 2nd order creek (N) and 50m to 2nd order creek (S). The eastern end of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. High potential.	68	Slope
SAC 2	One pink silcrete core with negative scar and one grey indurated tuff with negative scar. No archaeological potential.	69	Slope
SAC 3	This site was located outside the study area and will not be impacted by development. At the request of the Aboriginal community all details relating to this site have been withheld.	Outside study area.	Slope
SAC 4 & PAD 22	One yellow/ brown chert flake with possible backing, one yellow mudstone flake and one yellow silcrete flake on eroded bank of creek. PAD 22/ SAC 4 is on the highly eroded sloped bank of a dam, and a flat area to the south. 35m (N–S) by 25m (E–W). 17m to 1st order creek (N). Low potential on the slope, low to moderate potential on flat area to the south.	72	Slope
SAC 5 & PAD 20	30+ artefacts in one exposure and 15+ artefacts in a second exposure—primarily silcrete with some mudstone. The SAC 5 is on the north side of PAD20 in the eroded creek bank (Figure 3.4). PAD 20 is on an elevated flat above the creek. 55m (N–S) by 256m (E–W). 20m to 3rd order creek (N). The eastern half of the PAD has been ploughed and cropped within the last 10 years, and thus has some reduced integrity. Moderate to high potential, depending on proximity to the creek.	67	Slope
SAC 6 & PAD 24	Twenty-four silcrete (mostly light red silcrete) and tuff artefacts, one quartz artefact eroding from the edge of the creek bank (Figure 3.5). PAD 24 in on a low flat adjacent to the creek, which possesses alluvial soil and has the potential for stratified deposits. 65m (N–S) by 20m (E–W). 3m to a third order creek (N/ NW). High potential.	74	Slope
SAC 7 & PAD 19	Quarry site with large cobbles of silcrete, a large number of flakes removed for further reduction, flaked primary reduction flakes, but no smaller tools. Located in an exposure on the margin of the creek overlooking the major confluence. The steep bank has been highly eroded but at the top where the classic brown A horizon is present, the high incidence of raw material appears to have been worked (Figure 3.6). PAD 19 is on a hill slope overlooking the creek immediately north and the major confluence of creeks to the east. 16m (N–S) by 140m (E–W). 5m to 3rd order creek (N) and 50m to creek confluence (E). High to low potential, depending upon the landscape position and extent of ploughing impact.	74	Slope

Site Name	Features and Archaeological Potential	SU	Landform
SAC 8 & PAD 28	Large number of artefacts in three exposures along the banks of the creek. Exposure one contained four silcrete artefacts, two contained 50+ objects primarily of yellow silcrete and one mudstone, and 20+ objects in the third exposure. PAD 28 is on a low flat landform overlooking a steep eroded slope to the creek, with alluvium present. 48m (N–S) by 142m (E–W). 12m to 3rd order creek (S) and 50m to 2nd order creek (N). Moderate potential.	77	Flat
SAC 9 & PAD 25	30+ artefacts in two exposures in the creek bank. PAD 25 is on a low flat landform above the creek. Soil is alluvial with a high stone (gravel) content. 55m (N–S) by 16m (E–W). 10m to 3rd order creek (S). Moderate to high potential.	78	Slope
SAC 10 & PAD 26	Two silcrete artefacts in heavy erosion on the creek bank which has been terraced. PAD 26 is on a very slight sloped landform overlooking the creek. 14m (N–S) by 44m (E–W). 8m to 3rd order creek (S). Moderate to low potential.	78	Slope
SAC 11 & PAD 27	Around ten silcrete artefacts along highly eroded bank. PAD27 is on a slightly sloped landform overlooking the creek. 100m (N–S) by 25m (E–W). 10m to 3rd order creek (S). Low potential.	78/ 79	Slope
SAC 12	Four mudstone flakes within urban landscaped bank (disturbed). No archaeological potential.	89	Flat
PAD 1	Low flat hill top with views in all directions, especially to the low surrounding water courses. 90m (N–S) by 65m (E–W). 210m to major water course (S) and 140m to 2nd order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	2	Hilltop
PAD 2	On the break of a slope, creating a small flat landform. Good views to the SE. 50m (N–S) by 60m (E–W). 150m to a 2nd order creek (SE) and 110m to another 2nd order creek (W). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	4	Raised flat
PAD 3	On a middle hill slope, where an elevated flat creates a good outlook to the south. 90m (N–S) by 90m (E–W). 80m to a 2nd order creek (S). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Low to moderate potential.	8	Low hilltop
PAD 4	Small raised flat on the slope, above the creek (now dammed). Good views to the south, sheltered from northerly wind, and receives the early morning sun. 70m (N–S) by 70m (E–W). 45m to a 2nd order creek (E). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	9	Raised flat

Site Name	Features and Archaeological Potential	SU	Landform
PAD 5	Small raised flat, on a slope, between two second order creeks. Localised views to the south. 40m (N–S) by 80m (E–W). 60m to a 2nd order creek (SE), 40m to 2nd order creek (N), 70m to a 2nd order creek (SW). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	11	Raised flat
PAD 6	Flat section at the end of a ridge overlooking a creek. 60m (N–S) by 65m (E–W). 45m to a 2nd order creek (S). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Low potential due to the slight slope of the land. The area is suitable for infrequent Aboriginal activities which may have resulted in an archaeological signature.	12	Raised flat at the end of a ridge
PAD 7	Flat on the third highest hilltop within the study area. Good views to all directions, including Mount Sugar Loaf, and other sensitive landscapes (as described by the Aboriginal community). 50m (N–S) by 45m (E–W). 285m to a 2nd order creek (S). Moderate to low potential; due to distance from water sources.	15	Hilltop
PAD 8	Flat on the second highest hilltop within the study area. Good views to all directions, including Mount Sugar Loaf, and other sensitive landscapes (as described by the Aboriginal community). 80m (N–S) by 55m (E–W). 120m to 1st order creek (S) and 250m to 2nd order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential; close to ephemeral water sources and other prominent landforms with archaeological potential. The landform may have been suitable for occupation by larger numbers of Aboriginal people at a time.	19	Hilltop
PAD 9	Small flat areas on the north east slope of the second largest hill in the study area. 40m (N–S) by 20m (E–W). 120m to 1st order creek (S) and 250m to 2nd order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential. The landform is located near to PAD 8, which may have been suitable for occupation by larger numbers of Aboriginal people at a time.	20	Raised flat on a slope
PAD 10	Large flat hill top and the commencement of the upper slope to the west. 40m (N–S) by 80m (E–W). 200m to 2nd order creek (N) and 120m to a 1st order creek (S). The hilltop has commanding views of the study area and local area. The hilltop contains stone outcrop D (siltstone), which appears to have been quarried for historical purposes. The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	33 and 34	Hilltop and slope
PAD 11	Raised flat at the junction of two 2nd order creeks. 45m (N–S) by 90m (E–W). A large dam has been constructed adjacent to the PAD and may have impacted the condition and integrity of the PAD. The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Low potential due to possible disturbance.	45	Raised flat
PAD 12	See IF 3.	47	Raised flat
PAD 13	Wide raised flat landform overlooking a large creek system. 45m (N–S) by 110m (E–W). 45m to a 3rd order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	47	Raised flat

Site Name	Features and Archaeological Potential	SU	Landform
PAD 14	Raised flat landform overlooking a large wide creek. 32m (N–S) by 42m (E–W). 20m to a 3rd order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Low to moderate potential.	52	Slope (creek bank)
PAD 15	See IF 4.		
PAD 16	See IF 5.		
PAD 17	Small raised flat on the slope of a hilltop overlooking the confluence of three creeks. 60m (N–S) by 35m (E–W). 50m to a 3rd order creek (S) and 175m to a 2nd order creek (N). The area of PAD has been ploughed and cropped within the last 10 years, and thus has reduced integrity. Moderate to low potential.	54	Slope
PAD 18	See IF 7.		
PAD 19	See SAC 7.		
PAD 20	See SAC 5.		
PAD 21	See SAC 1.		
PAD 22	See SAC 4.		
PAD 23	See IF 8.		
PAD 24	See SAC 6.		
PAD 25	See SAC 9.		
PAD 26	See SAC 10.		
PAD 27	See SAC 11.		
PAD 28	See SAC 8.		

Figure 3.3 SAC 1 and PAD 21. PAD area extends along the flat raised terrace. Aboriginal representatives are sat on the second soil exposure, where stone objects with alluvial soil are present. Source: GML 2012.

Figure 3.4 SAC 5 and PAD 20. Exposures on the edge of the raised flat landform contain Aboriginal objects. Area of high potential is located adjacent to the top of this open depression. (Source: GML 2012)

Figure 3.5 SAC 6 and PAD 24. Exposure provides evidence for alluvium and Aboriginal objects. Area of PAD extends towards the fence line, an area which is thought not to have been ploughed. (Source: GML 2012)

Figure 3.6 SAC 7 and PAD 19. Exposure with silcrete cobbles is positioned where the recorders are stood. PAD area extends from this bank to the raised flat above the creek. (Source: GML 2012)

3.4 Survey Results—Aboriginal Landscape Use

3.4.1 Hill–Slope Shade Analysis

A GIS based hill-slope shade analysis has been undertaken for Anambah. This analysis compared landforms at noon in mid–summer and mid–winter (Figures 3.4 and 3.5), resulting in a pattern of shade intensity. An initial observation is that Anambah's winter and summer sun vary greatly in strength (intensity); where the summer sun has a minimum strength equalling the strongest winter sun (a fact obviously demonstrated by seasonal differences in temperature).

An assessment of the locations where Aboriginal sites were recorded during the survey indicates that most stone artefact sites are located on landforms that receive a high intensity of winter sun (but not the full sun) and a lower intensity of summer sun. Most of the sites were located on north facing slopes, directed towards the sun. A few of the recorded sites are positioned on the north facing slopes, but on landforms that are in the maximum shade from both summer and winter sun. No sites are located on a landform that receives full sun year round and only a few sites were located on south facing landforms. (It is acknowledged that a percentage of the study area did not have a high degree of visibility and thus resulted in the allocation of PADs—therefore, this preliminary analysis may require updating following test excavation).

From this analysis is it suggested that the study area was used year round by Aboriginal people, although it is possible more landforms (ie a wider range) were used for occupation activities during the summer months than in the winter. It is hypothesised that specific landforms were selected for seasonal use, where repeated visitation saw clan groups return to the same landform 'position' year round for an extended period of time. Such landform selection could have resulted in a distinct archaeological signature, where discrete pockets of archaeological evidence may be recovered, spatially separate from other archaeological evidence.

The archaeological accumulation of materials resultant from occupation activities may be present in sufficient quantities to draw inference on landscape use and infer intra-site archaeological patterning. Following the field survey, it would appear that the lower lying creek systems in the northern third of the study area were preferred locations for Aboriginal activities (these landforms are distinct to the higher hills in the centre and south of the study area). Should sufficient archaeological materials be present, then it may be possible to describe these areas as an Aboriginal landscape and commence inferring Aboriginal economic and social use of this space.

Archaeological patterning to support theories may be discernible through archaeological excavation (as was observed in recent excavations in Sydney[5] and Marulan[6], NSW), however, any interpretation should be tempered by interpretations of data across both 'space' and 'time'[7].

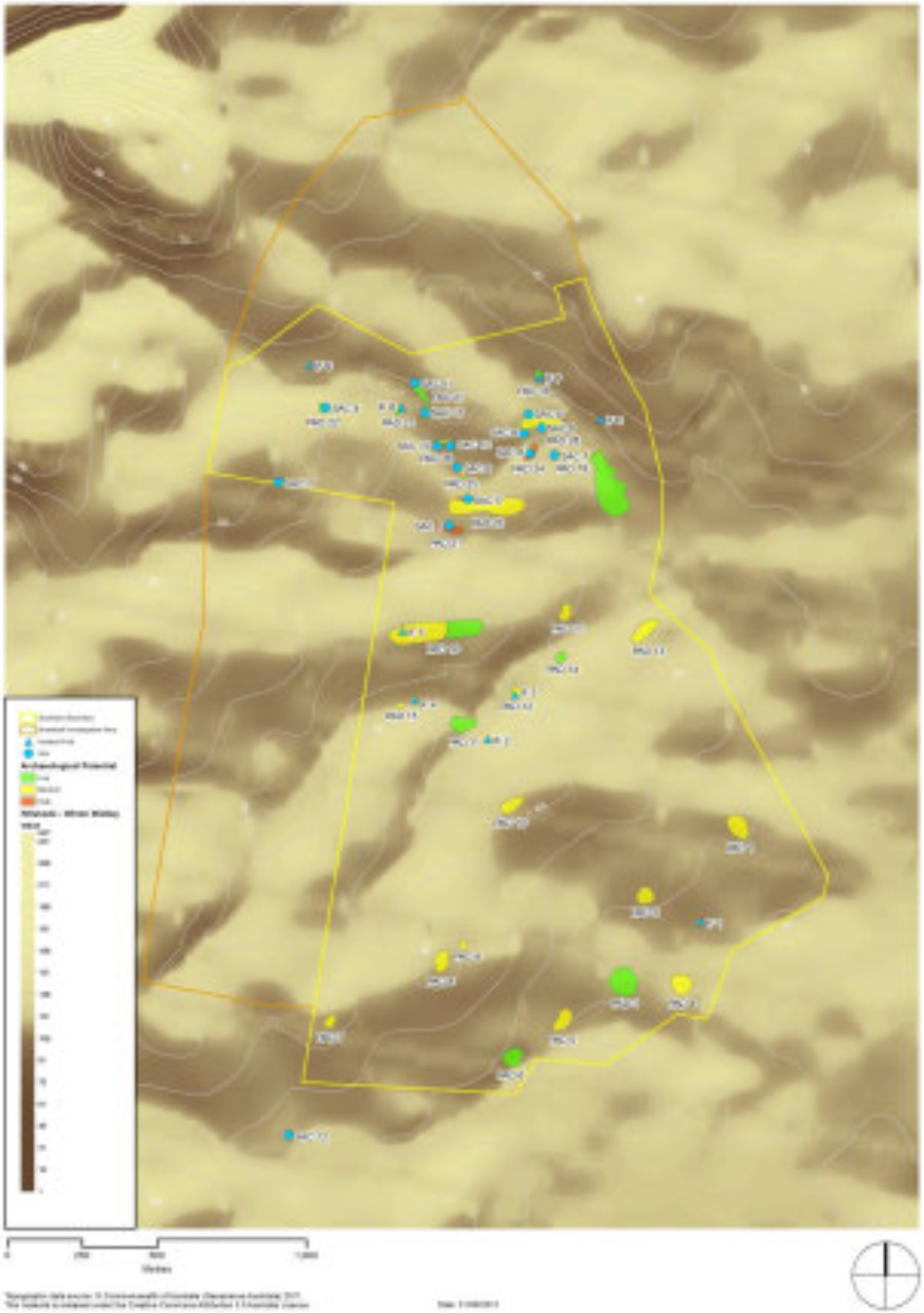


Figure 3.7 Hill–slope shade analysis—midday winter, with archaeological sites. (Source: GML 2012)

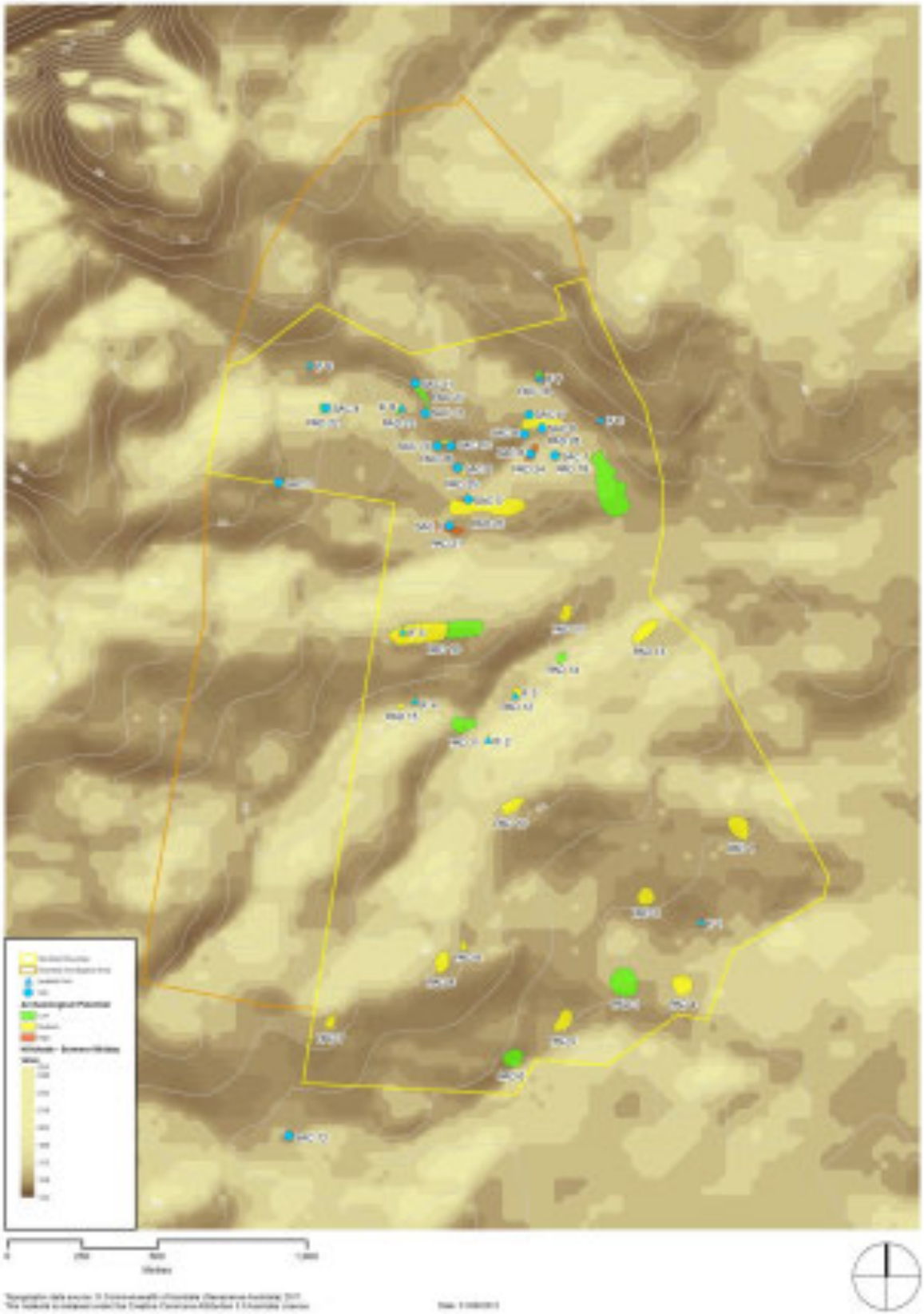


Figure 3.8 Hill–slope shade analysis—midday summer, with archaeological sites. (Source: GML 2012)

Figure 3.9 The four main view points within the study area. (Source: Google Earth Pro, with GML additions)

3.4.2 Key View Corridors

View corridors may be an important measure for Aboriginal heritage studies as they can provide an indication of locations that were important for Aboriginal people. Significant view corridors may have been to distant locations (and significant sites or landforms), or provided a vantage point from which to observe one's own Aboriginal territory—for the purpose of watching other Aboriginal clans/groups or hunting game. Alternatively, localised views may have been important for the 'layout' of Aboriginal encampments, where social laws defined where families were allowed to 'camp'[8].

It is difficult to infer key view corridors, due to historical landscape change, where vegetation regimes and pattern modification will have altered the appearance of such views (and indeed, environmental changes over the course of the Holocene would also have slowly altered such patterns). Therefore, this analysis has been restricted to key views, which are particularly obvious. It should be noted that a number of the Aboriginal economic strategies that were discussed during the field survey, may have depended on the use of specific internal landscapes within the study area. However, discussion of such models shall be reserved for the test excavation analysis, once a greater quantity of data has been collected.

There are four key view corridors within the Anambah survey area; these are shown in Figure 3.9. Each of these view corridors is located on a high point within the study area and provides both localised, internal views to locations that contain archaeological sites and, externally, to distant ranges and landforms.

- View point 1 (Figure 3.10) is located in the north east corner, with a view on to the northern three creek systems, where there was the greatest density of stone artefact sites recorded. From this view point one can see the hilltops on which viewpoints 2 and 3 are located.
- View point 2 (Figure 3.11) is positioned on the hilltop in the northwest of the study area. This is the highest hilltop and provides localised views into the northern third of the study area and distant views to the Hunter River
- View point 3 (Figure 3.12) provides a vantage location from which PADs 7, 8, 9 and 10 can be seen. Some distant views towards the Hunter River are also seen from this location.
- View point 4 (Figures 3.13 and 3.14) is located on the highest hill in the south west corner of the study area, where views extend to the north east across low hills, the fourth order creek to the mountains beyond, and to the south across the valley to Mount Sugarloaf.

Figure 3.10 View point 1, south to west. (Source: GML 2012)

Figure 3.11 View point 2, south east. This location provides local views across the study area and distant views to the south and east. (Source: GML 2012)

Figure 3.12 View point 3, south. The hilltops which contain PADs 7, 8, 9 and 10 can all be seen from this location (PAD 16). (Source: GML 2012)

Figure 3.13 View point 4, south, towards Mount Sugarloaf. (Source: GML 2012)

Figure 3.14 View point 4, east, views across the southern third of the study area and the Hunter River, with the mountain range in the east. (Source: GML 2012)

3.5 Survey Results—Other Aspects

3.5.1 Sources of Raw Stone Materials

Stone artefacts in the Maitland area are predominantly made of silcrete, augmented by silicified tuff, with smaller numbers of diverse other rock types including silicified wood, quartz, quartzite and igneous stone (Baker 1997; GML 2012:30-31; Kuskie 2008a:48; MDCA 2008; Reeves and Coulter 2006:14,17). Lithic raw material sources could potentially have occurred:

- in the local area as bed rock;
- in distant outcrops but transported into the local area by streams—the Hunter River gravels include rocks from diverse geological formations to the north, west and south-west. Wallis Creek could potentially include rocks from diverse geological formations to the south; and
- in distant outcrops but transported to the study area by people during visits or as a result of trade/exchange.

Eight stone outcrops were identified during the field survey (Table 3.5 and Figure 3.2). These outcrops include three siltstone, two sandstone and unworked conglomerate siliceous material on a creek edge. The only quality, workable material was the silcrete outcrop on a slope adjacent to PAD19/ SAC7, the Quarry site, which displays evidence of primary reduction by Aboriginal people. Figure 3.1 displays the locations of these raw stone sources. Of the artefacts found across the site, the majority were made from silcrete, a stone material found on site and near to many of the SACs. The next most common material was mudstone, followed by chert/tuff.

Beth White has undertaken a preliminary study to identify stone resources of potential use to Aboriginal people in the Maitland area, considering both locally available resources and non-local resources which could have been obtained through exchange or trade with neighbouring clan groups. The study was based on desk-top research with a brief field visit to the Maitland area, and focussed on lithic raw materials known to have been used for artefact production, and sought information on the likely sources of these. The stone resources report is available in Appendix C.

Table 3.5 Stone outcrops recorded during the survey

Outcrop	Location	Description
A	Eroded bank of southern dam	At the edge of the water, buried approximately 200mm from the surface. Small pockets of alluvial gravel with small red-silcrete pebbles. First exposure extends 1.5m along the bank, the second (5m from the first) measures 500mm and the exposure has a depth of around 300mm. This material would possibly have been suitable for stone artefact manufacture, although the pebbles were relatively small.
B	Creek bank	Outcrop of poor quality siltstone—highly shattered, highly fragmented with no signs of use. Unsuitable for stone artefact manufacture.
C	Slope	Siltstone poor quality outcrop on the side of a slope. Unsuitable for stone artefact manufacture.
D	Flat/ very slight slope on hilltop	Outcrop of poor quality siltstone within the boundaries of PAD10. Unsuitable for stone artefact manufacture.

Outcrop	Location	Description
E	Creek edge	Pocket of large unworked conglomerate siliceous material (silcrete cobbles). Occurs over an area of 30m from the top of the flat, down to the creek edge. Stone from this exposure appears to have been worked at SAC 7, adjacent to PAD 19 (the Quarry Site).
F	Hill top	Outcrop of very granular sandstone. Does not appear to have been used for grinding stone objects.
G	Hill top	Outcrop of sandstone on high hilltop associated with skeletal soils. Does not appear to have been used for grinding stone objects.
H	Slope	Outcrop of quality, workable silcrete at SAC7, adjacent to PAD19 (the Quarry Site) (Figure 3.15).

Figure 3.15 Silcrete cobbles from the Quarry Site (PAD 19, SAC7) with evidence of possible heat treatment primary reduction. (Source: GML 2012)

Figure 3.16 Alluvial deposit (foreground only) located within an erosional scour in SAC 8. (Source: GML 2012)

Figure 3.17 SAC 8—Duplex soils on the left exposure, alluvial soils on the right exposure . (Source: GML 2012)

3.5.2 Alluvial Terraces

Alluvial terraces have been associated with the following Aboriginal sites and PADs: IF4/PAD15 (possibly), IF7/PAD18, SAC1/PAD21, SAC6/PAD24, SAC8/PAD28 and SAC9/PAD25. Information on the alluvial material at each site is presented in Table 3.6.

Following the regional soil landscape mapping (Section 2.2.2, Figure 2.3) all of the locations with recorded alluvial deposits (except IF4/PAD15) were associated with the Rothbury soil landscape, close to the border of the Branxton soil landscape. IF4/PAD15 was positioned on the Branxton soil landscape (and could have been impacted by ploughing and recent flood events).

It is noted that the descriptions of soil landscapes (Section 2.2.2) define that alluvium should be associated with the Hunter soil landscape; this soil landscape has not been mapped in the northern section of the study area. However, it is suggested that the observed alluvial pockets are connected with the Hunter soil landscape, rather than the Rothbury landscape as mapped. An accumulation of Hunter alluvium could easily have formed in the central north east of the study area, associated with large flood events through lower lying lands.

SAC8/PAD28 (Figure 3.16 and 3.17) provides a case study for the localised accumulation of alluvium, juxtaposed against a second soil landscape. Figure 3.17 shows the two different soil profiles, within a single erosion scar. The profile to the right (which is positioned closest to the confluence of two major creeks) has three distinct stratigraphical layers, with a light brown gritty very stony alluvial layer, sharply interfaced against a brownish black clay loam, grading to a lighter brown clay. The soil profile to the left, demonstrates the Rothbury soils, with the A1 and A2 horizons of a brown loam over a reddish clay.

This difference in soil landscape will be important to note during test excavation, where vertical control of the excavation may provide evidence for stratigraphical layers and thus, a chronological archaeological sequence.

Table 3.6 Alluvial terraces, associated landform and artefact sites.

Site/ PAD	Location (Landform, location e.g. outer bend of creek, aspect)	Soil Description (including inclusions)
IF 4 & PAD 15	Two elevated flats on the lower slope within the open depression of the creek. On the inner bend of the creek with south westerly aspect toward the creek.	Gravel soil material in an exposed bank of the creek. This location could have been exposed to high velocity water movements, which could have removed any archaeological deposit, whilst depositing the alluvial material.
IF 7 & PAD 18	Elevated flat above a highly impacted lower slope adjacent to a dam. Aspect toward dam to the south of the flat.	Soil has high percentage of alluvial material containing some manuported quartzite, silcrete and gravel.
SAC 1 & PAD 21	Low flat terrace in sloping landform above the creek. On the outer bend of the creek with south westerly aspect toward the creek.	Fine sandy alluvial soil with a lot of small gravels approximately 300mm deep overlying yellow clay.
SAC 6 & PAD 24	Low flat in sloping landform adjacent to the creek. On the inner bend of the creek with north westerly aspect toward the creek.	Very fine powdery alluvial soil with few inclusions. Away from the bank, the brown A1 soil has formed over the alluvium. This terrace has the potential for stratified deposits.

Site/ PAD	Location (Landform, location e.g. outer bend of creek, aspect)	Soil Description (including inclusions)
SAC 8 & PAD 28	Low flat landform overlooking a steep eroded slope to the creek. On the outer bend of the creek with southerly aspect toward the creek.	Thin, very sandy alluvial soil approximately 200mm in depth overlying yellow clay. Lots of larger alluvial gravels and pebbles from the creek, with larger silcrete material from the Quarry Site. Weathered bedrock is approximately 1.4m below the surface.
SAC 9 & PAD 25	Low flat in sloping landform above the creek. South westerly aspect toward the creek.	Soil was alluvial in nature, with a high gravel content.

3.6 Analysis and Discussion

3.6.1 Observed Landform and Aspect

Stone artefact based sites were recorded on all landforms within the study area, including flats, hilltops, and open depressions; although the majority were on the gently inclined sloping landforms that predominate across the study area. Most of these sites were located on north facing slopes, directed towards the sun. Most of the stone artefacts were identified in exposures, particularly those associated with erosion around watercourses.

In general the PADs, associated with the identified artefact sites, were positioned on flat to gently sloping landforms overlooking the watercourses. Further areas with PAD were identified on hilltops, raised flats and some gentle slopes. Four of the PADs have significant views that span a large proportion of the study area. Four PADs, have good views to the south, five overlook large creeks and have 'middle distance' views and one PAD has a good northerly aspect. The remainder of the PADs have localised views across their immediate landforms.

3.6.2 Soil Conditions (Integrity and Condition)

Pedestrian survey and examination of historic aerials has shown that although much of the land has suffered historical disturbance from land clearing and agricultural activities, large parts retain the potential for intact archaeological deposits (refer to Section 2.2.7).

The southern two thirds of the study area has been ploughed and cropped within the last 10 years, and thus has reduced integrity, but it has experienced very little animal or water erosion by comparison to the northern third. In general the zones with PAD located within the centre or south of the study area have been subject to soil disturbance from cropping and ploughing over the last ten years—this has reduced their condition.

The northern third of the study area does not appear to have been ploughed or cropped, but has been impacted and eroded by animals and water, respectively; visible erosion scars exist along the creeks, especially on the outer bends. The areas with PAD, in the northern third, do not appear to have been cropped and thus may have a good soil condition.

It can be assumed that the whole of the study area has been subject to animal grazing (apparent in 2012). The primary impacts are erosion along feed locations, dams, some water courses and fence lines where animal tracks occur. Heavy erosion along dam banks was observed in 2012.

In general the study area retains a good level of soil integrity, where erosion has generally been restricted to the outer banks of the creeks in the north. However, the impacts of cropping and

ploughing may have reduced the study area's soil condition, especially in the central and southern portion.

3.6.3 Environmental Focus

Following the field survey, it would appear that the lower lying creek systems in the northern third of the study area were preferred locations for Aboriginal activities (these landforms are distinct to the higher hills in the centre and south of the study area). Should sufficient archaeological materials be present, then it may be possible to describe these areas as an Aboriginal landscape and commence inferring Aboriginal economic and social use of this space (Figure 3.2, 3.4 and 3.5).

3.6.4 Observed Aboriginal sites

Tangible Aboriginal sites observed during the field survey were all connected with the use of stone. No scarred trees, or other site features were observed. This was expected given the regional predominance of stone in the archaeological record. The most common stone material observed was a red silcrete, possibly originating from the quarry located within the study area. A number of mudstone, chert/tuff artefacts were also recorded. These may have originated from gravels in the Hunter River or from sources in the Tomago Coal Measures, ~10km southeast of the study area, near East Maitland (see Appendix C).

The absence of other materials used by Aboriginal people, ie particularly wood, is expected. However, the dominance of archaeological stone should not be used to write the Aboriginal 'history' of the Anambah study area. Inference of plant and wood use should be made from the record of stone; the spatial patterning of stone may also be used to underpin an understanding of social landscape use, ie domiciliary spacing.[9]

3.7 Endnotes

1 DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (24 September 2010). Page 13*

2 2010: Appendix A.

3 Wandsnider, L.A., and Camilli, E.L. 1992. The Character of Surface Archaeological Deposits and its Influence on Survey Accuracy. *Journal of Field Archaeological.* **19(2)**: 169-188.

4 Fanning, P., and Holdaway, S. 2001. Stone Artefact Scatters in Western NSW, Australia: Geomorphic Controls on Artefact Size and Distribution. *Geoarchaeology: An International Journal.* **16(6)**: 667-686.

5 GML. 2012. *East Leppington. Archaeological Technical Report*. Report prepared for Stockland.

6 GML. 2012. *Peppertree Quarry. Archaeological Excavation Report*. Report prepared for Boral.

7 Eg refer to Thomas, J. 2001. Archaeologies of Place and Landscape. In I. Hodder (Ed). Polity Press. *Archaeological Theory Today.* Cambridge. And Darvill, T. 1999. The historic environment, historic landscapes, and space-time-action models in landscape archaeology. In P.Ucko and R. Layton (Eds). *The Archaeology and Anthropology of Landscape.* Routledge. London.

8 Memmott, P. 2007. *Gunyah, Goondie + Wurley. The Aboriginal Architecture of Australia.* University of Queensland Press.

9 Memmott 2007: Figure 5.2

4.0 Anambah—Archaeological Research Design

4.1 Introduction

This Archaeological Research Design (ARD) has been prepared to define the methodology and research parameters for archaeological test excavation at Anambah. The principles upon which this ARD has been developed are the environmental background (Section 2) and the results of field survey (Section 3).

4.2 Mechanism for Archaeological Test Excavation

The archaeological test excavation methodology, described in this chapter, has been developed in accordance with the OEH *Code of Practice for Archaeological Investigation.*[1] Archaeological test excavation is permitted under the Code[2] without the need for a Section 90 permit (i.e. excluded from the definition of harm under the *NPW Act* 1974), provided that the sub-surface investigations are not carried out in the following areas:

- in or within 50m of an area where burial sites are known or are likely to exist;
- in or within 50m of a declared Aboriginal place;
- in or within 50m of a rock shelter, shell midden or earth mound; and/or
- in areas known or suspected to be Aboriginal missions or previous Aboriginal reserves or institutes.

As described by OEH the purpose of test excavation is to:

> *collect information about the nature and extent of sub-surface Aboriginal objects, based on a sample derived from sub-surface investigations. Test excavations contribute to the understanding of site characteristics and local and regional prehistory and they can be used to inform conservation goals and harm mitigation measures for the proposed activity*[3].

This chapter provides details and analysis of the test excavation in accordance with Requirements 14–17 of the Code. This section presents:

- the test excavation sampling strategy;
- details of OEH notification; and
- the methodology for test excavation.

Aboriginal community consultation was undertaken in accordance with NPW Regulation, subclause 80C(6), prior to archaeological test excavation commencing. Aboriginal community consultation is detailed in the accompanying Anambah ACHAR.

4.3 Test Excavation Sampling Strategy

The methodology for archaeological test excavation has been defined by OEH.[4] However, the sampling strategy for undertaking test excavation remains to be defined in accordance with each project, subject to the specific requirements of the study area.

An understanding of previous archaeological work, AHIMS data and the results from field survey, provides a context for previously identified Aboriginal objects and PADs. The outcome of field survey has resulted in a number of landforms being identified with archaeological potential (Figure 3.2).

In an ideal situation, where no post Aboriginal occupation impacts have occurred, all the zones identified as possessing archaeological potential should be sampled. However, in order to develop a strategic sampling model, consideration has been given to the natural and historical processes that have impacted and removed archaeological deposits associated with the study area (Section 2.2.7). Analysis of these factors has defined the need for archaeological sampling within the study area, allowing for a focus on zones that have both good soil integrity and archaeological potential. In addition a number of landforms should be sampled that have been defined as having no archaeological potential in order to test a null hypothesis that will allow for an understanding of the 'background' density of Aboriginal archaeological material. It also aims to provide certainty to the Aboriginal community and OEH that the sampling program has indeed excavated landforms with the greatest archaeological potential.

4.3.1 Archaeological Sampling Strategy

The archaeological sampling strategy to be employed during the excavation at Anambah is based upon the methodology for sampling presented by Orton[5]. Orton presents a 12-step process[6] for determining a suitable sampling strategy and to provide a suitable test excavation methodology. This methodology, following Orton's categories, is presented below.

Existing Knowledge

Existing knowledge has been gathered and presented by this report in terms of registered site data and prior reports; the landscape context, the known impacts to the study area, and consequentially archaeological predictive modelling. The combination of these aspects defines the zones within the study area that are suitable for archaeological testing. However, test excavation units have been located within zones that have varying levels of archaeological potential.

Objectives (and Research Questions)

The first objective of the archaeological test excavation for Anambah is to undertake excavation that allows for the clarification, characterisation, description and archaeological potential of soil horizons across the study area to be realised.

The second objective is to determine whether these soil profiles contain archaeological materials and to undertake an assessment of these materials, within a regional context.

In order to achieve these two objectives, research questions have be established to guide the archaeological process and provide the basis for questioning the data collected. Relevant research questions include:

1. What are the characteristics of soil horizons across the study area?
    a. How has the land use history impacted the study area and survival of soils and thus, archaeological material?
    b. Is there a difference in the soil landscape's integrity across the study area due to different ploughing regimes?

c. At each location, is the deposit consistent? Or, does it possess characteristics that tell of different depositional events?

d. Are there three soil landscapes (Hunter, Branxton and Rothbury) present? Are these found where they are mapped at the regional level? Does the archaeological deposit vary on each landscape? How do these soil landscapes interact and does the archaeological deposit vary by soil landscape?

e. Is there alluvium present (other than that identified through field survey)? How deep is the alluvium and, what are its characteristics? Is there evidence for former alluvial terraces and 'ancient' modifications to the water courses? How does the alluvium interact with the associated soil landscape?

f. Are buried sand sheets or buried alluvial terraces present within the study area? If so, is any archaeological material associated with them? Is stratigraphy present in alluvial deposits?

2. What are the characteristics of archaeological deposits across the study area?

   a. What types and densities of archaeological materials are present? What is the nature (type) of the deposit? Is the deposit stratified? Is the deposit associated with a particular flood event? Does the deposit have different degrees of archaeological potential with depth?

   b. What, if any, evidence other than stone is present for Aboriginal occupation of this region? Is it correct to infer that stone equates to Aboriginal use of a landform? Or were other landforms without stone used by Aboriginal people?

   c. How was stone used on site? Is there a relationship between artefact creation and use of landscape and/or landform?

   d. Are stone deposits spatially discrete within areas of PAD? Does this provide information in terms of Aboriginal social laws and patterning of site use?

   e. Can deposits be dated? What is the antiquity of the evidence?

   f. What is the source of the artefactual stone at any particular site? How does this correlate with the regional research into stone resources undertaken (Appendix D)?

3. How can the deposit be interpreted?

   a. Is there evidence of archaeological spatial patterning of deposits on continuous landforms? How long has it taken for such evidence to be created?

   b. Does spatial patterning, if present, provide any evidence for Aboriginal social rules and laws?

   c. How do archaeological deposits relate to the hill slope shade analysis? Can this analysis be used to inform seasonal use of this landscape?

   d. If archaeological deposits are absent from a landform, in which they were expected to exist (ie soils have good condition and integrity), what does this mean in terms of Aboriginal landscape use?

e. What are the physical attributes of the deposit (stone, carbon, clay or other)?

f. For stone deposits, what are their physical characteristics and do they indicate a specialised use? Is there a difference in stone tool types between the different locations tested?

4. What does the archaeological deposit tell us about Aboriginal use of this specific landscape?

   a. How do long term patterns of Aboriginal population movement through this valley (as described by Aboriginal elders and early ethnographers) correlate with archaeological deposits?

   b. Was the study area used for large scale Aboriginal gatherings? Does landform use correlate with the number of people inhabiting the study area (i.e. if large groups gathered, then did they use the larger landforms for habitation)?

5. Can the archaeology be interpreted in a regional context?

   a. Where did raw stone materials originate from? Have they been brought into the study area? From how far away has the stone been brought?

   b. How old is the archaeological deposit and how does this relate to regional use of this landscape?

   c. What is the relationship of the archaeological material within the study area to the region; in particular, the Pleistocene/Holocene relationship with Stockton Bight and other sites of great antiquity in the region?

   d. Is there evidence of trade in connection to stone deposits?

6. Is the archaeological deposit culturally significant?

   a. What is the heritage value of the deposit, both scientifically and culturally?

   b. How does the Aboriginal community view and value the deposit identified?

7. Is there a deposit worthy of conservation or of future research?

   a. Where and what deposits should be conserved for future generations?

   b. Which deposits should be subject to more extensive investigations?

   c. How should a boundary be drawn around a site? Are identifiable places present within a cultural landscape?

8. Does the deposit provide a link between scientific hypotheses and Aboriginal cultural views?

Population

The targeted population is defined by the extent of the study area boundary and the extent of significant impacts within the study area. Archaeological sampling will be further targeted to those areas that have archaeological potential (those zones that are likely to contain a residual deposit) and those areas not highly disturbed and/or posing a danger to the fieldworkers. At the current time

there are a number of locations which could have a dense archaeological deposit, which may be suitable for 'conservation' (retention) during the urban development of the study area. However, such archaeological areas cannot be defined without being subject to archaeological test excavation. Once test excavation has been undertaken, it will be possible to define the nature and extent of archaeological deposits and thus, enter into planning discussions as to which archaeological deposits should be retained.

In order to test a 'null hypothesis', archaeological Test Units (TUs) are to be placed extending away from landforms that have a high to moderate level of archaeological potential, towards areas that have a low archaeological potential, or are possibly highly disturbed. Such TUs will be placed to test the 'null hypothesis' and will be excavated to prove that archaeological deposits can be scientifically classified according to landform, level of disturbance and that certain landforms do nto contain an archaeological deposit.

Data to be Collected

Data will be collected for each TU during the test excavation on a specific TU context sheet. Data collected will include: TU number, location, landform, aspect, depth of each spit as excavated, number of stone objects (or other features) per spit, total number of objects, the identification of any features or inclusions (such as carbon), taphonomic factors (disturbance, bioturbation etc.), soil characteristics, section and plan diagrams (especially where features are present) and a recommendation as to whether the TU should be expanded (in accordance with OEH guidelines), or further TUs be located surrounding the one excavated.

The excavation director will supervise all TU recording and determine whether further TUs should be opened (in addition to those defined by the sample grid), or whether a TU should be expanded.

A running total of features and Aboriginal objects will be kept, so as to determine an in-the-field comparison between sample areas.

Degree of Precision Required

The location of each sample transect has been established using ArcGIS based upon landforms, disturbance factors, sites recorded during field survey and archaeological potential. For every sample transect, TU were positioned using ArcGIS on an offset 20m by 20m grid. The accuracy of this initial layout is high. All TU locations will be set-out by a surveyor, based upon the sample pattern developed in ArcGIS (with minor variation only where physical features on the ground necessitate this). Additional TUs, when required, will be set out in the field by hand, using standard surveying techniques. Excavation of each spit will be determined by an archaeologist using a hand tape; the vertical control for excavation should be around 10mm.

Spatial control of TU locations and vertical excavation will be sufficiently precise to define the location of Aboriginal deposits across the study area and to allow the research questions to be addressed.

Method of Measure

The 'background' density of Aboriginal objects across the wider region is very low, that is possibly around 0.1 objects per metre square (based upon our understanding of archaeological excavation results from regional work). In this region it is suggested that object densities over 100 objects per square metre represents a very dense deposit.

The origins of stone materials also needs to be assessed, as field survey has identified a number of locations that may contain localised sources of stone suitable for artefact manufacture. Further, the Aboriginal community has described mechanisms for the transport of non-local materials from the north and south into the study area. Therefore, all Aboriginal material present in any one site needs to be assessed in terms of its origin (refer to Appendix D) and placed within a regional framework.

Some zones may have limited evidence relating to Aboriginal objects, but yield other significant deposits, such as hearths, oven/fire pits, heat retaining stone, etc. Archaeological investigation of such features will be considered, irrespective of the associated stone artefact deposit, as they could reflect domiciliary areas.

The Frame for Sampling

With reference to the units of sampling, Orton states that:

> *…surveys do not have to be based on grid squares or transects: other shapes (even ones without straight lines) are statistically permitted…*[7]

OEH's requirements for sampling are fairly basic—the sampling framework for the test excavation has been based upon 20m grids, where TUs will be excavated in transects, with 20m spacing between TUs. Each sample transect has been defined according to soil landscape, landform within that landscape, and avoiding all known limitations. These are positioned to intersect known surface expressions of archaeology and to sample areas that have been identified as potentially associated with Aboriginal traditions.

In order to locate archaeological deposits in each landform, a number of parallel transects have been proposed for most sample locations. The offset between transects is 20m, thus allowing for a regular pattern of sample TUs. Orton[8] has examined the relationship between site diameter to grid interval and the probability of discovering a site. He contrasted a square grid against a staggered square grid and found that 'a staggered grid is considerably more efficient than a square grid…'[9] with an increased probability of discovering sites using the staggered grid. Thus a staggered grid pattern may be employed if additional TUs are to be located following excavation of the initial 394 TUs. The layout of the sample transects across the study area, and the TUs on each transect is shown in Figures 4.1 to 4.5. It is proposed to excavate up to 500 TUs, however, only 394 have been planned during the additional layout. Up to an additional 100 can therefore be excavated, once the initial 394 have been completed. Additional TU locations will be guided by the presence of an archaeological deposit; suitable locations where further TUs can be placed in order to precisely define the extent of a deposit; and in response to the results of initial testing, where the field team will discuss and location further TUs. If excavation in one area of PAD is not proving a reliable deposit, the excavation team may cease excavation in this area and move onto a new transect of the TU.

A breakdown of TUs and transects, by landform and soil landscape, is presented in Table 4.1. As can be seen, a wide variety of landforms and locations will be test excavated.

Table 4.1 Number of Transects and TUs, by soil landscape and landform

Soil landscape (based on Figure 2.3)	Landforms (based on Figure 2.4)	Number PADs	Number TUs (approx.)
Hunter	Low hilltop	1	12
	Raised flat	1	12

Soil landscape (based on Figure 2.3)	Landforms (based on Figure 2.4)	Number PADs	Number TUs (approx.)
Branxton	Hilltop	3	22
	Raised flat	4	32
	Ridge	1	12
	Slope	3	25
	Terrace	1	9
Rothbury	Low hilltop	1	47
	Raised flat	5	61
	Slope	3	34
	Terrace	5	128
Totals		28	394

The Pre-Test or Pilot Survey

Orton notes that the best survey designs can be made when the survey is over and that a pilot survey can serve to remove some of the 'bugs' from the sampling process.[10] The current test excavation design has been based upon the recent field survey, with GPS-based identification of areas that are suitable for sub-surface sampling.

It is intended that during the test excavation, the Aboriginal representatives and field archaeologists will be able to respond to the initial results of excavation and determine whether further transects should be sampled.

Should a sample transect yield no cultural evidence, then excavation of the transect may be terminated prior to the completion of all TUs on that transect, or TUs skipped to a location that may yield results, provided both archaeologists and Aboriginal stakeholders agree on this course of action.

Organisation

The test excavation will be undertaken by a team which will include an archaeological excavation director, four field archaeologists and up to twelve Aboriginal representatives (from the Registered Aboriginal Parties [RAPs]). Excavation teams of two people will hand excavate sequential 500mm by 500mm TUs along each sample transect (in accordance with the requirements of the Code of Practice). All deposits will be individually wet sieved through nested 7mm and 3/5mm sieves and any archaeological material retained with respect to its TU and context layer. Following recording by the excavation director, each TU will be backfilled with clean fill by Stockland. All information relating to each TU will be recorded on a context sheet.

Running totals of artefacts and features will be kept in order to keep track of yields on a sample transect, so that a logical progression to expanding a sample transect can be made if required.

Summary and Analysis

Following test excavation, all recovered Aboriginal stone objects will be subject to specialist analysis by GML's Aboriginal lithic specialist Beth White. Ms White will undertake recording of all

relevant attributes in a comparable manner to other regional lithic studies and in accordance with Holdaway and Stern (2004) and OEH (2010) Requirement 19. A technical report will be prepared that contrasts the Anambah stone materials against other recent excavations in the region, especially that from excavations at McKeachie's Run.

Following test excavation, objects will be reburied in accordance with OEH (2010) Requirements 16b and 26. The precise mechanism for this reburial will be discussed with the Aboriginal community and determined during the cultural heritage assessment.

If required, faunal analysis will be undertaken by Dr Tim Owen. Should shell material and/or human skeletal material be identified during the test excavation, work will cease in the immediate area and OEH, and in the case of the latter, the NSW Police Department will be notified. Dr Owen will be responsible for the positive identification of such materials.

If recovered, carbon samples associated with cultural features would be submitted for carbon dating.

Landscape analysis and all other reporting will be undertaken by GML, assisted by the field archaeologists present during the test excavation. All results will be analysed with the assistance of ArcGIS, and consequential mapping of sites, place, landscapes and heritage values will be GIS based.

In accordance with OEH requirements, this report will be provided to the RAPs for review and comment (with a minimum period of four weeks to comment). Following Aboriginal review, the report will be forwarded to the OEH.

Information Gained for Future Survey

The information derived from test excavation will be used to underpin the heritage values assessment of the study area. The report will provide direction for conservation of Aboriginal heritage and an impact analysis for all known objects, sites, places and values within the study area. The report will detail sites and places that would require further study, and possibly excavation if they cannot be conserved during any future development process.

The report will also contrast and compare the study area within the wider region and provide direction for future studies.

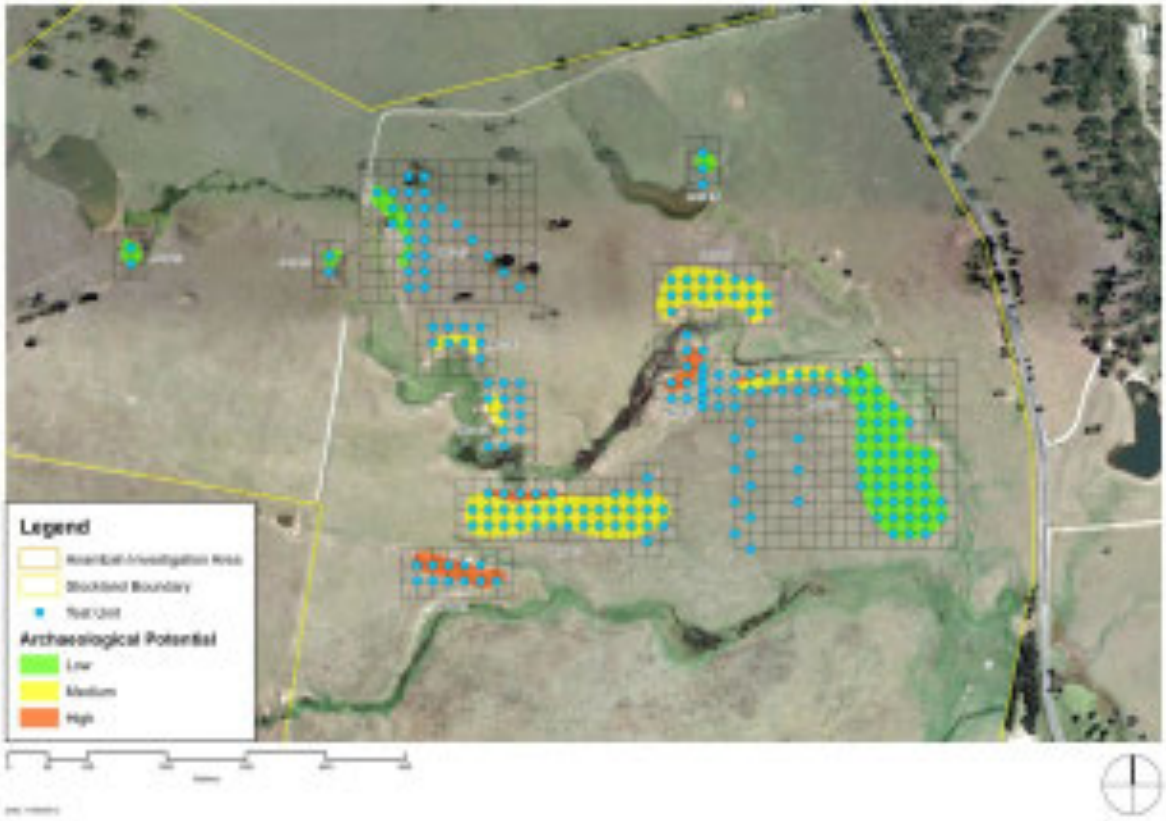


Figure 4.1 TU against Aboriginal sites and PADs (Source: GML 2012)

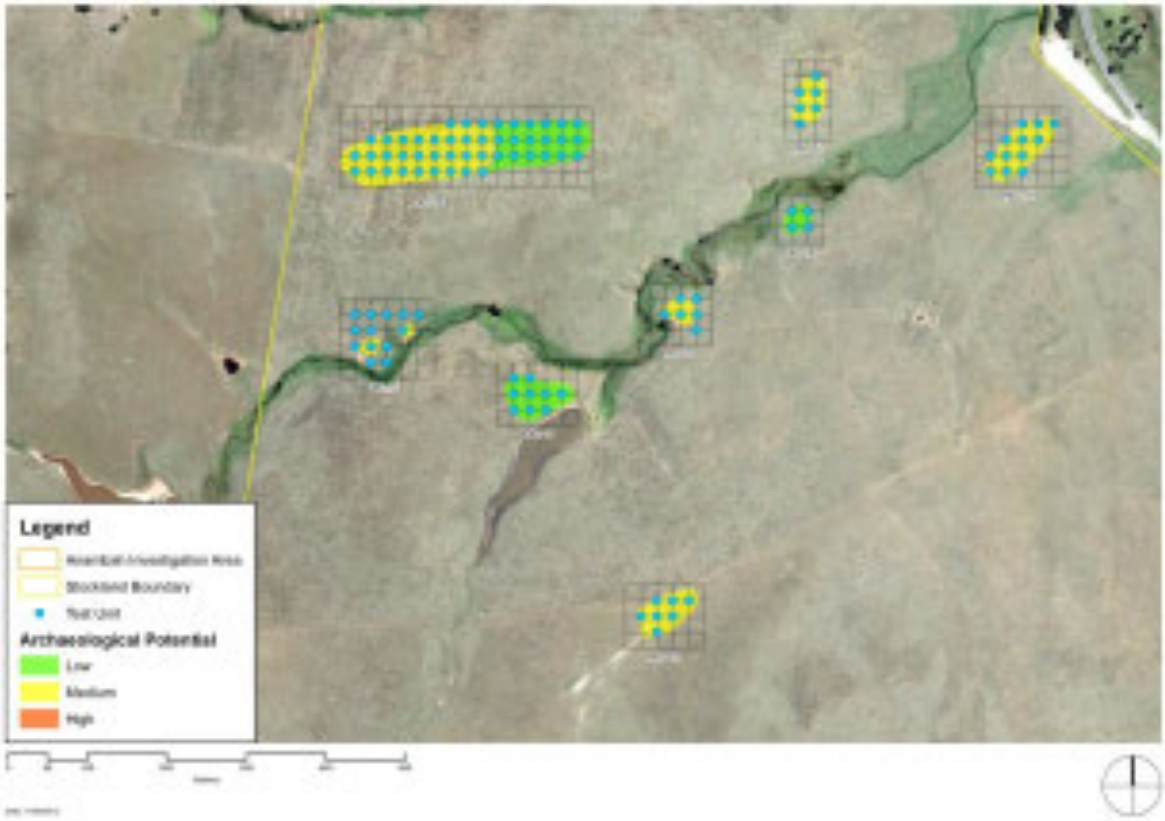


Figure 4.2 TU against Aboriginal sites and PADs (Source: GML 2012)

Figure 4.3 TU against Aboriginal sites and PADs (Source: GML 2012)

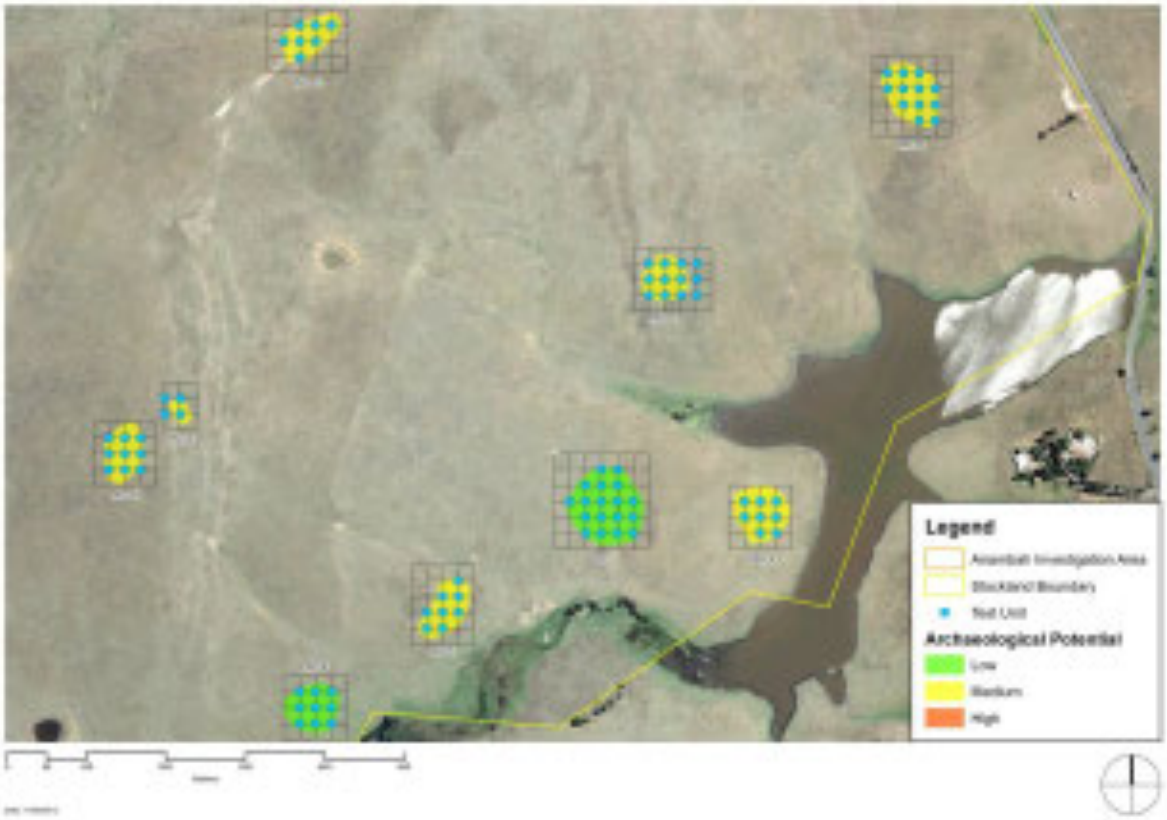


Figure 4.4 TU against Aboriginal sites and PADs (Source: GML 2012)

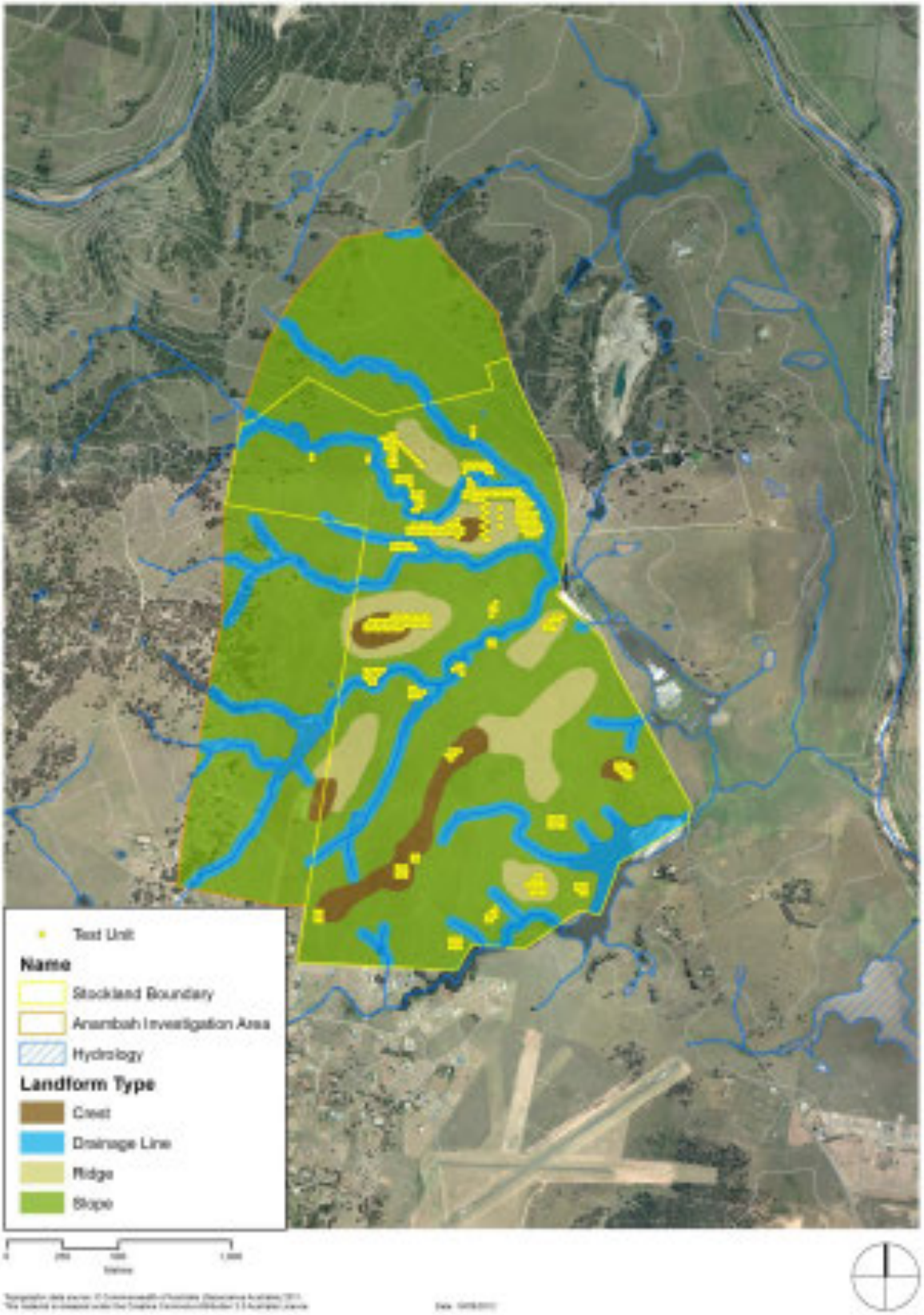


Figure 4.5 TU against landforms (after Figure 2.4) (Source: GML 2012)

4.4 Endnotes

1 (OEH) DECCW 2010.
2 (OEH) DECCW *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (24 September 2010). Page 24-28.*
3 (OEH) DECCW 2010: 24
4 (OEH) DECCW 2010: Requirement 16a (Page 26-27).
5 Orton, C. 2000. *Sampling in Archaeology.* Cambridge Manuals in Archaeology. Cambridge University Press. Cambridge.
6 Orton, C. 2000:27-39
7 Orton 2000:29.
8 Orton 2000: Figure 4.7, 4.8, Pages 90-92.
9 Orton 2000: 90
10 Orton 2000: 29

5.0 Preliminary Scientific Values and Significance Assessment

5.1 Preamble

Aboriginal heritage sites, objects and places hold value for communities in many different ways. The nature of those heritage values is an important consideration when deciding how to manage a heritage site, object or place and balance competing land-use options.

The approach to the Aboriginal heritage assessment is based upon identifying the key Aboriginal heritage values; values that are likely to be both tangible and intangible. This approach needs to consider the values assessment from the scientific and Aboriginal community perspectives, in accordance with Australian best practice documents.

This assessment concerns itself with scientific values only. Aspects of social value, historic values and aesthetic value are assessed in the Aboriginal Cultural Heritage Assessment Report, to which this report is an appendix[1].

The primary guide to management of heritage places is the Australia ICOMOS Burra Charter 1999. The Burra Charter defines cultural significance as:

> *Cultural significance means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.*
>
> *Cultural significance is embodied in the place itself, its fabric, setting, use, associations, meanings, records, related places and related objects.*
>
> *Places may have a range of values for different individuals or groups.*

5.2 Approach to Assessing Aboriginal Heritage Significance

In line with the Burra Charter's four principal values (social, historical, scientific and aesthetic) and the NSW Heritage Office's 2001 publication *Assessing Heritage Significance,* OEH has developed guidelines for assessing Aboriginal cultural heritage significance within a study area based on four key criteria:

- Social or cultural value—refers to the spiritual, traditional, historical or contemporary associations and attachments the place or area has for Aboriginal people. Social or cultural value is how people express their connection with a place and the meaning that place has for them.
- Historic value—refers to the associations of a place with a historically important person, event, phase or activity in an Aboriginal community.
- Scientific value—refers to the importance of a landscape, area, place or object because of its rarity, representativeness and the extent to which it may contribute to further understanding and information.
- Aesthetic value—refers to the sensory, scenic, architectural and creative aspects of the place. It is often closely linked with the social values.

5.3 Method for Identifying and Assessing Cultural Significance

The significance of Aboriginal sites, objects and places is assessed through a combination of avenues of inquiry. These include consultation with registered Aboriginal parties, investigation into the background history of the study area and local region, and field work to date. This is undertaken with the aim of understanding key values associated with the four criteria listed above.

Aboriginal community consultation is required in order to make a valid assessment of Aboriginal (heritage) values, especially those Aboriginal memories, stories and associations between the Aboriginal people and their traditional lands or Country. Aboriginal people frequently express an enduring connection to their Country, a connection that transcends generations, both past and present. The connection is frequently expressed as a sense of belonging, which may manifest through physical objects or place; alternatively it may be presented as an intangible idea, where an appreciation of an unseen quality or non-materialistic value connects a place in the landscape, tradition, observance, custom, lore belief and/or history to the person or group describing the item, event or value. The notion of intangible, social, or community values is essential to Aboriginal people, as 'the effective protection and conservation of this heritage is important in maintaining the identity, health and wellbeing of Aboriginal people'[2].

As the consultation process for the study area is ongoing, the assessment of aspects of social value, historic value and aesthetic value is incomplete. This section only presents the values identified thus far through community consultation.

5.4 Method for Assessing and Grading Scientific Significance

The archaeological fieldwork undertaken to date has allowed for a preliminary assessment of the area's scientific significance. This assessment has sought to identify Aboriginal heritage objects and sites within the study area and obtain sufficient information to allow the values of those objects and sites to be determined. Following OEH guidelines for assessing scientific value[3] five key criteria have been considered during the examination of the scientific value/significance of the identified sites and places within the subject area. These criteria are:

- Research potential: does the evidence suggest any potential to contribute to an understanding of the area and/or region and/or state's natural and cultural history?
  - Integrity & condition. Integrity refers to the level of modification a site has been subject to (the cultural and natural formation process) and whether the site could yield intact archaeological deposits, which could be spatially meaningful. Condition takes into account the state of the material, which is especially relevant for organic materials;
  - Complexity. The demonstrated or potential ability of a site to yield a complex assemblage (stone, bone and/or shell) and/or features (hearths, fire pits, activity areas);
  - Archaeological potential. The potential to yield information (from sub-surface materials which retain integrity, stratigraphical or not) that will contribute to an understanding of contemporary archaeological interest, or which could be saved for future research potential.

- Connectedness. Whether the site can be connected to other sites at the local or regional level through aspects such as type, chronology, content (i.e. materials present, manufacturing processes), spatial patterning or ethno-historical information;

- Representativeness. How much variability (outside and/or inside the subject area) exists, what is already conserved, how much connectivity is there;
- Rarity. Is the subject area important in demonstrating a distinctive way of life, custom, process, land-use, function or design no longer practised? Is it in danger of being lost or of exceptional interest?
- Education potential. Does the subject area contain teaching sites or sites that might have teaching potential; and
- Archaeological landscapes. The study of the cultural sites relating to Aboriginal peoples within the context of their interactions in the wider social and natural environment they inhabited. Landscapes can be large or small depending upon specific contexts (i.e. local or regional conditions); they may also may be influenced by Aboriginal social and demographic factors (which may no longer be apparent);

Following OEH 2001, the values, as outlined above, will be graded in accordance with a basic ranking of High, Moderate or Low. The ranking is based upon the research potential, representativeness, rarity and educational potential of each value. Where possible, the grading is stated at the end of each value assessment.

A statement of Aboriginal scientific significance has been prepared that summarises the salient values as drawn from the above criteria.

5.5 Social or Cultural Significance

Discussions with RAPs (throughout the consultation process and during the field survey) has indicated that the range of hills surrounding the north of the study area are significant for a number of reasons. These locations would have been used as viewing location, where significantly local landmarks, including Mount Sugarloaf, the Hunter River and the Brokenback mountain range could be viewed. In addition, such locations were used for observing other Aboriginal people, families and on occasions of larger gatherings, other clan groups. Secondly, these hilltop locations were connected with ‘men’s business’, which included stone tool manufacture and potentially activities that did not necessitate stone resources. These uses may have included ceremonial activities, and male initiation, which were significant parts of the social and cultural life of the Aboriginal community. GML has been provided information on such activities and their locations, but has been requested for this information to be with-held from this report.

During the field survey local RAPs identified that most of the hill tops and lower flats (and terraces) were significant landforms, especially following flood events. When floods came through, wild game would congregate on the high ridges, creating good opportunities for hunting. Thus the landscape has value for the stories associated with it that reflect previous Aboriginal land use and customs.

Stone artefacts concentrations were identified as significant because of their direct connection to Aboriginal occupation and use of the area. The apparent patterning of objects within the landscape was of cultural importance as it provided evidence for selective landform use, which potentially related to social factors, such as Aboriginal law governing where and when people could go.

The RAPs conveyed that Aboriginal people from far and wide were invited to Mount Sugarloaf for ceremonial activities. Camp site patterning in the landscape present at Anambah, on the northerly approach to Mount Sugarloaf would have been dictated by relationship to the land and to other groups. Different clans would have inhabited the various hilltops, for purposes of visibility, while others would have been positioned on the lower flats. The landscape has significance for its reflection of Aboriginal social organisation and connection to Mount Sugarloaf.

RAPs identified that the stone material is able to 'tell a story' as certain clans used different materials for certain purposes and controlled certain resources within their lands; thus stone materials may be used to indicate where people have come from. The silcrete quarry site (SAC7/PAD19) was identified as significant as it identified a particular local clan and indicates the material they owned and used.

5.6 Historical Significance

Historical research, archaeological investigation and ongoing consultation with Aboriginal stakeholders has not indicated whether the study area is historically significant.

5.7 Scientific Significance

The subject area has been assessed against each of the criteria, defined above. The following assessment is study area inclusive, unless specific zones, locations, sites and/or features warrant individual mention.

Research potential

In general the study area contains sufficient archaeological materials, primarily in the form of Aboriginal stone objects, to present a level of research potential that will contribute to a wider understanding of this area, within the context of the Hunter Valley. The study area contains a varied combination of landforms and soil landscapes, all of which hold an archaeological signature. Contrast between archaeological deposits associated with hilltops and those on low flats overlooking watercourse, and the varied soil landscapes may provide a detailed picture of Aboriginal landscape use, which is not normally accessible through archaeological excavation and/or research. In addition, recovery of an analysable assemblage of stone may provide new information pertaining to stone material sources and trade networks.

A large assemblage of stone artefacts would be expected from the future phase of test excavation and the presence of alluvial deposits and terraces provides the opportunity to investigate chronological stratigraphic sequences that may provide new evidence of changes in stone material use over the mid to late Holocene.

Of particular research interest was the patterning of archaeological materials within the study area. From the results of the field survey, landforms associated with the creek systems (low flats on hill slopes) did not generally contain a continuous density of materials. Instead objects were clustered in discrete groups, separated from the adjacent artefact concentrations by a distance of between 60m to 150m. This seeming separation of materials requires further investigation through test excavation. The separation could be associated with specific selection of landforms and/or locations, which could have been governed by Aboriginal tradition and law.

A number of research questions have been established for the future archaeological test excavation. These questions will focus the research and begin to address the research potential of the study area.

Integrity & condition

Pedestrian survey and examination of historic aerials has shown that although much of the land has suffered historical disturbance from land clearing and agricultural activities, large parts retain the potential for intact archaeological deposits (refer to Section 2.2.7).

The southern two thirds of the study area has been ploughed and cropped within the last 10 years, and thus has reduced integrity, but it appears to have experienced very little animal or water erosion by comparison to the northern third.

The northern third of the study area does not appear to have been ploughed or cropped but has been eroded by animals and water; visible erosion scars exist along the creeks, especially on the outer bends.

It can be assumed that the whole of the study area has been subject to animal grazing (apparent in 2012). The primary impacts were erosion along feed locations, dams, some water courses and fence lines where animal tracks occur. Heavy erosion along dam banks was observed in 2012.

Water erosion has resulted in moderate soil condition and low to moderate integrity in areas of impact. The condition of the soils across all the study area following vegetation stripping and cropping is high, while the integrity in the northern third is high, whilst in the central and lower third it appears to be low (NB archaeological test excavation should confirm this assumption). The impacts of animal grazing have resulted in moderate soil condition and low to moderate soil integrity. 4WD tracks, fence post installation and dam construction have resulted in poor soil condition and low integrity in the areas of impact.

Overall, the study area is significance for its potential to yield intact archaeological deposits, which could be spatially interpretable, particularly in the northern third.

Complexity

The majority of archaeological deposits within the study area are likely to possess only stone objects (with some locations having objects within spatially intact deposits). However, at this point in time the northern third of the study area is considered to have moderate potential to yield a complex assemblage (stone resources and variety of tools) and/or features (hearths, fire pits, activity areas).

The analysis of stone objects from the study area and surrounding region appears to suggest the use of local stone, and also importation of stone material from Newcastle and other areas. Such stone could have been procured through trade networks. Further study of the stone resource may provide new evidence for such trade networks. Analysis of stone objects may provide evidence for intra-site use, and could present evidence for spatially discrete activities being undertaken within different locations of the study area.

Archaeological potential

Archaeological potential has been assigned to landforms across the study area. The majority of archaeological deposits have a low to moderate potential to yield spatially intact, unmodified, dense archaeological assemblages. However, two areas with a high level of archaeological potential have

been identified (SAC 6 & PAD 24 and SAC 1 & PAD 21), two areas with moderate to high potential (SAC 5 & PAD 20 and SAC 9 & PAD 25), and one area with moderate potential (SAC 8 & PAD 28). The remaining sites and PADs identified during field survey have been attributed moderate to low, low to moderate or low potential.

Connectedness

The Aboriginal sites identified within the Anambah study area can be connected to those at the regional level. The sites are connected through their landscape location, landform position and commonality in material content. Comparative analysis of these factors will further archaeological knowledge in this region of the Hunter Valley. The study area meets this criterion but requires archaeological test excavation to provide a viable sample which is scientifically connected to other nearby locations.

Representativeness

Archaeological deposits and the physical assemblage of stone within those deposits appear to be representative of wider deposits. In general the materials themselves are representative. Deposits with a moderate or high archaeological potential have the ability to provide a suitable sample of materials for regional characterisation and comparison.

Rarity

The study area appears to possess a number of unique heritage aspects, which can be considered rare at the local level.

The spatial nature of archaeological deposits, located at discrete distances along the creeks and lower slopes, coupled with the use of micro-landforms (low flats) on the slopes, has not been previously archaeologically identified in this region. Whilst such patterning may have been the norm for Aboriginal landscape use in this region, until further research and identification is undertaken, the spatially discrete archaeological deposits within Anambah should be considered rare. Any chrono-stratigraphic sequences within the alluvial terraces may also be rare at the regional level. However, further research is required to provide additional evidence for this patterning, which should only be described as tentative at the current time.

The hills across which the study area is positioned, may be regionally rare and provide outstanding views across the Hunter Valley to Mount Sugarloaf and adjacent mountains in the south.

Education potential

The study area could yield a large artefact assemblage suitable for substantial scientific analyses, with sufficient detail and content to be of educational potential to the general public. The sites in the northern third of the study area may present a context that could be used to explain territorial aspects of Aboriginal society and place the study area within a regional context.

Archaeological landscapes

The study area is considered to have archaeological landscapes associated with flat hill tops and low flats (terraces) on the slopes above the creek corridors. The two landforms present a potential for future, informative landscape analysis.

The flat hill tops possess local views to Mount Sugarloaf and across the Hunter River's flood plain. These views, and some of the hills from which they are observed, may have been connected with

specific Aboriginal traditions. The low flats overlooking the creeks may have been used for different traditional purposes. The archaeological accumulation of materials resultant from occupation activities may be present in sufficient quantities to draw inference on landscape use and infer intra-site archaeological patterning. The differences between these landforms and any difference in archaeological assemblage between them, and the slopes that separate them, including the presence and absence of materials in these zones, may provide new information on landscape use.

Following the field survey, it would appear that the lower lying creek systems in the northern third of the study area were preferred locations for Aboriginal activities (these landforms are distinct to the higher hills in the centre and south of the study area). Should sufficient archaeological materials be present, then it may be possible to describe these areas as an Aboriginal landscape and commence inferring Aboriginal economic and social use of this space.

The spatial differentiation between the hill tops and lower flats, habitation and use/ activity zones within the landscape, with and without archaeological deposit, may provide intangible evidence for Aboriginal 'location/site' selection and consequential use, possibly over a long period of time. Landforms within the different soil landscape may also differ in activity/ habitation patterns and their archaeological deposits could provide evidence for these differing uses.

5.8 Aesthetic Significance

Historical research, archaeological investigation and ongoing consultation with Aboriginal stakeholders have not indicated whether the study area (or aspects of it) are aesthetically significant. Further research may present evidence for such an aesthetic value.

5.9 Endnotes

1 This division is in line with OEH requirements for reporting and assessment, as defined under OEH. 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011). Section 2.4.2 and DECCW. 2010. *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (24 September 2010). Requirement 11.

2 DECCW 2010 (April). *Aboriginal cultural heritage consultation requirements for proponents 2010*. DECCW, Sydney.

3 OEH. 2011. *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* (April 2011). Page 10.

6.0 Impact Assessment

This heritage assessment has been prepared to support the rezoning proposal for the future Anambah residential development. While the proposal for rezoning poses no direct impact to the heritage values present within Anambah, the consequential residential development would result in an impact.

In line with OEH and Heritage Branch heritage impact assessment guidelines, the impacts arising from the potential residential development of the study area have been assessed for Aboriginal heritage sites, places and values.

6.1 The Indicative Layout Plan

A draft Indicative Layout Plan (ILP), intended for public comment, for the proposed subdivision and consequential residential development of the Stockland landholdings at Anambah has been used to determine the potential impacts on Aboriginal heritage.

The key aspects of the ILP include:

- discrete development precincts;
- creation of zones with wetland species and native grasses;
- revegetation areas;
- a permanent water storage pond;
- the retention of four main Riparian corridors;
- a public hub with three playing fields, a school and shops; and
- residential subdivision and development across the remainder of the study area.

Based on the proposed ILP, a number of the identified heritage sites will be impacted by the proposed development. Therefore, this impact assessment will be used to underpin future heritage management and mitigation requirements which have been suggested in the subsequent section of this report and which will be further refined following test excavation within the Stockland landholdings.

It should be noted that the proposed ILP can be modified following rezoning, which allows some flexibility in terms of altering the position of parks, detention basins, some of the urban footprint etc so that the possibility exists for the conservation of some Aboriginal sites. Therefore, this impact assessment should be considered preliminary, where Stockland will aim to conserve further Aboriginal heritage sites and places through future evolution of the ILP. Consideration of the final/actual impacts to Aboriginal heritage will be undertaken for a future Section 90 application.

6.2 Approach to Aboriginal Heritage Impact Assessment

An objective of the *NPW Act* 1974 is the “conservation of objects places and features … of cultural value within the landscape, including … places, objects and features of significance to Aboriginal people …” (s.2A(1(b)(i)).

The publication—*Operational Policy: Protecting Aboriginal Cultural Heritage (*DECCW 2009)—provides guidance to proponents in term of Ecologically Sustainable Development (ESD). The following discussion provides an overview of ESD and its application to the current project.

> *Avoiding or Reducing Impact to Aboriginal Sites*
>
> *DECC [OEH] needs to balance the sometimes competing tensions between development activities and environment protection when we make decisions. Although the NPW Act gives a high level of protection to known Aboriginal objects [and since the NPW Amendment Regulation 2010 all unknown Aboriginal sites], recent court decisions have reinforced that Part 6 gives the Director General (DG) express powers to consent to the damage, destruction or defacement of Aboriginal objects by development activities. The powers in Part 6 are not inconsistent with the objects of the Act or a requirement to give effect to ESD. (DECC 2009: Section 3.8)*

The OEH has three policies that provide guidance with respect to avoiding or reducing impact to Aboriginal sites:

> *Policy 20*
>
> *Impacts to significant Aboriginal objects and places should always be avoided wherever possible. We [the OEH] will promote the development (or amendment) of proposals to avoid impacts and therefore avoid the need for s.90 AHIPs.*
>
> *Policy 21*
>
> *Where impacts to Aboriginal objects and places cannot be avoided, we will require the proponent or AHIP applicant to develop (or amend) proposals so as to reduce the extent and severity of impacts to significant Aboriginal objects and places through the use of reasonable and feasible measures. Any measures proposed should be negotiated between the proponent or AHIP applicant and the Aboriginal community.*
>
> *Policy 22*
>
> *Once all avoidance, minimisation and mitigation options have been adequately explored, we may also consider the appropriateness of any proposed actions having potential Aboriginal cultural heritage benefit. Any actions proposed should be negotiated between the proponent or AHIP applicant and the Aboriginal community.*

6.2.1 Principles of Ecologically Sustainable Development

Ecologically Sustainable Development has been defined in section 6 of the *Protection of the Environment Administration* Act 1991 (NSW). This requires the integration of economic and environmental considerations (including cultural heritage) in the decision-making process. In regard to Aboriginal cultural heritage, ESD can be achieved by applying the principle of intergenerational equity and the precautionary principle (DECC 2009: 26).

Intergenerational Equity

> *Intergenerational equity is the principle whereby the present generation should ensure the health, diversity and productivity of the environment for the benefit of future generations.*
>
> *In terms of Aboriginal heritage, intergenerational equity can be considered in terms of the cumulative impacts to Aboriginal objects and places in a region. If few Aboriginal objects and places remain in a region (for*

example, because of impacts under previous AHIPs), fewer opportunities remain for future generations of Aboriginal people to enjoy the cultural benefits of those Aboriginal objects and places.

Information about the integrity, rarity or representativeness of the Aboriginal objects and places proposed to be impacted, and how they illustrate the occupation and use of land by Aboriginal people across the region, will be relevant to the consideration of intergenerational equity and the understanding of the cumulative impacts of a proposal.

Where there is uncertainty, the precautionary principle should also be followed. (DECC 2009:26)

The Precautionary Principle

The precautionary principle states that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

In applying the precautionary principle, decisions should be guided by:

a careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment

an assessment of the risk-weighted consequences of various options.

The precautionary principle is relevant to DECC's consideration of potential impacts to Aboriginal cultural heritage where:

the proposal involves a risk of serious or irreversible damage to Aboriginal objects or places or to the value of those objects or places, and

there is uncertainty about the Aboriginal cultural heritage values or scientific or archaeological values, including in relation to the integrity, rarity or representativeness of the Aboriginal objects or places proposed to be impacted.

Where this is the case, a precautionary approach should be taken and all cost-effective measures implemented to prevent or reduce damage to the objects/place. (DECC 2009:26)

With respect to the above OEH policies (Policy 20–22) and ESD the following sections detail specifications for conservation, potential impact, and possible reductions to impact on the identified Aboriginal sites and values in the current study area.

6.3 Impact Assessment

6.3.1 Proposed Impacts

The proposed residential development would result in holistic impacts to all soil horizons across Stockland's landholdings, from activities such as cut and fill, top soil stripping and development for housing and its associated infrastructure.

Development activities would affect all parts of the study area including the riparian corridors where ground disturbance activities may include removal of weeds, vegetation rehabilitation or machinery activities.

6.3.2 Aboriginal Sites that Could be Impacted

The proposed subdivision and residential development of Stockland's landholdings could result in an impact to many of the Aboriginal sites identified during the field survey, as well as further currently unidentified subsurface archaeological deposits.

The current ILP does not indicate direct impacts to sites: SAC7/PAD19, half of SAC1/PASD21 (high archaeological potential); SAC9/PAD25 (moderate to high); half of SAC8/PAD 28 (moderate) and around half of the low archaeological potential sites and PADs. These land areas could be impacted by top soil stripping, general construction activities and rehabilitation works.

As such, the suite of proposed residential development activities could cause direct and total harm to the majority of Aboriginal sites and areas of sensitivity. Overall, such unchecked impact would result in the loss of further Aboriginal sites and values from the Hunter Valley.

There are also potential indirect impacts to Aboriginal sites outside the Anambah study area from the increased population that the development would facilitate. Recreational use of the surrounding bushland and open space could result in increased visitor rates in Aboriginal sites and places.

6.3.3 Cumulative Impact

The gradual and continued loss of Aboriginal sites (a consequence of urban and infrastructure development) is resulting in a substantial overall cumulative impact to Aboriginal heritage information and values in the region.

Impacts to the identified sites from Anambah (with the potential to contain useful and rare information about Aboriginal land use, practices and traditions) without appropriate management and mitigation, culminates in a loss of Aboriginal heritage value and information essential to the understanding of past Aboriginal people, their culture and subsistence in the Hunter Valley.

An aim for Stockland and the Aboriginal community, would be to thus identify which sites within Stockland's landholdings are of highest heritage values and, as such, which could be retained through the residential development process.

6.3.4 Conservation of Aboriginal Sites

A proposal for the conservation of key locations, where high value Aboriginal heritage archaeological deposits are located, could be developed. The best potential for retention within the development is associated with riparian corridors (which, prior to test excavation, have the greatest concentration of Aboriginal archaeological sites) and large items of public infrastructure, such as playing fields.

At the current time, the archaeological record provides insufficient data to present detailed GIS mapping that defines the precise locations of archaeological deposits; in turn this prevents a robust scientific values assessment to be undertaken.

Archaeological test excavation may provide additional data to rectify this situation. Therefore, it is proposed that following archaeological test excavation (and associated reporting with values assessment), the ILP may be revised to allow for the conservation of key Aboriginal archaeological sites. This may be achieved through:

- determination of high value archaeological deposits located within riparian corridors and non-development areas. Where present, appropriate measures will be formulated, dependent on the level of assessed significance;
- movement of neighbourhood parks, playing fields and other large public infrastructure items to zones where key archaeological deposits are located (a process of cover and fill can be used to minimise impacts and retain in–situ archaeological deposits);
- movement of detention basins within the riparian corridors to avoid archaeological sites; and
- should high value archaeological deposits be located within the urban footprint, some cases may apply where alteration to the urban design could be considered for conservation purposes.

6.3.5 AIA Non–Stockland Land Possible Impacts

At the time of writing residential development has not been planned for land areas outside Stockland's holdings within the AIA. Further, as no archaeological survey has been undertaken across these areas, the extent of Aboriginal archaeological deposits (or other values) is uncertain.

The Aboriginal archaeological potential of these lands is presented in Figure 2.10. If these areas did contain Aboriginal archaeological deposits and were subject to residential development, then further impacts to Aboriginal heritage would occur. However, such conjecture will require heritage assessment, Aboriginal community consultation and planning for an ILP.

An identifiable impact for these lands, could arise from increased visitation resultant from adjacent urban development. However, the nature and extent of Aboriginal sites in these areas would again need to be determined prior to a precise discussion of indirect impacts.

7.0 Management, Mitigation & Recommendations

Aboriginal heritage sites (including PADs) would not be impacted directly by the proposed rezoning but could be impacted by the subsequent residential development. Impacts to a number of Aboriginal sites and heritage values could be avoided if an appropriate mitigation strategy is employed.

The following management and mitigation statements are based on consideration of:

- legal requirements under the terms of the NPW Act, as amended—which states that it is illegal to harm or desecrate an Aboriginal object without first obtaining an AHIP from the Director-General, OEH, NSW;
- abiding by the new OEH Code of Practice, which was adopted by the *NPW Regulation 2009* (NPW Regulation) made under the NPW Act, and which came into force on 1 October 2010;
- the preliminary identification of the Aboriginal cultural heritage values in the subject area;
- the interests of the local Aboriginal community members who participated in this project; and
- the size of the study area, the areas already identified as having archaeological sensitivity and likely impacts posed by the project proposal.

7.1 Further Heritage Assessment

7.1.1 Stockland's Landholdings

Test excavation, under the OEH *Code of Practice,* is proposed be undertaken within the Stockland landholdings during November and December 2012, in accordance with the ARD (Section 4), as Stockland wish to proceed to a Section 90 application under the NPW Act. As the Section 90 will not extend to the non–Stockland holdings within the AIA, excavation has not been planned for these zones. The results from test excavation will allow the extent and nature of the Anambah archaeological deposit to be spatially described and further assessed for Stockland's lands.

This assessment will be provided to the RAPs and OEH through an ATR for Stockland's landholdings. The ATR will include a revised significance assessment, impact assessment and updated management requirements.

The ATR (and accompanying ACHAR) can be used by Stockland for a future Section 90 application, which will provide approval for harm to specified Aboriginal sites within Anambah, and consequentially residential development.

The formulation of appropriate development controls to be placed over the area in the form of an Area Plan and Precinct Plan would be one of the ongoing management measures.

7.1.2 AIA Non-Stockland Land Holdings

In relation to the non-Stockland land, Aboriginal community consultation needs to be initiated. Following registration of Aboriginal stakeholders in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* , a field survey should be undertaken in line with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales.* Subsequent to this field survey, test excavation could be undertaken following OEH guidelines to

define the extent and nature of Aboriginal archaeology. Reporting of the aforementioned field work necessitates a determination of conservation and impact in relation to any proposed development activities that may occur on this land.

7.2 Further Definition of Conservation and Impact

Following test excavation it may be possible to better understand the extent of archaeological deposits and thus undertake a rigorous assessment for heritage impacts across the Stockland landholdings. Discussion with Stockland will be held to consider modifications to the urban design footprint to minimise and avoid impacts to Aboriginal heritage sites.

Specific principles could be developed to aid conservation, such as measures for Aboriginal site avoidance and protection during urban development.

7.3 Conclusions

The preliminary Aboriginal heritage impact assessment and significance assessment, presented in this report, have found that the AIA has the potential to contain relatively intact Aboriginal archaeological deposits. These could provide new information on middle to late Holocene Aboriginal economic and subsistence strategies within the region. The consequence of residential development, within the AIA, will impact a number of areas that possess Aboriginal cultural archaeological deposits. In order to manage and offset this impact, the proponent will be required to undertake the relevant archaeological procedures for recovery of a representative proportion of the deposit. For some locations, an opportunity exists for the in–situ retention of archaeological deposits, either through complete avoidance, or by a process of cover and fill.

To manage Aboriginal heritage within the AIA two Aboriginal heritage reports will be prepared (in addition to this report), in accordance with OEH 2010—the ATR and the ACHAR. These reports will provide a complete review of all Aboriginal heritage work (including field survey [as detailed in this report] and test excavation), along with a record of Aboriginal community consultation, revised significance assessment and impact assessment, and further Aboriginal heritage management requirements, in accordance with the statutory provisions of the *NSW National Parks and Wildlife Act,* 1974 (NPW Act).

Copies of this rezoning report have been provided to the RAP, for their comment and record. A period of six weeks was allowed for RAP review and comment. No RAP comments, written or verbal, have been received.

8.0 Appendices

Appendix A

AHIMS Search Results

Appendix B

RAP Consultation and Participation in the Field Survey

Appendix C

Review of Local and Regional Stone Material Sources

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : 12-0226

Client Service ID : 69695

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0069	Martins Creek;	AGD	56	369540	6398390	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	**Recorders**	ASRSYS					**Permits**		
38-4-0294	Patison Rd.;	AGD	56	368990	6395990	Open site	Valid	Shell : -, Artefact : -	Midden	1333
	Contact	**Recorders**	Warren Bluff					**Permits**		
38-4-0214	Martins Creek 2	AGD	56	370600	6397300	Open site	Valid	Artefact : -	Isolated Find	1872
	Contact	**Recorders**	Gary Dunnett					**Permits**		
38-4-0215	Martins Creek 3	AGD	56	370400	6397300	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1872
	Contact	**Recorders**	Gary Dunnett					**Permits**		
38-4-0216	Martins Creek 4	AGD	56	366900	6397650	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1872
	Contact	**Recorders**	Gary Dunnett					**Permits**		
38-4-0217	Martins Creek 5	AGD	56	369880	6397490	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1872
	Contact	**Recorders**	Gary Dunnett					**Permits**		
38-4-0218	Martins Creek 6	AGD	56	369840	6397590	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1872
	Contact	**Recorders**	Gary Dunnett					**Permits**		
45-3-1954	Calga;Gunderman;	AGD	56	363750	6412900	Open site	Valid	Burial : -	Burial/s	1333
	Contact	**Recorders**	Warren Bluff					**Permits**		
45-3-1955	Calga;Gunderman;	AGD	56	364040	6413540	Open site	Valid	Grinding Groove : -, Art (Pigment or Engraved) : -	Axe Grinding Groove,Rock Engraving	1333
	Contact	**Recorders**	Warren Bluff					**Permits**		
38-1-0005	Allynbrook;Allyn River;	AGD	56	362000	6416000	Open site	Valid	Modified Tree (Carved or Scarred) : -, Ceremonial Ring (Stone or Earth) : -	Bora/Ceremonial,Carved Tree	
	Contact	**Recorders**	David Bell					**Permits**		
37-3-0140	Myall Creek/hv61;	AGD	56	355100	6414900	Open site	Valid	Artefact : -	Open Camp Site	
	Contact	**Recorders**	Archaeological Consulting Services					**Permits**		

Report generated by AHIMS Web Service on 10/05/2012 for Josh Madden for the following area at Lat, Long From : 151.37189, -32.5809 - Lat, Long To : -32.37558, 151.63323 with a Buffer of 0 meters.Additional Info : Aboriginal Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 58

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref Number : 12-0226
Client Service ID : 69695

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
38-4-0103	Vacy No.2 Martins Creek	AGD	56	369750	6399020	Open site	Valid	Artefact : -	Open Camp Site	
Contact		Recorders	Allan Lance					Permits		
38-4-0105	Vacy;Site 1;Martins Creek;	AGD	56	369200	6398510	Open site	Valid	Artefact : -	Open Camp Site	
Contact		Recorders	Allan Lance					Permits		
37-6-1084	GG B44	AGD	56	352341	6400092	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1085	GG B45	AGD	56	352330	6400192	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1086	GG B 46	AGD	56	358239	6400014	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1087	GG B 49	AGD	56	350675	6400275	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1088	GG B 55	AGD	56	352528	6400086	Open site	Valid	Artefact : -		
Contact		Recorders	Mr.Giles Hamm					Permits		
37-6-1089	GG B 55A	AGD	56	352529	6400086	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1076	GG B22	AGD	56	351417	6400959	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1077	GG B28	AGD	56	352176	6401058	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1078	GG B29	AGD	56	352133	6401010	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1079	GG B27	AGD	56	352121	6401058	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1080	GG B30	AGD	56	352111	6400980	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1081	GG B35	AGD	56	352288	6400259	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1082	GG B36	AGD	56	352265	6400221	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1083	GG B43	AGD	56	352298	6400172	Open site	Valid	Artefact : -		
Contact		Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		

Report generated by AHIMS Web Service on 10/05/2012 for Josh Madden for the following area at Lat, Long From : 151.37189, -32.5809 - Lat, Long To : -32.37558, 151.63323 with a Buffer of 0 meters.Additional Info : Aboriginal Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 58

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)
Extensive search - Site list report

Your Ref Number : 12-0226
Client Service ID : 69695

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
37-6-1055	GG A2	AGD	56	349620	6399822	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1056	GGA6	AGD	56	349733	6399375	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1057	GGA8	AGD	56	349851	6399185	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1058	GGA10	AGD	56	349740	6399083	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1059	GGA13	AGD	56	349910	6399481	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1060	GGA16	AGD	56	350923	6398637	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1061	GCA18	AGD	56	351071	6398939	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1062	GG B64	AGD	56	350152	6399558	Open site	Valid	Artefact : 0		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1063	GG B61	AGD	56	351520	6399522	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1064	GG B62	AGD	56	351531	6399558	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1065	GG A27	AGD	56	351619	6399943	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1066	GGB2	AGD	56	350740	6400870	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1067	GB B1	AGD	56	350240	6400716	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1068	GG B10	AGD	56	351725	6401157	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1069	GB B13	AGD	56	355223	6400289	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		
37-6-1070	GB B14	AGD	56	355223	6400289	Open site	Valid	Artefact : -		
	Contact	Recorders	Archaeological Risk Assessment Services (ARAS)					Permits		

Report generated by AHIMS Web Service on 10/05/2012 for Josh Madden for the following area at Lat, Long From : 151.37189, -32.5809 - Lat, Long To : -32.37558, 151.63323 with a Buffer of 0 meters.Additional Info : Aboriginal Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 58

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref Number : 12-0226

Client Service ID : 69695

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
37-6-1071	GB B17	AGD	56	352103	6400914	Open site	Valid	Artefact : -		
Contact	Recorders	Archaeological Risk Assessment Services (ARAS)						Permits		
37-6-1072	GB B18	AGD	56	352059	6400990	Open site	Valid	Artefact : -		
Contact	Recorders	Archaeological Risk Assessment Services (ARAS)						Permits		
37-6-1073	GB B19	AGD	56	352081	6401033	Open site	Valid	Artefact : -		
Contact	Recorders	Archaeological Risk Assessment Services (ARAS)						Permits		
37-6-1074	GG B20	AGD	56	352046	6401098	Open site	Valid	Artefact : -		
Contact	Recorders	Archaeological Risk Assessment Services (ARAS)						Permits		
37-6-1075	GG B21	AGD	56	352025	6401154	Open site	Valid	Artefact : -		
Contact	Recorders	Archaeological Risk Assessment Services (ARAS)						Permits		
37-6-1223	Lambs Valley 5	AGD	56	355505	6397105	Open site	Valid	Artefact : -		
Contact	Recorders	Mrs.Angela Besant						Permits	1964	
38-4-0841	Martins Creek PAD 1	AGD	56	369800	6396910	Open site	Valid	Potential Archaeological Deposit (PAD) : -		
Contact S Scanlon	Recorders	Austral Archaeology Pty Ltd						Permits	2263	
37-6-1506	Lot 12 Site 15 Stanhope	AGD	56	348971	6393886	Open site	Valid	Artefact : 49		
Contact T Russell	Recorders	Mr.Giles Hamm						Permits		
38-4-0983	Grace Avenue, Martins Creek 1	AGD	56	369987	6396819	Open site	Valid	Artefact : 6		101133
Contact Searle	Recorders	Austral Archaeology Pty Ltd						Permits	2633,2729,2855	
38-4-0213	Martins Creek 1	AGD	56	370400	6397300	Open site	Valid	Artefact : -	Isolated Find	1872
Contact	Recorders	Gary Dunnett						Permits		
38-4-0104	Vacy;No.3;Martins Creek;	AGD	56	369840	6399100	Open site	Valid	Artefact : -	Open Camp Site	
Contact	Recorders	Allan Lance						Permits		
38-4-1182	Vacy-Cornish	AGD	56	365404	6399931	Open site	Destroyed	Artefact : -		
Contact	Recorders	RPS Australia East Pty Ltd -Hamilton,Mr.Lennard Roberts,Ms.Ali Byrne						Permits	3310	
38-4-1183	Vacy-Cornish_	GDA	56	365317	6400112	Open site	Valid	Artefact : 1		
Contact	Recorders	Mr.Lennard Roberts						Permits		
38-4-1304	RPS STANFORD METHYR AS2	GDA	56	359770	6399774	Open site	Valid	Artefact : -		
Contact	Recorders	RPS Australia East Pty Ltd -Hamilton,Ms.Laraine Nelson						Permits		
38-4-1383	Gostwyck Bridge PAD 1	GDA	56	369057	6396095	Open site	Valid	Potential Archaeological Deposit (PAD) : 1		
Contact	Recorders	Ms.Mary-Jean Sutton,Virtus Heritage - Tighes Hill						Permits		

Report generated by AHIMS Web Service on 10/05/2012 for Josh Madden for the following area at Lat, Long From : 151.37189, -32.5809 - Lat, Long To : -32.37558, 151.63323 with a Buffer of 0 meters.Additional Info : Aboriginal Archaeological Assessment. Number of Aboriginal sites and Aboriginal objects found is 58

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Aboriginal Consultation Log

Stage 1–Notification of project proposal and registration of interest

Stage 1.1–Compilation of a list of Aboriginal stakeholders

Body/Group	Contact	Date Sent	Date Reply	Comment	Reference
OEH EPRG region office	Roger Mehr	11/5/12	18/5/12	List of 52 Aboriginal stakeholder groups	Doc12/20891
Mindaribba Local Aboriginal Land Council (LALC)	Ken Riddiford	11/5/12			
The Registrar, *Aboriginal Lands Right Act 1983*	Tabatha Dantoine	11/5/12	16/5/12	Does not appear to have Registered Aboriginal Owners	
National Native Title Tribunal (NNTT)	Nakari Thorpe	11/5/12	17/5/12	No relevant entries in the NNTT databases	4908/12nt
Native Title Services Corporation (NTSCORP Limited)	Peter Schultz	11/5/12	29/5/12	Correspondence forwarded to interested parties	29-05-2012/2
Maitland City Council	Claire James	11/5/12	28/5/12	Identified 5 Aboriginal groups to contact	RZ10015
Catchment Management Authority (CMA)	The Manager	11/5/12			

10 days was allowed for these groups to respond.

Stage 1.2–Newspaper Advert

Newspaper	Date Sent	Date Printed
Maitland Mercury	21 May 2012	23 May 2012

14 days (i.e. until 6 June 2012) was allowed for Aboriginal people to respond to the newspaper advertisement.

Stage 1.3–List of Aboriginal groups/people from Stage 1.1 and 1.2.

Organisation/Person	Contact	Date Registered	How the name was obtained and any comments
Aboriginal Native Title Elders Consultants	Margaret Matthews		OEH Stakeholder list

Organisation/Person	Contact	Date Registered	How the name was obtained and any comments
Aliera French Trading	Aliera French		OEH Stakeholder list
Black Creek Aboriginal Corporation	Tracey White		OEH Stakeholder list
Bullen Bullen	Lloyd Mathews		OEH Stakeholder list
Cacatua Culture Consultants	Donna & George Sampson	29 May 2012	OEH Stakeholder list
Carrawonga Consultants	Cheryl Moodie & Justin Matthews		OEH Stakeholder list
Culturally Aware	Tracey Skene & David Swan	5 June 2012	OEH Stakeholder list
D F T V Enterprises	Derrick Vale Sr	6 June 2012	OEH Stakeholder list
Deslee Talbott Consultants	Deslee Matthews		OEH Stakeholder list
Gidawaa Walang & Barkuma Neighbourhood Centre Inc.	Debbie Dacey-Sullivan + Annie Hickey	28 May 2012	OEH Stakeholder list
Giwiirr Consultants	Michele Stair		OEH Stakeholder list
Hunter Traditional Owner	Paulette Ryan		OEH Stakeholder list
Hunter Valley Aboriginal Corporation	Rhonda Griffith		OEH Stakeholder list
Hunter Valley Cultural Consultants	Christine Matthews & Colleen Stair		OEH Stakeholder list
Hunter Valley Cultural Surveying	Luke Hickey	6 June 2012	OEH Stakeholder list
Hunter Valley Natural & Cultural Resources	David French		OEH Stakeholder list
Indigenous Outcomes	Robert Smith		OEH Stakeholder list
Jarban + Mugrebea	Les Atkinson		OEH Stakeholder list
Jeff Matthews	Jeff Matthews		OEH Stakeholder list
Kawul Cultural Services	Vicky Slater	4 June 2012	OEH Stakeholder list
Kayaway	Mark Hickey		OEH Stakeholder list
Lower Hunter Wonnarua Council Inc	Lea-Anne Ball, Uncle Tommy Miller	28 May 2012	OEH Stakeholder list; Maitland City Council
Lower Wonnaruah Tribal Consultancy Pty Ltd	Barry Anderson		OEH Stakeholder list
Mindaribba Local Aboriginal Land Council	Ken Riddiford	5 June 2012	OEH Stakeholder list; Maitland City Council

Organisation/Person	Contact	Date Registered	How the name was obtained and any comments
Mingga Consultants	Clifford Matthews		OEH Stakeholder list
Mooki Plains Management	Stephen Matthews		OEH Stakeholder list
Mooki Plains Management	Les Field		OEH Stakeholder list
Muswellbrook Cultural Consultants	Brian & Gay Horton		OEH Stakeholder list
Ngarramang-Kuri Aboriginal Culture & Heritage Group	Abie Wright	1 June 2012	OEH Stakeholder list
Roger Noel Matthews Consultancy	Roger Noel		OEH Stakeholder list
Scott Smith	Scott Smith		OEH Stakeholder list
St Clair Singleton Aboriginal Corporation	Cultural Heritage Officer		OEH Stakeholder list
T & G Culture Consultants	Tony Griffiths	4 June 2012	OEH Stakeholder list
Ungooroo Aboriginal Corporation	Alan Paget & Sarah Hall		OEH Stakeholder list
Ungooroo Cultural & Community Services	Rhonda Ward		OEH Stakeholder list
Upper Hunter Heritage Consultants	John, Melissa & Darrel Matthews		OEH Stakeholder list
Upper Hunter Wonnarua Council Inc	Rhoda Perry & Georgina Berry		OEH Stakeholder list
Valley Culture	Larry Van Vliet & John Matthews		OEH Stakeholder list
Wanaruah Custodians	David Foot		OEH Stakeholder list
Wanaruah Local Aboriginal Land Council	Noel Downs	31 May 2012	OEH Stakeholder list (n.b.—study area not within LALC boundaries, therefore cannot be consulted)
Wattaka Wonnarua C.C. Service	Des Hickey	27 August 2012	OEH Stakeholder list
Widescope Indigenous Group Pty Ltd	Steven Hickey	1 June 2012	OEH Stakeholder list
Wonn1 Contracting	Arthur Fletcher		OEH Stakeholder list
Wonnarua Culture Heritage	Gordon Griffith	4 June 2012	OEH Stakeholder list
Wonnarua Nation Aboriginal Corporation	Laurie Perry	3 June 2012	OEH Stakeholder list
Wonnaruah Elders Council	Uncle Tommy Miller		OEH Stakeholder list; Maitland City Council
Yarrawalk (A division of Tocomwall Pty Ltd)	Scott Franks		OEH Stakeholder list

Organisation/Person	Contact	Date Registered	How the name was obtained and any comments
Yinarr Cultural Services	Kathleen Steward	28 May 2012	OEH Stakeholder list
Awabakal Local Aboriginal Land Council			Maitland City Council (n.b.—study area not within LALC boundaries)
Worimi Local Aboriginal Land Council			Maitland City Council (nb—study area not within LALC boundaries)
Myland Cutural and Heritage Group	Warren F Schillings	29 May 2012	Registration
Warragil Cultural Services	Aaron Slater	28 May 2012	Registration
Maree/TA Wallangan Cultural Services	Maree Waugh	3 June 2012	Registration
DRM Cultural Management	Helen Faulkner	6 June 2012	Registration

Stage 1.4–Aboriginal notification of the proposed project and an offer to be involved in the consultation

Organisation/Person	Contact	Date sent	Reference
Aboriginal Native Title Elders Consultants	Margaret Matthews	21 May 2012	12-0226
Aliera French Trading	Aliera French	21 May 2012	12-0226
Black Creek Aboriginal Corporation	Tracey White	21 May 2012	12-0226
Bullen Bullen	Lloyd Mathews	21 May 2012	12-0226
Cacatua Culture Consultants	Donna & George Sampson	21 May 2012	12-0226
Carrawonga Consultants	Cheryl Moodie & Justin Matthews	21 May 2012	12-0226
Culturally Aware	Tracey Skene & David Swan	21 May 2012	12-0226
D F T V Enterprises	Derrick Vale Sr	21 May 2012	12-0226
Deslee Talbott Consultants	Deslee Matthews	21 May 2012	12-0226
Gidawaa Walang & Barkuma Neighbourhood Centre Inc.	Debbie Dacey-Sullivan + Annie Hickey	21 May 2012	12-0226
Giwiirr Consultants	Michele Stair	21 May 2012	12-0226

Organisation/Person	Contact	Date sent	Reference
Hunter Traditional Owner	Paulette Ryan	21 May 2012	12-0226
Hunter Valley Aboriginal Corporation	Rhonda Griffith	21 May 2012	12-0226
Hunter Valley Cultural Consultants	Christine Matthews & Colleen Stair	21 May 2012	12-0226
Hunter Valley Cultural Surveying	Luke Hickey	21 May 2012	12-0226
Hunter Valley Natural & Cultural Resources	David French	21 May 2012	12-0226
Indigenous Outcomes	Robert Smith	21 May 2012	12-0226
Jarban + Mugrebea	Les Atkinson	21 May 2012	12-0226
Jeff Matthews	Jeff Matthews	21 May 2012	12-0226
Kawul Cultural Services	Vicky Slater	21 May 2012	12-0226
Kayaway	Mark Hickey	21 May 2012	12-0226
Lower Hunter Wonnarua Council Inc	Lea-Anne Ball, Uncle Tommy Miller	21 May 2012	12-0226
Lower Wonnaruah Tribal Consultancy Pty Ltd	Barry Anderson	21 May 2012	12-0226
Mindaribba Local Aboriginal Land Council	Ken Riddiford	21 May 2012	12-0226
Mingga Consultants	Clifford Matthews	21 May 2012	12-0226
Mooki Plains Management	Stephen Matthews	21 May 2012	12-0226
Mooki Plains Management	Les Field	21 May 2012	12-0226
Muswellbrook Cultural Consultants	Brian & Gay Horton	21 May 2012	12-0226
Ngarramang-Kuri Aboriginal Culture & Heritage Group	Abie Wright	21 May 2012	12-0226
Roger Noel Matthews Consultancy	Roger Noel	21 May 2012	12-0226
Scott Smith	Scott Smith	21 May 2012	12-0226
St Clair Singleton Aboriginal Corporation	Cultural Heritage Officer	21 May 2012	12-0226
T & G Culture Consultants	Tony Griffiths	21 May 2012	12-0226
Ungooroo Aboriginal Corporation	Alan Paget & Sarah Hall	21 May 2012	12-0226
Ungooroo Cultural & Community Services	Rhonda Ward	21 May 2012	12-0226

Organisation/Person	Contact	Date sent	Reference
Upper Hunter Heritage Consultants	John, Melissa & Darrel Matthews	21 May 2012	12-0226
Upper Hunter Wonnarua Council Inc	Rhoda Perry & Georgina Berry	21 May 2012	12-0226
Valley Culture	Larry Van Vliet & John Matthews	21 May 2012	12-0226
Wanaruah Custodians	David Foot	21 May 2012	12-0226
Wanaruah Local Aboriginal Land Council	Noel Downs	21 May 2012	12-0226
Wattaka Wonnarua C.C. Service	Des Hickey	21 May 2012	12-0226
Widescope Indigenous Group Pty Ltd	Steven Hickey	21 May 2012	12-0226
Wonn1 Contracting	Arthur Fletcher	21 May 2012	12-0226
Wonnarua Culture Heritage	Gordon Griffith	21 May 2012	12-0226
Wonnarua Nation Aboriginal Corporation	Laurie Perry	21 May 2012	12-0226
Wonnaruah Elders Council	Uncle Tommy Miller	21 May 2012	12-0226
Yarrawalk (A division of Tocomwall Pty Ltd)	Scott Franks	21 May 2012	12-0226
Yinarr Cultural Services	Kathleen Steward	21 May 2012	12-0226
Awabakal Local Aboriginal Land Council		21 May 2012	12-0226
Worimi Local Aboriginal Land Council		21 May 2012	12-0226
Myland Cutural and Heritage Group	Warren F Schillings	21 May 2012	12-0226
Warragil Cultural Services	Aaron Slater	21 May 2012	12-0226
Maree/TA Wallangan Cultural Services	Maree Waugh	21 May 2012	12-0226
DRM Cultural Management	Helen Faulkner	21 May 2012	12-0226

14 days was allowed for Aboriginal people to register an interest to be consulted.

Stage 1.5 – Registered Aboriginal Parties (RAP) Contact Details

Aboriginal Organisation/Person	Contact	Date of Registration and Comments
Cacatua Culture Consultants	Donna & George Sampson Unit 1b/11 Glenwood Drive THORNTON NSW 2322	29/5/12
Culturally Aware	Tracey Skene 7 Crawford Place MILLFIELD NSW 2325	5/6/12
D F T V Enterprises	Derrick Vale Sr 5 Mountbatten Close RUTHERFORD NSW 2320	6/6/12
DRM Cultural Management		6/6/12 Requested details not be passed on
Gidawaa Walang Cultural Heritage Consultancy	Ann Hickey 76 Lang Street KURRI KURRI NSW 2327	28/5/12
Gomeroi Namoi Traditional Owners	Mr Stephen Talbott 73 Kiah Road, Gillieston Heights NSW 2321	8/8/2012 NB late registration
Hunter Valley Cultural Surveying	Luke Hickey 165 Susan St SCONE NSW 2337	6/6/12
Kawul Cultural Services	Rod Hickey/Vicky Slater PO Box 817 SINGLETON NSW 2330	4/6/12
Lower Hunter Wonnarua Council Inc	Lea-Anne Ball/Uncle Tommy Miller 51 Bowden St HEDDON GRETA NSW 2321	28/5/12
Maree/TA Wallangan Cultural Services	Maree Waugh 29 Anzac Ave CESSNOCK NSW 2325	3/6/12

Aboriginal Organisation/Person	Contact	Date of Registration and Comments
Mindaribba Local Aboriginal Land Council	Ken Riddiford PO Box 401 EAST MAITLAND NSW 2323	5/6/12
Myland Cultural & Heritage Group		29/5/12 Requested details not be passed on
Ngarramang-Kuri Aboriginal Culture & Heritage Group		1/6/12 Requested details not be passed on
T & G Culture Consultants	Tony Griffiths 19 O'Donnell Cres METFORD NSW 2323	4/6/12
Warragil Cultural Services	Aaron Slater PO Box 1095 SINGLETON NSW 2330	28/5/12
Wattaka Wonnarua C.C. Service	Des Hickey 4 Kennedy Street SINGLETON NSW 2330	27 August 2012 NB late registration
Widescope Indigenous Group Pty Ltd	Steven Hickey 73 Russell St EMU PLAINS NSW 2750	1/6/12
Wonnarua Culture Heritage		4/6/12 Requested details not be passed on
Wonnarua Nation Aboriginal Corporation	Laurie Perry PO Box 3066 SINGLETON NSW 2330	3/6/12
Yinarr Cultural Services	Kathleen Steward 111 Westwood Road GUNGAL NSW 2333	28/5/12

GML provided a copy of the registered Aboriginal parties to the OEH and the LALC on the 5th July 2012.

Stage 2 – Presentation of information about the proposed project

Stage 2.1 & Stage 2.2—Presentation of proposed project information & provision of the proposed assessment methodology to the RAPs

Information on the proposed project and the intended assessment methodology was provided in a short report (GML June 2012) entitled "Anambah Investigation Area Archaeological and Cultural Assessment Methodology". A copy of this report with a cover was provided to each of the RAPs.

Aboriginal Organisation/Person	Date Sent	Date Reply	Comment and details of how input has been considered	Reference
Cacatua Culture Consultants	02/06/2012			
Culturally Aware	02/06/2012			
D F T V Enterprises	02/06/2012			
DRM Cultural Management	02/06/2012			
Gidawaa Walang Cultural Heritage Consultancy	02/06/2012			
Hunter Valley Cultural Surveying	02/06/2012			
Kawul Cultural Services	02/06/2012	30/07/2012	Vicky Slater—"We agree with your Draft Report & Methodology of the above project"	Email 30 July 2012
Lower Hunter Wonnarua Council Inc	02/06/2012			
Maree/TA Wallangan Cultural Services	02/06/2012			
Mindaribba Local Aboriginal Land Council	02/06/2012	25/07/2012	Happy with methodology	Pers. Comm.
Myland Cultural & Heritage Group	02/06/2012			
Ngarramang-Kuri Aboriginal Culture & Heritage Group	02/06/2012			
T & G Culture Consultants	02/06/2012	25/07/2012	Happy with methodology	Pers. Comm.
Warragil Cultural Services	02/06/2012	30/07/2012	Aaron Slater—"We have read and are quite happy with the Methodology and approve the draft report"	Email 30 July 2012
Widescope Indigenous Group Pty Ltd	02/06/2012			
Wonnarua Culture Heritage	02/06/2012			

Aboriginal Organisation/Person	Date Sent	Date Reply	Comment and details of how input has been considered	Reference
Wonnarua Nation Aboriginal Corporation	02/06/2012			
Yinarr Cultural Services	02/06/2012			
Wattaka Wonnarua C.C. Service	27/08/2012			

Stage 2.3—Meeting regarding proposed assessment methodology with proponent and the RAPs 8/8/2012

A stakeholder meeting was held on 8 August 2012, at the Maitland Mercure, to present the project background and methodology for field survey. All RAP were invited to attend this meeting. RAPs were asked to provide any cultural knowledge relating to the study area and feedback on the assessment methodology.

Aboriginal Organisation/Person	Invitation Sent	Date of RSVP	Attendance	Comment and details of how input has been considered
Cacatua Culture Consultants	31/7/2012		8/8/2012 George Sampson	
Culturally Aware	31/7/2012	1/8/2012		
D F T V Enterprises	31/7/2012	2/8/2012	8/8/2012 Derrick Vale	
DRM Cultural Management	31/7/2012	7/8/2012	8/8/2012 Jenni Field and Helen Faulkner	
Gidawaa Walang Cultural Heritage Consultancy	31/7/2012			
Hunter Valley Cultural Surveying	31/7/2012			
Kawul Cultural Services	31/7/2012	31/7/2012		Apologies due to illness sent 8/8/2012
Lower Hunter Wonnarua Council Inc	31/7/2012	7/8/2012	8/8/2012 Dean Miller and Tom Miller	The landform is similar to other surrounding project areas which have had archaeology. A management plan should be put in place following the work.

Aboriginal Organisation/Person	Invitation Sent	Date of RSVP	Attendance	Comment and details of how input has been considered
Maree/TA Wallangan Cultural Services	31/7/2012			
Mindaribba Local Aboriginal Land Council	31/7/2012	31/7/2012	8/8/2012 Ken Riddiford	
Myland Cultural & Heritage Group	31/7/2012		8/8/2012 Warren Schillings	
Ngarramang-Kuri Aboriginal Culture & Heritage Group	31/7/2012			
T & G Culture Consultants	31/7/2012	6/8/2012	8/8/2012 Greg Griffiths	This project should be based on a good will process. Management plan should be part of the archaeological process.
Warragil Cultural Services	31/7/2012			
Widescope Indigenous Group Pty Ltd	31/7/2012		8/8/2012 Steven Hickey	
Wonnarua Culture Heritage	31/7/2012	6/8/2012	8/8/2012 Shannon Griffiths + 1	
Wonnarua Nation Aboriginal Corporation	31/7/2012	1/8/2012	8/8/2012 Maree Waugh	
Yinarr Cultural Services	31/7/2012			
Gomeroi Namoi Traditional Owners	Registered on 8/8/2012	N/A	8/8/2012 Stephen Talbott	Agreed with management plan initiative and provided more information regarding a management plan being cooperation and creating a win win for both proponent and community. He also noted that there are grants for such community projects as tree planting. I one is not out on site for the duration of works, that person cannot report as well. IF everyone is on site, it provides better coverage and better RAP reporting/ assessment. Those who are at meetings should be part of field work.

Stage 2.4—Field Survey or opportunity for RAP to visit the proposed project site

The field survey was undertaken from 20 August to 23 August 2012. All RAPs were invited to participate in the field survey on all days of the survey. In addition to archaeological survey, the survey methodology included discussion between male and female GML staff (with anthropological training) and the RAPs on cultural and intangible aspects of Aboriginal heritage across the region. Relevant comments received during the survey, which are not confidential, are included in the log below.

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Cacatua Culture Consultants	Adam Sampson	14/8/2012 Email	20/8/2012	
			22/8/2012	
			23/8/2012	
	Legan McCormack		21/8/2012	
Culturally Aware	Tracey Skene	14/8/2012 Email	20/8/2012	The bigger hills have views to Sugarloaf. Some of the hills were markers, for example Sugarloaf and Brokenback ranges. Different people were located on bigger hilltops for visibility. In all four directions from the study area is a lot of sensitive landscape, particularly 20/25km in SW direction.
			21/8/2012	
			22/8/2012	
			23/8/2012	
D F T V Enterprises	Derrick Vale	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
DRM Cultural Management	Helen Faulkner	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Gidawaa Walang Cultural Heritage Consultancy	Ann Hickey	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Gomeroi Namoi Traditional Owners	Peter Whitten	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Hunter Valley Cultural Surveying	Luke Hickey	14/8/2012	20/8/2012	
			21/8/2012	Recognises how Country is defined by the creeks flowing into Country.

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
			22/8/2012	Wonarua – trade route to the ocean from Paterson. Mt Olive mission, which closed in the1900s, was located inland near Paterson and Luke's mother informed him of the mission and the trade route. Mount Sugarloaf is a ceremonial area where all mobs met. It is uncertain but there may have been/ still be bora grounds around the foot of the mountain. Mount Sugarloaf was used for orientation. It is a boundary marker the border with Awakabal land which runs along the Liverpool ranges. It took weeks, if not month, to make the journey. When the wattle flowered, that was the time to go fishing, particularly for Taylor fish. From the Hunter River to Mount Pleasant there is a pattern of stone reduction – material quarries at the river, uphill they started turning material into cores and then there is a site on the top of the hill.
			23/8/2012	
Kawul Cultural Services	Kerrie Slater	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Lower Hunter Wonnarua Council Inc.	Lionel McGrady	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Mindaribba LALC	Mathew Yates	14/8/2012 Email	20/8/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
			21/8/2012	
			22/8/2012	
			23/8/2012	
Myland Cultural and Heritage Group	Lennie Wright	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Ngarramang-Kuri Aboriginal Culture & Heritage Group	David Ahoy	14/8/2012 Email	21/8/2012	
			22/8/2012	
			23/8/2012	
T&G Culture Consultants	Greg Griffiths	14/8/2012 Fax	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
TA Wallangan Cultural Services	Tony Waugh	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Warragil Cultural Services	Arika Jalomaki	14/8/2012 Email	20/8/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
			21/8/2012	
			22/8/2012	
			23/8/2012	
Widescope Indigenous Group Pty Ltd	Steven Hickey	14/8/2012 Email	20/8/2012	When standing at PAD 2 Steven commented that a good time to hunt was during or following a flood as the wild game would congregate on high ridges.
			21/8/2012	Aboriginal people would travel into this region, from the NW– for certain ceremonies, such as initiation – gathering ceremonies, where boys aged 14-15 (just before manhood) would gather. The track they followed was from the Upper Hunter to a point to elders had designated. The initiated boys would need to collect items representative of the sky, land and water – ie elders ask for fish/ crab/duck – kangaroo/goanna. This showed their hunting skills were good and that they were looking to manhood. It also prove that they could live off the land. Family groups of 12-15 people comprised clans which were of approximately 350 people. Clans gather together to form the tribe. Laws were dealt with by the head of a clan, which was usually a female. All the stone materials tell a story – certain clans used different materials for certain purposes. Materials tell where people came from.
			22/8/2012	
			23/8/2012	
Wonnarua Culture Heritage	Shannon Griffiths	14/8/2012 Email/ Fax	20/8/2012	
			21/8/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
			22/8/2012	
			23/8/2012	
Wonnarua Nation Aboriginal Corporation	Maree Waugh	14/8/2012 Email	20/8/2012	
			21/8/2012	
			22/8/2012	
			23/8/2012	
Yinarr Cultural Services		14/8/2012 Email		
Wattaka Wonnarua C.C. Service		14/8/2012 Email		

Stage 2.5—Meeting to present the findings of field survey and the proposed ARD for test excavation 24 September 2012

A stakeholder meeting was held on 24 September 2012, at the Maitland Mercure, to present the results of the survey, the methodology for archaeological test excavation and the intention of Stockland to provide a 'Rezoning Report' for RAP review and comment. All RAP were invited to attend this meeting. An open session was held where RAPs could provide any comments, views and opinions on the field survey, the forthcoming report and test excavation methodology.

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Cacatua Culture Consultants	George Sampson	13/9/2012 Email	24/9/2012	
Culturally Aware	Tracey Skene	13/9/2012 Email	24/9/2012	
DFTV Enterprises	Derrick Vale	13/9/2012 Email	24/9/2012	
DRM Cultural Management	Apology	13/9/2012 Email		

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Gidawaa Walang Cultural Heritage Consultancy	Apology	13/9/2012 Email		
Gomeroi Namoi Traditional Owners	Stephen Talbott	13/9/2012 Email	24/9/2012	Commented extensively on the results of the survey, the process for AHIP application and the forthcoming test excavation. Discussed the processes for 'conservation' of Aboriginal sites following test excavation.
Hunter Valley Cultural Surveying	Did not attend	13/9/2012 Email		
Kawul Cultural Services	Vicky Slater	13/9/2012 Email	24/9/2012	
Lower Hunter Wonnarua Council Inc.	Tom Miller	13/9/2012 Email	24/9/2012	
Mindaribba LALC	Did not attend	13/9/2012 Email		
Myland Cultural and Heritage Group	Warren Schillings	13/9/2012 Email	24/9/2012	
Ngarramang-Kuri Aboriginal Culture and Heritage Group	Did not attend	13/9/2012 Email		
T&G Culture Consultants	Tod Maley	13/9/2012 Fax	24/9/2012	
TA Wallangan Cultural Services	Tony Waugh	13/9/2012 Email	24/9/2012	
Warragil Cultural Services	Did not attend	13/9/2012 Email		
Wattaka Wonnarua C.C. Service	Des Hickey	13/9/2012 Email	24/9/2012	
Widescope Indigenous Group Pty Ltd	Steven Hickey	13/9/2012 Email	24/9/2012	
Wonnarua Culture Heritage	Gordon Griffiths	13/9/2012 Email	24/9/2012	

Registered Aboriginal Party	Representative	Invitation Sent	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Wonnarua Nation Aboriginal Corporation	Maree Waugh	13/9/2012 Email	24/9/2012	
Yinarr Cultural Services	Steven Campbell	13/9/2012 Email	24/9/2012	

Stage 2.6—Provision of the draft Rezoning Report (GML 2012)

On 5 October 2012 all RAP were provided with a copy of the Anambah rezoning report (either by You Send It email or Registered Post), which included the results of the field survey and the archaeological research design. RAP were specifically requested to comment on the ARD and provide any comments with respect to tangible or intangible Aboriginal heritage sites, places, events and/or values across this study area. RAPs were allowed 28 days to provide written and/or verbal comment—2 November 2012.

Aboriginal Organisation/Person	Date Sent & Received	Date Downloaded	GML Follow Up	Comments	Date Reply	Comments
Cacatua Culture Consultants	5-10-12		9-10-12 Phone Call	Message left on answering service asking Cacatua to download report.		No comments were received by 15 November
Culturally Aware	5-10-12	5-10-12		Report already downloaded prior to phone calls on 9.10.12 – no follow up in relation to download required		No comments were received by 15 November
D F T V Enterprises	5-10-12	9-10-12	9-10-12 Phone Call	Message left on answering service asking DFTV to download report.		No comments were received by 15 November
DRM Cultural Management	5-10-12	9-10-12		Report already downloaded prior to phone calls on 9.10.12 – no follow up in relation to download required		No comments were received by 15 November

Aboriginal Organisation/Person	Date Sent & Received	Date Downloaded	GML Follow Up	Comments	Date Reply	Comments
Gidawaa Walang Cultural Heritage Consultancy	5-10-12	8-10-12		Report already downloaded prior to phone calls on 9.10.12 – no follow up in relation to download required		No comments were received by 15 November
Gomeroi Namoi Traditional Owners	5-10-12			No phone number supplied so no phone call made to request they download the report.		No comments were received by 15 November
Hunter Valley Cultural Surveying	5-10-12		9-10-12 Phone Call	Landline disconnected/ unavailable. Ph no. 0423930690 unanswered and no room for messages, ph no. 0402446223 not Luke Hickey's.		No comments were received by 15 November
Kawul Cultural Services	5-10-12	15-10-12	9-10-12 Phone Call	Vicky did receive the email and has downloaded the report and started to read it.		No comments were received by 15 November
Lower Hunter Wonnarua Council Inc	5-10-12		9-10-12 Phone Call	No answer and no message service.		No comments were received by 15 November
Maree/TA Wallangan Cultural Services	5-10-12	9-10-12	9-10-12 Phone Call	No answer – message left asking Maree to download the report.		No comments were received by 15 November
Mindaribba Local Aboriginal Land Council	5-10-12	8-10-12		Report already downloaded prior to phone calls on 9.10.12 – no follow up in relation to download required		No comments were received by 15 November

Aboriginal Organisation/Person	Date Sent & Received	Date Downloaded	GML Follow Up	Comments	Date Reply	Comments
Myland Cultural & Heritage Group	5-10-12		9-10-12 Phone Call	DC spoke to Warren – he thinks he received email and will try and download the report this afternoon.		No comments were received by 15 November
Ngarramang-Kuri Aboriginal Culture & Heritage Group	5-10-12		9-10-12 Phone Call	Abie didn't think he had received email. DC checked email with him and sent the report again. DC asked that he call to confirm he received the email and downloaded the report/ if he hasn't in a day or so.		No comments were received by 15 November
T & G Culture Consultants	5-10-12	Sent by registered post.	The registered post provided version of the report was not collected and returned to GML (30-10-12). As a consequence the report was hand delivered by GML to Gordon Griffiths (to be provided to T&G) on 7-11-12.	The report sent by registered post, as T&G have not supplied an email address.		No comments were received by 15 November
Warragil Cultural Services	5-10-12		9-10-12 Phone Call	No answer and message service not available.		No comments were received by 15 November
Wattaka Wonnarua C.C. Service	5-10-12		9-10-12 Phone Call	Des has received email and will download the report and look at it tonight.		No comments were received by 15 November
Widescope Indigenous Group Pty Ltd	5-10-12	14-10-12	9-10-12 Phone Call	Call couldn't be connected (ph number on RAP log 0416643226)		No comments were received by 15 November

Aboriginal Organisation/Person	Date Sent & Received	Date Downloaded	GML Follow Up	Comments	Date Reply	Comments
Wonnarua Culture Heritage	5-10-12		9-10-12 Phone Call	Yes he received the email and will download the report tomorrow.		No comments were received by 15 November
Wonnarua Nation Aboriginal Corporation	5-10-12		9-10-12 Phone Call	No answer, phone message left asking that they download the report.		No comments were received by 15 November
Yinarr Cultural Services	5-10-12 5-11-12	9-10-12	2-11 Kathie Kinchela requested a second digital copy of the report. This was provided on 5-11-12.	Report already downloaded prior to phone calls on 9.10.12 – no follow up in relation to download required		No comments were received by 15 November

Stage 2.7—Invitation to Test Excavation Under the Code of Practice – Season 1 (Nov – Dec 2012)

All RAP were offered the opportunity to be involved in the archaeological test excavation at Anambah. No comments were received from the RAP with respect to the commencement of the fieldwork, other than acknowledgements of the invitation and confirmation of attendance.

Registered Aboriginal Party	Invitation Sent	Representative	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Cacatua Culture Consultants	23/10/2012			
Culturally Aware	23/10/2012 Email sent 30 Oct. 12			
D F T V Enterprises	23/10/2012			
DRM Cultural Management	23/10/2012			
Gidawaa Walang Cultural Heritage Consultancy	23/10/2012			
Gomeroi Namoi Traditional Owners	23/10/2012			

Registered Aboriginal Party	Invitation Sent	Representative	Attendance	Comments on methodology, the presence of Aboriginal objects of cultural value and places of cultural value, etc
Hunter Valley Cultural Surveying	23/10/2012			
Kawul Cultural Services	23/10/2012			Vicky Slater confirmed attendance (email 2 November)
Lower Hunter Wonnarua Council Inc.	23/10/2012			
Mindaribba LALC	23/10/2012			
Myland Cultural and Heritage Group	23/10/2012			
Ngarramang-Kuri Aboriginal Culture & Heritage Group	23/10/2012			
T&G Culture Consultants	23/10/2012			
TA Wallangan Cultural Services	23/10/2012			
Warragil Cultural Services	23/10/2012			
Widescope Indigenous Group Pty Ltd	23/10/2012			
Wonnarua Culture Heritage	23/10/2012			
Wonnarua Nation Aboriginal Corporation	23/10/2012			Laurie Perry confirmed attendance (email 2 November)
Yinarr Cultural Services	23/10/2012			
Wattaka Wonnarua C.C. Service	23/10/2012			

1.0 Potential Lithic Sources in the Maitland Area

Beth White, September 2012

1.1 Introduction

This is a preliminary study to identify stone resources of potential use to Aboriginal people in the Maitland area, considering both locally available resources and non-local resources which could have been obtained through exchange or trade with neighbouring clan groups. The study is based on desk-top research with a brief field visit to the Maitland area. The study is intended to help inform two subject areas – at Anambah and McKeachie's Run (Figure 1).

Stone artefacts in the Maitland area are predominantly of silcrete, augmented by silicified tuff, with smaller numbers of diverse other rock types including silicified wood, quartz, quartzite and igneous stone (Baker 1997; GML 2012:30-31; Kuskie 2008a:48; MDCA 2008; Reeves and Coulter 2006:14,17). Lithic raw material sources could potentially have occurred variously:

- in the local area as bed rock;
- in distant outcrops but transported into the local area by streams. The Hunter River gravels include rocks from diverse geological formations to the north, west and south-west. Wallis Creek could potentially include rocks from diverse geological formations to the south;
- in distant outcrops but carried by people during visits or as a result of trade/exchange.

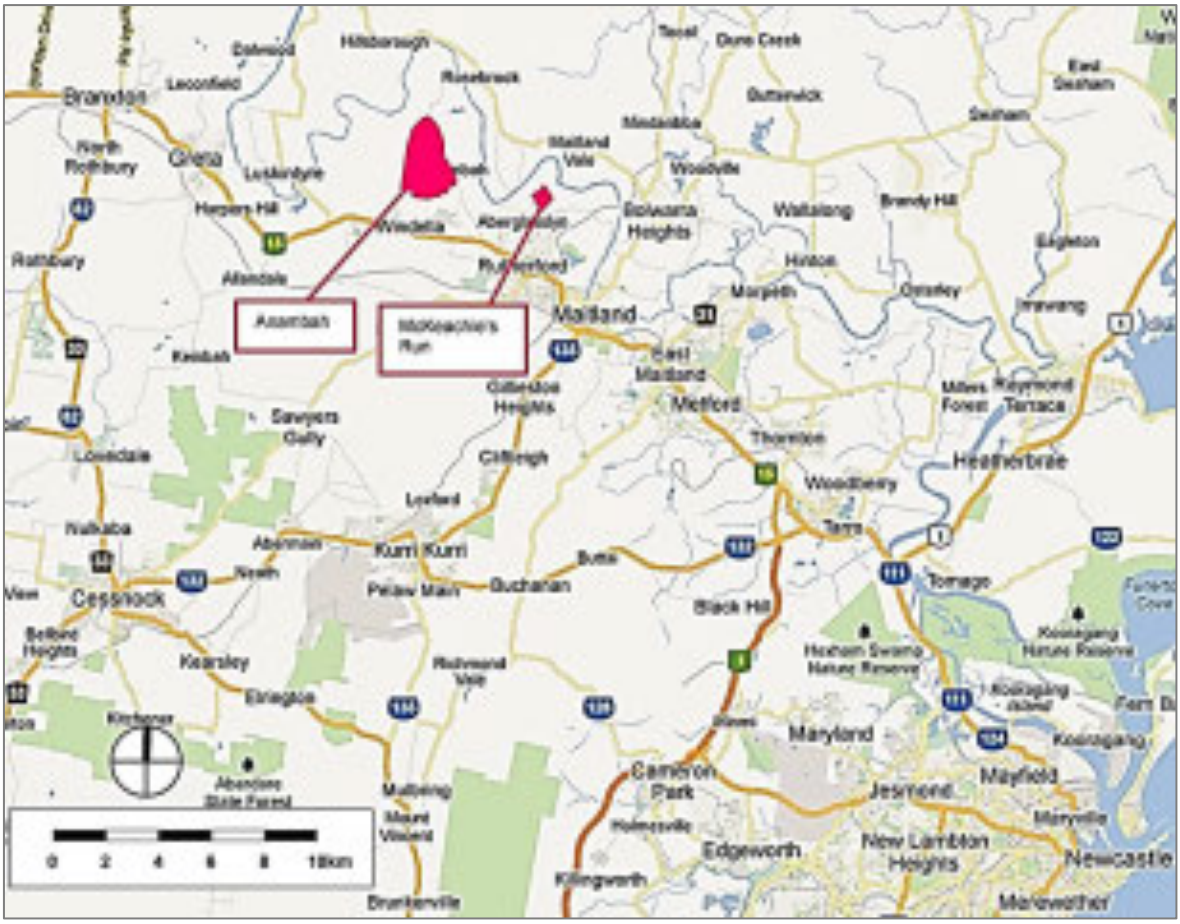


Figure 1 Locality map

This report could have taken different approaches. It could have described the local and regional geology and sought to identify potential lithic sources within it, and/or it could have focussed on lithic raw materials known to have been used for artefact production, and sought information on the likely sources of these. Apart from an examination of the local geology, I have chosen the latter path. The local geology is described in section 1.3. The main raw material types used for artefact production are described and their potential sources are discussed in sections 1.4, 1.4.9 8 and 1.6. A summary of results is given in section 1.7. An outline of study methods is given in section 1.2. A glossary of terms is included as section 1.9.

The issue of lithic raw material movement via trade or exchange would also involve an examination of social structure and of the mechanisms surrounding the movement and transport of physical goods across the physical and social landscapes. These issues were beyond the scope of the current study.

1.2 Study Methods

1.2.1 General

The study brief for this work was to identify potential sources of stone in the Maitland area which Aboriginal people could have used for stone artefact production. The aim of the study was to assist in the identification of the processes of stone procurement and local/regional trade/exchange.

The work carried out for this study involved:

- Checking previous archaeological reports to identify the raw material types from which Aboriginal objects in this region were made, and whether sources of stone raw materials had previously been identified. Kuskie and Kamminga (2000:180-190) provide an extensive discussion of the nature of lithic materials used for flaking and their potential sources in the Lower Hunter. Their observations were followed up, and more recent reports were checked to obtain more up-to-date information;
- Inspection of geological maps at various scales to ascertain locally and regionally available rock types. Geological maps held by the author, and those available for download from http://www.resources.nsw.gov.au/geological/geological-maps were examined;
- Checking on-line geological reports and publications which may have been relevant to the identification, or elimination, of potential stone sources;
- Field visit on 4th July to familiarise myself with the local landscape and to identify any potential sources. This is described in section 1.2.2 below;
- Preparation of this draft report.

A limited amount of time was allocated to the study, so it was not possible to visit public libraries or to conduct a comprehensive reading of archaeological reports held in the Aboriginal Heritage Information Management System (AHIMS located in Hurstville). Research was restricted to the author's existing holdings, to internet searches, to reports held by AHIMS which were identified by Kuskie and Kamminga (2000), and a preliminary field visit. More exhaustive research, and interviews with experts with local knowledge (especially geologists) would undoubtedly uncover new information.

1.2.2 Field Visit

A field visit to the Maitland area was made on Wednesday 4th July 2012. A vehicle was driven along several public roads by Ms Jenni Lennox of GML, and I scanned the road side and surrounding terrain for exposed rock which could then be inspected on foot (Figure 2). The following particular situations were sought:

- exposed ground containing pebbles and cobbles,
- road cuttings revealing geological strata, and
- stream banks or beds containing pebbles and cobbles.

A targeted visit was made to Riverbend Quarry, at Anambah, to inspect gravels occurring in the Greta Coal Measures. Ms Annette Ditton in the quarry office arranged for Jenni Lennox and me to visit the quarry, where a brief discussion was held with Mr Terry Ditton and Mr Chris Ditton. A foot inspection of exposed gravels near the top of the quarry was then made by Jenni Lennox and me. No indurated/silicified tuff or silcrete was seen.

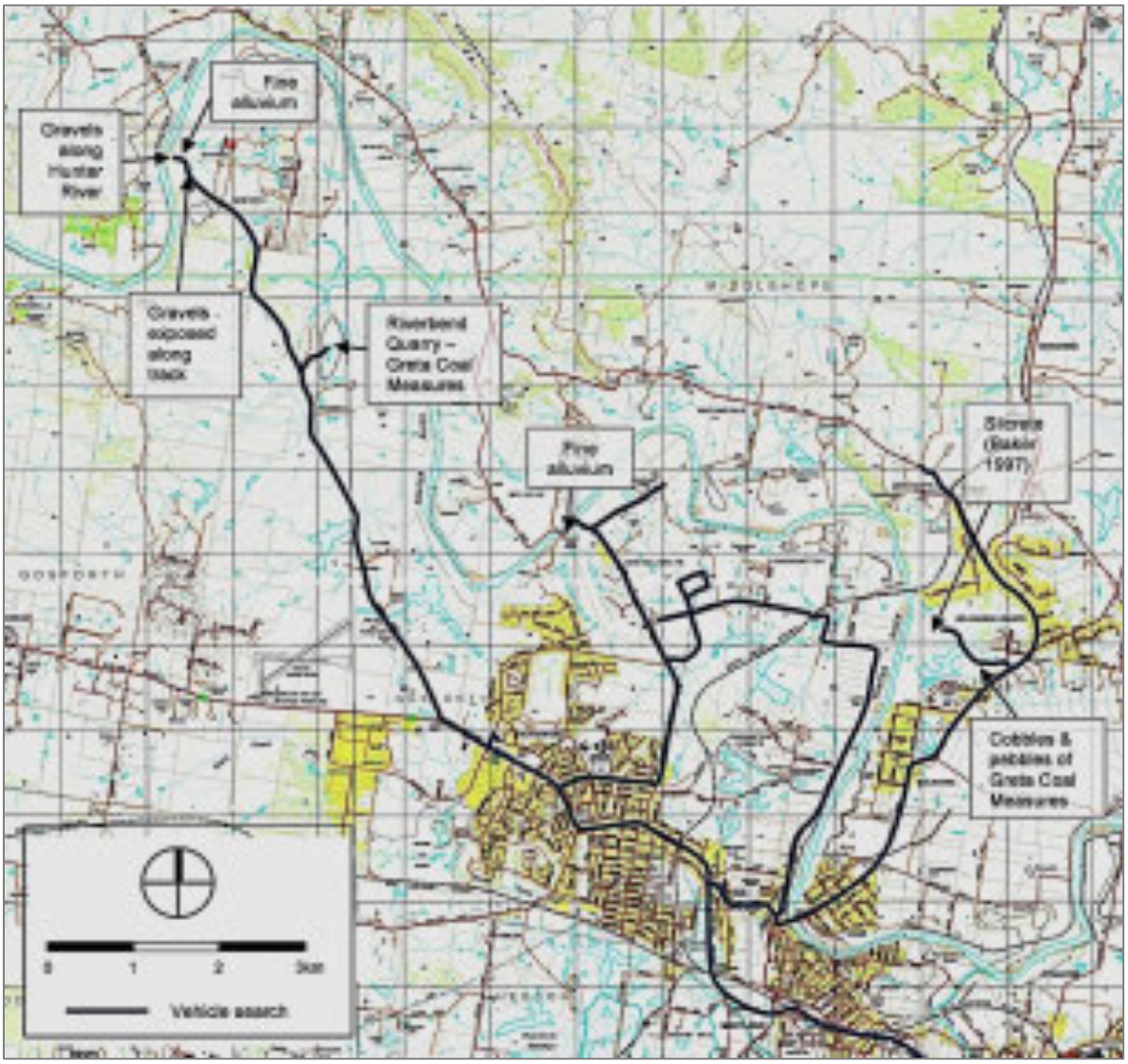


Figure 2 Field visit, vehicle search and points of interest.

Whilst in the office of Riverbend Quarry Ms Megan Smith (a local history teacher, on holiday), kindly offered to show JL and myself a location where she knew gravels and cobbles were exposed within the bedload of the Hunter River. She took us to the Hunter River west of Gosforth, along the Gosforth to Hillsborough Road; the bridge over the River having been destroyed by floods. Inspection of the gravels revealed numerous pebbles and small cobbles of indurated/silicified tuff, quartz, various igneous and other rock types. No silcrete was observed.

An area of pebbles and small cobbles was seen along the Gosforth to Hillsborough Road, about 350m south-east of the Hunter River. On inspection the pebbles appeared similar to those at Riverbend Quarry, and the location may have been an unmapped area of the Greta Coal Measures. No indurated/silicified tuff or silcrete cobbles or pebbles were seen.

The vehicle search for exposures of pebbles and cobbles was then continued in the Aberglasslyn and Oakhampton areas, thence to Lorn, Bolwarra and Bolwarra Heights, on the eastern side of the Hunter River.

The vehicle search for pebbles and cobbles was generally unsuccessful. Very few road cuttings were encountered, and the ground and creek banks were covered with thick grass. The area of silcrete at Bolwarra Heights was not inspected, as we did not have permission to enter the land.

1.3 Local Bedrock

Local geology has been mapped at the 1:100,000 scale on the Newcastle Coalfield Regional Geology 1995 map (Figure 3). I have been unable to locate mapping at 1:25,000 scale.

Anambah bedrock

The Anambah subject area is located on ‘Pdl’, being basalt, siltstone and sandstone of the Permian Lochinvar Formation. Siltstone and sandstone are not suitable for the production of flaked artefacts, although sandstone could be used for grinding seeds, and hatchet sharpening with water. Basalt is often thought to be suitable for artefact production (e.g. a category listed on the AHIMS form), but this rock type is predominantly feldspar (plagioclase) and contains relatively little silica, making it unsuitable for flaked artefact production. In the Sydney region, igneous rocks were rarely used for hatchet production, metamorphic rocks being preferred (Corkill 2005). In the New England region, hatchets were of greywacke, siltstone (sedimentary rocks), hornfels, phyllite, schist and quartzite, other metamorphic rocks, altered basalts (“greenstone” and others) and altered plutonic igneous rocks. Only small numbers of New England hatchets were of basalt (Binns and McBryde 1972:8-60, their Group 7). It is likely that basalt was rarely used for stone artefacts in the Hunter Valley.

McKeachie’s Run bedrock

The McKeachie’s Run subject area is located on several sedimentary formations. ‘Pmb’ (Permian Branxton Formation) occurs in the south, with ‘Pdf’ (Permian Farley Formation of siltstone) in the north, with a narrow band of ‘Pdfs’ (Permian Farley Formation of sandstone) through the centre of the northern section. ‘Pms’ (Permian Muree Sandstone) occurs in the south-west corner and ‘Pg’ (Permian Greta Coal Measures) occurs in the eastern corner (Newcastle Coalfield 100k geological map sheet). The siltstone and sandstones of these formations are not suitable for flaked artefacts.

Nearby bedrock containing conglomerate

An outcrop of the Greta Coal Measures is located immediately north-east of the Anambah subject area; this is shown as ‘Pg’ on the 1:100k, and consists of sandstone, conglomerate, siltstone and

coal. The conglomerates were of potential interest, as they could have potentially included pebbles of diverse lithologies. The outcrop of Greta Coal Measures was visited (Plate 1 and Plate 2), but pebbles were generally unsuitable for the production of flaked artefacts.

'Cz' occurs west of the study area. This formation consists of Carboniferous undifferentiated tuff and ignimbrite interbedded with conglomerate, sandstone and shale. These rock types were not inspected during the field visit but are unlikely to have been suitable for flaked artefact production.

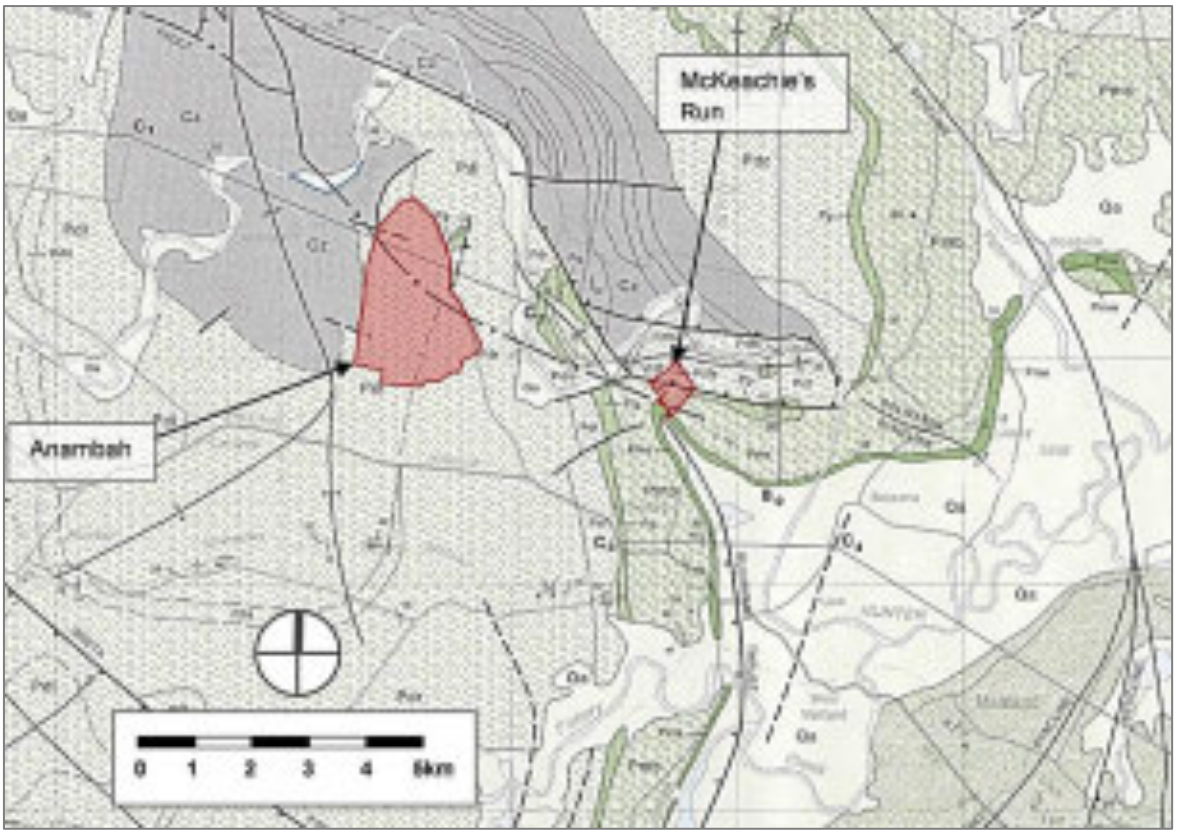


Figure 3 Extract from *Newcastle Coalfield Regional Geology* 1:100k (Department of Mineral Resources 1995)

Plate 1 Greta Coal Measures at Riverbend Quarry, Anambah.

Camera facing north-east.

Plate 2 Detail of pebbles at Riverbend Quarry, Anambah.

Scale 8.5cm long.

1.4 Indurated/Silicified Tuff

1.4.1 General

Kuskie and Kamminga (2000:180-182) note that 'indurated rhyolitic tuff' (sometimes referred to as 'indurated mudstone' and 'silicified tuff') formed when volcanic ash settled onto the ground or into water bodies. After burial the tuff beds became indurated and the stone recrystallised. Volcanic tuffs occur in numerous geological formations throughout the Hunter Valley, although only a few were suitable for flaking.

Inspection of the 1:100k *Newcastle Coalfield Regional Geology* map sheet shows that tuff occurs in many formations in the Newcastle Coal Measures and less commonly in some formations of the Tomago Coal Measures (Table 1, Figure 4). Diessal (1983) notes that the Newcastle Coal Measures contain hundreds of individual tuff layers. Together with their associated and derived claystones they comprise 20% of the rock sequence, varying from 1mm to 25m thick. The layers occur as thick tuffs (usually several metres) between coal seams, and thin ash layers millimetre to decimetre thick) within coal seams. The thick inter-seam tuffs retained their pyroclastic character, apart from some devitrification and other effects of weathering, while the thin ash layers within or under coal seams have generally been altered to claystones (Diessal 1983:197, 207). The intra-seam claystones and tonsteins consist of single layers, which can cover large areas, e.g. a claystone band in the Dudley Seam is 10cm thick but covers more than 700km^2 (Diessal 1983: 207).

Quartz, biotite, plagioclase, orthoclase, volcanic rock fragments and unwelded glass shards occur in varying proportions in the tuff layers, which often grade from coarse crystal tuff at the bottom through vitric tuff to fine ash-stone within a thickness of only a few centimetres. Some tuff beds consist of only one layer and others display multiple and/or reverse grading. The composition of the tuffs suggests a rhyolitic to rhyodactic source for most tuffs of the Newcastle Coal Measures, but post depositional alterations have often obliterated their genetic association. The fine-grained tuffs are generally more altered than the coarse ones (Diessal 1983:197-199). Some tuffs display a

microcrystalline intergrowth of authigenic chalcedony and analcime. As rainwater filtered through the tuff layer after it settled on the ground it leached alkalis, silica and iron from the volcanic glass, increasing the pH of the descending fluids. Analcime and silica (opal and chalcedony) formed near the bottom of the pyroclastic pile. Montmorillonite (clay) also formed, especially in the thin intra-seam tuffs. Most claystones have remnants of fine glass shards now transformed into montmorillonite or kaolinite, with biotite common in some cases (Diessal 1983:199, 207). The inter-seam tuffs commonly consist of stacks of strata which differ from each other in grain size, colour (white, pink, green, cream), fabric (massive, cross-bedded), different grades of secondary silicification and other forms of authigenesis resulting in contrasting weathering patterns (Diessal 1983:199).

Two implications arise for archaeologists: (1) some of the tuffs have been silicified, giving them good flaking properties, and (2) many of the tuffs have been transformed into clay, making them generally unsuitable for flaked artefact production.

Kuskie and Kamminga (2000) observed rhyolitic tuff occurring naturally in the terrain at Black Hill and Woods Gully (F3 Freeway), exposed in a creek near Stockrington and in a cutting along Seahampton Road (Kuskie and Kamminga 2000:357, Plates 15 and 16). They cited Murray Little (geologist) when reporting several potential tuff sources at Black Hill Quarry (10m to 20m thick), spurs around Long Gully, spurs near George Booth Drive, a quarry near Buttai, localities along Minmi Creek, and localities near West Wallsend (Kuskie and Kamminga 2000:180-182). More information on the nature of tuff in the Tomago Coal Measures is given in Section 1.4.2 .

Barry (2010:13-14) reported sources of 'IMTC' (Indurated mudstone/tuff/chert) at Nobbys Headland (see section 1.4.3), Mereweather Beach, Glenrock Lagoon, Jewells Swamp at Dudley (quarry site #38-4-0039), Richardson Road at Tomago, Grahamstown Storage Reservoir and Tomago (Shortland Tuff). Barry's references for these locations were Shane Frost (Awabakal Descendent Traditional Owner Aboriginal Corporation) personal communication in 2009, MDCA (2004:90,94) and Dyall (1972). The 'Shortland Tuff' is actually silcrete and is discussed below in section 1.4.9).

Dyall (1972:171) reported 'chert' among boulders at the foot of the sea cliff at Dudley. He stated

> *… the stone was obtained from the seashore. The most likely sources of chert and tuff are Little Redhead and Murdering Gully, where large aboriginal (sic) stone workshops exist. The only closer source I can find is at the foot of the cliff at Dudley, where chert makes up a small proportion of the boulders. (Dyall 1972: 171)*

Steele (2005:16) noted that Indurated mudstone/rhyolitic tuff occurred extensively in the Permian Singleton Coal Measures in the Central Hunter Lowlands, and could be obtained from river cobbles or occasionally from outcrops. However, tuff from the Singleton Coal Measures which I have observed (courtesy Geologist Roz Kerr, 1991) was coarser than that used for flaked artefacts in the Singleton–Jerrys Plains area. The Singleton Coal Measures were probably not a source for silicified tuff used widely for artefact production in the Central Hunter Lowlands.

There is a widely-held belief that silicified tuff occurs in the bed load of the Hunter River, and the current field visit confirmed the presence of silicified tuff in the Hunter River gravels, near the former river crossing west of Gosforth (Plate 3, Plate 4, at grid reference 357250 6386670). Silicified tuff cobbles from the Hunter River are generally tabular in shape, whereas as some cobbles of Nobbys Tuff are ovoid to lenticular in shape (e.g. AHMS 2011 front cover).

		Coal seams & formations	**Comments on Tuff**
Newcastle	Moon Island	Vales Point	Includes tuff (Hawley and Brunton 1995:45)

		Coal seams & formations	Comments on Tuff
Coal Measures	Beach Subgroup	Karignan conglomerate	
		Cowper Tuff	Mechanically weak, weathers to form clay (Laing 2012:15,24).
		Wallarah coal	Plastic clays (Hamilton 1971:107)
		Catherine Hill Bay / Mannering Park Tuff	
		Toukley Coal	
		Bluff Point Coal	
		Teralba Conglomerate	
		Booragul Tuff	Mostly claystone (Hayes 2001); 'Pipeclay" (Laing 2012:27).
		Great Northern Coal	Plastic clays (Hamilton 1971:107)
	Awaba Tuff	**Eleebana / Awaba Tuff**	Mostly claystone (Seedsman 1988)
	Boolaroo Subgroup	Chain Valley Coal	
		Bolton Point Conglomerate	
		Fassifern Coal	
		Croudace Bay / Belmont Conglomerate	Includes **tuff** – the **chert** Belmont insect bed (Hawley and Brunton 1995:39; Beattie 2007)
		Upper Pilot Coal	Includes **tuff bands** (Hawley and Brunton 1995:39)
		Reids Mistake / Seahampton Sandstone	Includes **tuff** (Hawley and Brunton 1995:41)
		Lower Pilot Coal	Includes **tuff** (Hawley and Brunton 1995:39)
	Warners Bay	**Tuff**	
	Adamstown Subgroup	Hartley Hill Coal	Includes **tuff bands** (Hawley and Brunton 1995:39)
		Mount Hutton	
		Australasian Coal	Includes **numerous tuff bands** (Hawley and Brunton 1995:38), but as plastic clays (Hamilton 1971:107)
		Tickhole/Charlestown Conglomerate	
		Stockrington Tuff	
		Montrose Coal	
		Kahibah / Whitebridge Conglomerate	
		Hillsborough Tuff	
		Wave Hill Coal	
		Glebe / Tingira Conglomerate	
		Edgeworth Tuff	
		Redhead Conglomerate	
		Fern Valley Coal	Includes **tuff** (Hawley and Brunton 1995:37)
		Kotara/Merewether Conglomerate	Includes **tuff** (Hawley and Brunton 1995:35)
		Victoria Tunnel Coal	
	Nobbys Tuff	**Shepherds Hill / Nobbys Tuff**	Used for artefacts (AHIMS 2011)
	Lampton Subgroup	Nobbys Coal	
		Bar Beach / Signal Hill Conglomerate	Includes **tuff** (Hawley and Brunton 1995:34)
		Dudley Coal	10cm claystone band (Diessal 1983:207)
		Young Wallsend Coal	
		Bogey Hole / Cockle Creek Conglomerate	Includes **tuff** (Hawley and Brunton 1995:34)
		Yard Coal	
		Tighes Hill / Ferndale Conglomerate	Includes **tuff** Hawley and Brunton 1995:31
		Borehole Coal	
		West Borehole Coal	
	Waratah	Waratah Sandstone	

		Coal seams & formations	Comments on Tuff
	Sandstone		
Tomago Coal Measures	Dempsey Formation	Shale, mudstone, sandstone, thick coal seams, clay	Tuffaceous clays (Engels 1966:23), most unsuitable for knapping, some pieces OK (Kuskie & Kamminga 200:358)
	Four Mile Creek Formation	Sandstone, shale, mudstone, coal seams, tuff	
	Wallis Creek Formation	Sandstone, shale, mudstone, thin coal seams	

Table 1 Tuff in Permian geological formations in the Newcastle region. (Compiled largely from Hawley and Brunton 1995:12, 16, 83; Engel 1966:Table 1, with additional references)

Plate 3 Gravel bar along Hunter River, Gosforth.

Camera facing south-west

Plate 4 Detail of gravels in Hunter River, Gosforth.

Yellow pebble above scale is silicified tuff. Scale in cm.

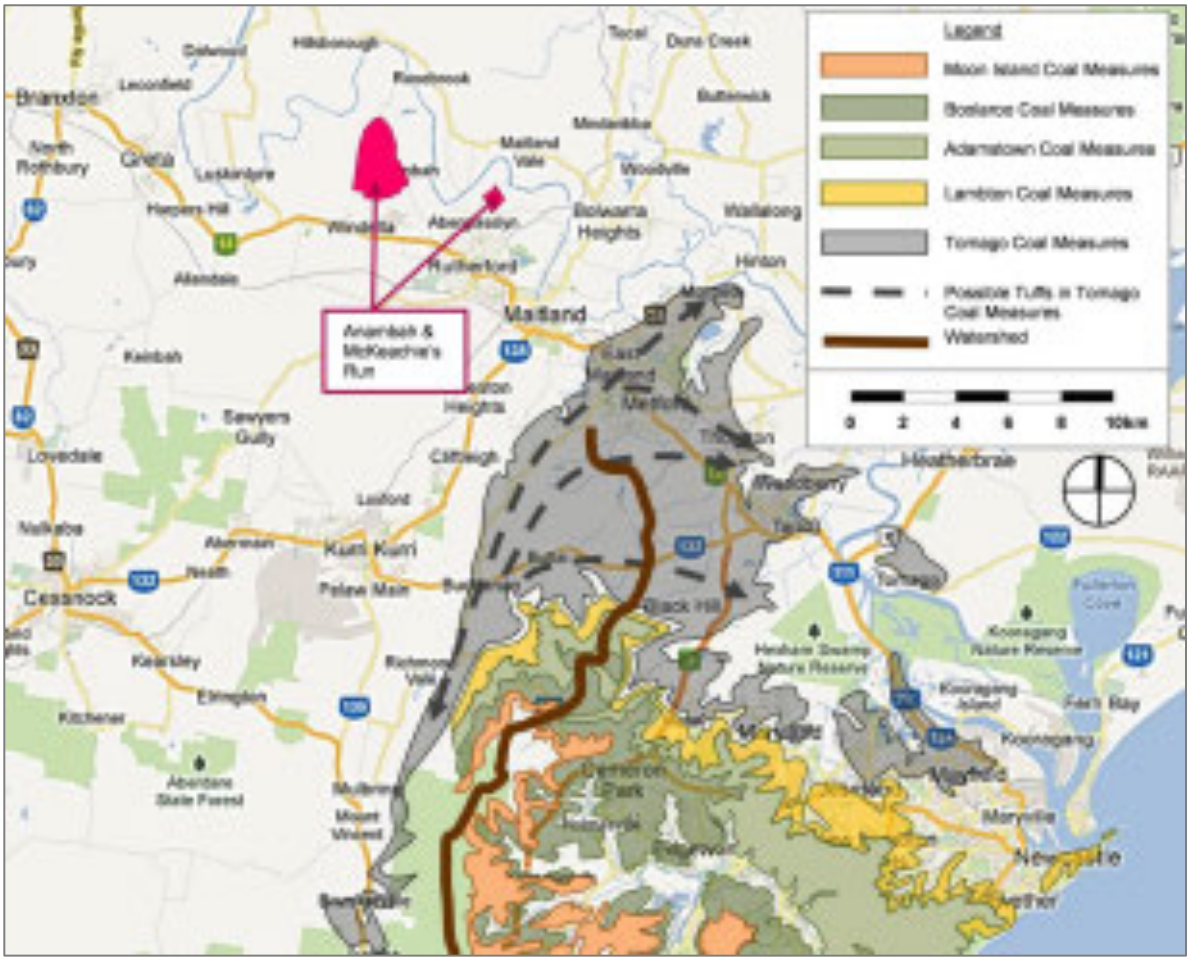


Figure 4 Primary geological formations in the Newcastle Coalfield which contain tuff (from Hawley and Brunton 1995:50).

1.4.2 Tuffs in the Tomago Coal Measures

The Tomago Coal Measures include a number of tuff horizons (Engel 1966:21), but by volume, they make up only a small proportion of the total sequence. Tuffs occur in the Four Mile Creek and Dempsey Formations. The Four Mile Creek formation outcrops from about 1.5km south of Buchanan, north-east to about 1.5km south-east of Maitland, then south-east around the flank of the south dipping Four Mile Creek Anticline, then north-east to about 1km south of Thornton (Engles 1966:22-23). The Dempsey Formation includes “tuffaceous clays”, between the Upper and Lower Sandgate Seam. It outcrops in the Buttai area and extends easterly towards Newcastle, passing under alluvium in the Hexham area (Engels 1966:23). Approximations of the surface outcrop of tuff formations are shown on Figure 4 with dashed lines.

Kuskie and Kamminga (2000:357) reported detritus from thin tuff layers occurring naturally at Woods Gully and Black Hill around their archaeological excavations. This area was located on the Dempsey Formation of the Tomago Coal Measures (Kuskie and Kamminga 2000:29). They describe the tuff as follows:

> *Within the survey area, thick tabular pieces of tuff up to 15cm in size were scattered on the reservoir embankment and along the margins of the gully between scrapes C3/1 and F4/a. A few detrital pieces of tabular tuff, the largest 80mm long, 16mm thick and weighing 106 grams, were also recovered from the F5/A*

> *broad area excavation. These pieces of tuff were orange, yellow or white in surface colouration, with orange to red interior matrix. While some displayed small conchoidal flake scars along their sides, they predominantly had fractured along bedding planes weakened by penetration of secondary minerals. Because many pieces were heavily weathered, only some were suitable for knapping. Possibly these fragments derive from bedrock layers no more than a centimetre thick, or from the parallel splitting along bedding planes within a layer at least a few centimetres thick. Such layers have not been completely removed by erosion in the area and presumably these fragments represent their typical remnants. Similar detrital pieces of tuff were used as microblade cores on site and may have been collected from the immediate area to be used for knapping (Kuskie and Kamminga 2000:358).*

This statement indicates that occasional pieces of tuff may have been found which were suitable for production of flaked artefacts — but most pieces were not.

1.4.3 Nobbys Tuff

Nobbys Tuff was a preferred lithic resource for production of flaked artefacts (e.g. AHIMS 2011; Baker 1994; Dean-Jones 1990).

Nobbys Tuff formed at the top of the Lambton Subgroup. It is generally 1.5m to 2m thick over much of the eastern portion of the Newcastle Coalfield with irregular thickening to the north and east (Diessal 1983:199). At Nobbys Head, Nobbys Tuff is 25m thick, extending upwards from sea level. South of Nobbys, the tuff occurs high up in cliffs at Shepherds Hill and Merewether, then further south at Glenrock it outcrops again just above sea level. From Glenrock the tuff continues to dip southwards, disappearing below sea level. It forms a broad arch-like fold, called the Shepherds Hill Anticline. Inland, Nobbys Tuff outcrops from Newcastle to Stockrington. South of the outcrops it occurs beneath the land surface. Thin sections of Nobbys Tuff examined under the microscope show crystals of quartz, feldspar, and biotite, shards of volcanic glass and clay minerals. Much of the original glass was altered to clay soon after deposition (Kerr 2000, 2008).

The Lambton Subgroup is shown in yellow on Figure 4, and mostly east of the Sugarloaf Range watershed. It is likely that most Nobbys Tuff would have originated from bedrock outcrops in this region and from streams flowing into Hexham Swamp and the lower Hunter. The Lambton Subgroup also outcrops west of Sugarloaf Range, though much less extensively. It is possible that Nobbys Tuff could occur as bedrock outcrops or cobbles in the catchments of Buttai, Surveyors and Wallis Creeks. I would expect, however, that finds of Nobbys Tuff west of Sugarloaf Range may be uncommon. Archaeological survey on the Lambton Subgroup in the Surveyors Creek catchment did not identify any lithic materials suitable for artefact production (HBHC 2001:14, Figure 1).

1.4.4 Adamstown Subgroup

The Adamstown Subgroup includes several tuff formations, with the Warners Bay tuff at the top of the sequence, and Stockrington, Hillsborough and Edgeworth Tuff as named formations. Tuff also occurs in the Australasian, Fern Valley and Kotara Coal Seams (Table 1); although that in the Australasian coal Seam was unsuitable for artefact production (Hamilton 1971). The Adamstown Subgroup is quite extensive (Figure 4). It occurs in the Dudley area, and the ‘chert’ among boulders at the foot of the sea cliff at Dudley, reported by Dyall (1972:171) may have originated from the Adamstown Formation.

The Adamstown Subgroup also outcrops west of Sugarloaf Range, though much less extensively. Like Nobbys Tuff, it is possible that tuff from the Adamstown subgroup could occur as bedrock or cobbles in the catchments of Buttai, Surveyors and Wallis Creeks – but uncommonly.

1.4.5 Reids Mistake Formation

The Reids Mistake Formation is a pyroclastic sequence 7m thick (Diessal 1983:201). It is exposed at Swansea Head and includes chert nodules and claystone (Loughnan and Ray 1978; Brownlow 1979). Some of this formation may have been suitable for artefact production.

1.4.6 Belmont 'Chert'

A thin 'chert' seam has been referred to as the Belmont Insect Bed. It is located within the Belmont Conglomerate Member within the upper part of the Croudace Bay Formation within the Boolaroo Subgroup. The Belmont Insect Bed is generally only 20cm to 32cm thick, but it has been reported to be up to 8m thick. It outcrops at Belmont North, Snake Gully and Mt Hutton (Beattie 2007:41, 45). The description of the Belmont Insect Bed as 'chert' suggests that it may have included stone suitable for flaked artefact production, although the fossil insects would probably have formed flaws in the stone, hindering knapping.

1.4.7 Tuffs Unsuitable for Artefact Manufacture

Several tuff formations would have been unsuitable for the production of flaked artefacts. The Awaba Tuff is a poor quality rock with strength and deformation properties lower than that of its associated coal seams, and causes roof and floor instability in underground mines (Seedsman 1988).

Booragul Tuff is referred to locally as 'claystone'. It is part of the Moon Island Beach sub-group. The thickness of the Booragul Tuff varies from absent to several metres thick over a fairly short distance. Claystones vary from soft to harder. The claystone is firmer at Chain Valley mine and weakest at Moonee mine. Claystone tends to be weakest near the interface with coal and tends to become stronger higher in the strata (Hayes 2001:73-83).

Tuffs in the Wallarah and Australasian Seams were composed largely of plastic clays, being montmorillonite and/or beidellite, as are similar deposits associated with the Scotch Derry and Great Northern Seams (Hamilton 1971:107-108).

1.4.8 Tuffs in Stream Bedloads

The Newcastle Coal Measures generally outcrop east of Sugarloaf Range. Cobbles and pebbles from these formations could become incorporated into the bedloads of streams draining north towards the Lower Hunter. The Tomago Coal Measures are the most westerly of the formations, occurring west and south of Mt Vincent, within the catchments of Surveyors and Buttai Creeks, and extending north to Metford and Morpeth. Surveyors and Buttai Creeks are tributaries of Wallis Creek, so tuff cobbles or pebbles could potentially occur in the bedload of Wallis Creek, which drains northwards to divide East Maitland from Maitland. Small areas of the Lambton and Adamstown subgroups of the Newcastle Coal Measures also occur within the upper catchment of Surveyors Creek, so tuff (including Nobbys Tuff) from those formations might also occur within the bedload of Wallis Creek. Tuff from the Boolaroo and Moon Island subgroups (including Warners Bay and Awaba Tuff) are not expected to occur within the bedload of Wallis Creek.

Indurated/silicified tuff occurs as tabular cobbles and pebbles within the bedload of the Hunter River in the Singleton area, and upstream to the west. Cobbles also occur along the Goulburn River, which is a major western tributary of the Hunter River, but are very rare (absent?) along the Hunter River upstream of the Goulburn River confluence (Fahey 1994:28). The rock may have originated

from Permian deposits in the Western Coalfields. Cobbles have also been found in relict terraces above the Hunter River at Lemington west of Singleton (Dean-Jones 1992:5).

Kuskie and Kamminga (2000:185) note that identifying particular gravel source locations along active streams is problematic. Substantial changes have occurred to the Hunter River since European occupation, due to ongoing changes in water flow, sediment erosion and deposition. Gravel bars which may have contained useable lithic materials may have been washed away by floods or buried under finer sediments. The course of the Hunter River across its flood plain has also been known to change in some places (Reeves and Coulter 2006:8-9). Similar processes may also have affected Wallis Creek and its floodplain.

1.4.9 Potential to Source Tuffs in Artefact Assemblages

Kuskie and Kamminga (2000:360) conducted x-ray diffraction (XRD) of tuff samples from their sites and from other localities in the lower and upper Hunter Valley. The analysis confirmed that both central and coastal Hunter Valley tuffs were essentially the same in mineral composition. The tuff samples were composed of quartz, potassium feldspar (orthoclase and/or sanidine) and occasionally layer silicate. They concluded that the then current methods of analysis did not provide a basis for attributing individual artefacts or assemblages to a particular source.

However, other geo-chemical analysis of various tuffs in the Sydney Basin has been carried out, indicating that some tuffs are distinctive. Kramer *et al*. (2001) found that the Awaba and Nobbys tuffs could be distinguished by chemical composition. Analysis of tonsteins in the tuffs also distinguished between the Warners Bay tuff, but not Mt Hutton tuff. When compared to tuffs in the Wollombi Coal Measures it was found that the Awaba Tuff was equivalent to the Nalleen Tuff of the Wollombi Coal Measures, but other tuffs in the Wollombi Coal Measures showed only moderate to poor correlation with their supposed stratigraphic equivalents in the Newcastle Coal Measures (Kramer *et al*. 2001). Geochemical analysis found that the Burragorang Claystone showed a strong correlation with the Awaba Tuff, and the Farmborough Claystone Member correlated with the Warners Bay Tuff. The Huntley Claystone Member was difficult to correlate with Nobbys Tuff (Grevenitz *et al*. 2003; but see Retallack *et al*. 2011:235). The results of the geo-chemical analyses indicate that Nobbys Tuff is distinctive from other tuffs that were tested. However, it is possible that it was distinguished from other tuffs which had weathered to form claystone, e.g. Awaba Tuff and Burragorang Claystone.

Kuskie and Kamminga (2000:183) raise the issue of colour as a potential aid to identifying different sources of tuff. Colour could be influenced by mineral composition, but colour could also change due to heat (e.g. yellow changing to red, Corkill 1997) or weathering (yellow artefacts when freshly broken during excavation often show grey less weathered stone internally).

The available information suggests a need for further geological investigation into the origin and nature of tuff from various sources in the region. If it was possible to distinguish between tuffs from various geological formations it may be possible to determine the original sources of indurated/silicified tuff used for artefact production. In turn, this might help inform social relationships across the lower and middle Hunter regions.

1.5 Silcrete

Kuskie and Kamminga (2000:183) describe silcrete as a brittle, intensely indurated rock composed mainly of quartz clasts cemented by a matrix which may be well-crystallised quartz, cryptocrystalline

quartz or amorphous (opaline) silica. The texture of silcrete reflects the host rock, and clasts may range from very fine grains to boulders.

In the lower Hunter, Kuskie (1994:4.29) reported the presence of silcrete gravel at Thornton, just west of Woodberry Swamp. Gravels were found at Thornton site 7, site 9 and elsewhere on the surface (Kuskie 1994:14,24,29) in the north-east part of his study area, suggesting a localised distribution. The sites were located between c.8m and 15m AHD. Surface geology was mapped as Permian Mulbring Sandstone (*Newcastle Coalfield Regional Geology* 100k). Kuskie (1994) stated:

> *Silcrete is by far the most common raw material within each site and the study area as a whole. The only notable internal variation is that Sites 8 and 9 are comprised almost entirely of silcrete. This is indicative of the different activities (procurement and reduction) which have occurred in this location. … The occurrence of silcrete in the Hunter Valley is widespread in alluvial gravels. It is ultimately derived from silicified Tertiary fluvial sands and gravels, several sources of which are located in the Upper Hunter (Hughes 1984:78).*
>
> *Site 9 could be described as a lithic quarry, following Hiscock and Mitchell's (1993) definition of a lithic quarry as the location of an exploited stone source* (Kuskie 1994:32)

Barry (2010:13-14) reported the presence of silcrete at Beresfield Golf Course and Fennell Bay, citing Shane Frost (Awabakal Descendent Traditional Owner Aboriginal Corporation) personal communication in 2009 for the Beresfield source, and MDCA (2004:90,94) for Fennell Bay. The precise location of silcrete within Beresfield Golf Course was not reported, but the golf course is located c.3km south of the Thornton source of silcrete and below 10m AHD. The surface geology is mapped as Tomago Coal Measures and Quaternary alluvium (*Newcastle Coalfield Regional Geology* 100k map).

Steele (2005:12) noted that various gravels, including silcrete, were present within Hexham Swamp; he cited Engel (1966) as the source for this information.

Silcrete 'gravels' occur at Bolwarra Heights, and Baker (1997) confirmed that they had been utilised as a raw material source, with on-site flaking of the stone. Baker stated:

> *The crest shows primary evidence of reduction of stone for artefact manufacture (mostly silcrete …). Aboriginal people dug in this area for large fragments of gravel for manufacture into artefacts. Artefacts of other raw materials occurred in very low numbers (1 to 5 artefacts): petrified wood, quartz, quartzite, tuff and other volcanic stone.*
>
> *Whilst most of the gravel originates from weathered Permian conglomerates, the origin of the silcrete is problematic. Silcrete is generally held to be of Tertiary age (P.Mitchell pers.comm. Dec 1996) whereas the conglomerates are of an older age. Inspection of conglomerate seams in the sandstone/conglomerate outcrops at river level fail to reveal silcrete pebbles or cobbles within the conglomeritic seams.*
>
> *The bulk of the gravel had long ago weathered from the conglomerates and formed a concentrated band in the soil at 10-20cm. A gravel layer at 10-20cm below ground surface was common across the elevated parts of the study area. On the crest the gravel fragments were larger than elsewhere and more suitable for Aboriginal flaking.* (Baker 1997:29)

The crest landform on which the silcrete occurred was located above 36m AHD, and about 300m from the Hunter River (Baker 1997). The surface geology was mapped as the Permian Branxton Formation (Newcastle Coalfield 100k Geological Map). It can be noted that the 1:25k topographic map sheet showed the Bolwarra Heights location as occurring between 20m and 30m; indicating an error in the mapping at the larger scale than given in the report.

Raggatt (1938) reported the presence of 'silicified Tertiary sands' or 'grey billy' (i.e. silcrete) at several locations in the Central Lowlands of the Hunter Valley between Muswellbrook and Singleton. He considered that the silcrete had formed when remnants of river sands and gravels were cemented following outpouring of Tertiary basalt which had since been removed by erosion (Raggatt 1938). That is, Raggatt proposed *in situ* formation of the silcrete. Mitchell (1997) inspected a formation at Bengalla, on the opposite side of the Hunter River to those at Roxburgh reported by Raggatt. The Bengalla formation included lithologies comparable to those in the bedload of the modern Hunter River, suggesting a similar original source. The Bengalla silcrete boulders showed arcuate and circular fractures, which were the eroded cones of percussion caused by boulder impacts during transportation in a high energy stream. He concluded that the silcrete was part of a fluvial gravel transported from an unknown source in the upper Hunter Valley (Mitchell 1997:3). Mitchell (1997:4) also noted that the terrace deposits were not dated, and could not be reliably ascribed a Tertiary age.

Silcrete has recently been identified within the Anambah study area at three locations. The outcrops include silcrete boulders and smaller debris (Tim Owen, personal communication 22nd and 28th August 2012). The outcrops are exposed between c.15m and 17m AHD, on the eroded edges of flat to very gently sloping landforms, into which several streams have been incised. They are located between 1.1km and 1.7km from the modern channel of the Hunter River. Similar formations could occur on wide flattish landforms between the outcrops and the Hunter River. It is possible that these landforms are ancient terraces, or lower slopes capped by ancient terrace deposits. If so, silcrete could occur on the adjacent flattish land surfaces away from the incised creeks.

In the Central Lowlands of the Hunter Valley (west of Maitland) silcrete has been reported at several locations (Table 2, Figure 5). Silcrete occurred within the bedload of the Hunter River (e.g. at the low level crossing at "Kilburnie", personal observation) but has been observed more often in relict terraces above the Hunter River (e.g. Brayshaw et al. 1996:5; Dean-Jones 1992; Koettig and Hughes 1985; Rich 1992, 1993). At Lemington, some of the boulders were very large and some probably weighed several tonnes. Rocks of other diverse lithologies were also present at Bengalla, Lemington, and nearby at Cheshunt (Brayshaw et al. 1996:5, Fig.2b; Dean-Jones 1992; Mitchell 1997). The elevations of silcrete locations are shown on Figure 6, together with the elevation of the modern Hunter River. The silcrete locations occur at higher elevations than the modern Hunter River, except for the low level crossing at "Kilburnie". The silcrete locations also show a general decline in elevation from Bengalla in the north-west towards the coast. However, the silcrete outcrops along Putty Road at Abbey Green and Doughboy Hollow, and that at Bolwarra Heights, are at higher elevations than the general trend, indicating that there may have been more than one phase of silcrete deposition.

Figure 5 Locations of reported silcrete (shown as red stars)

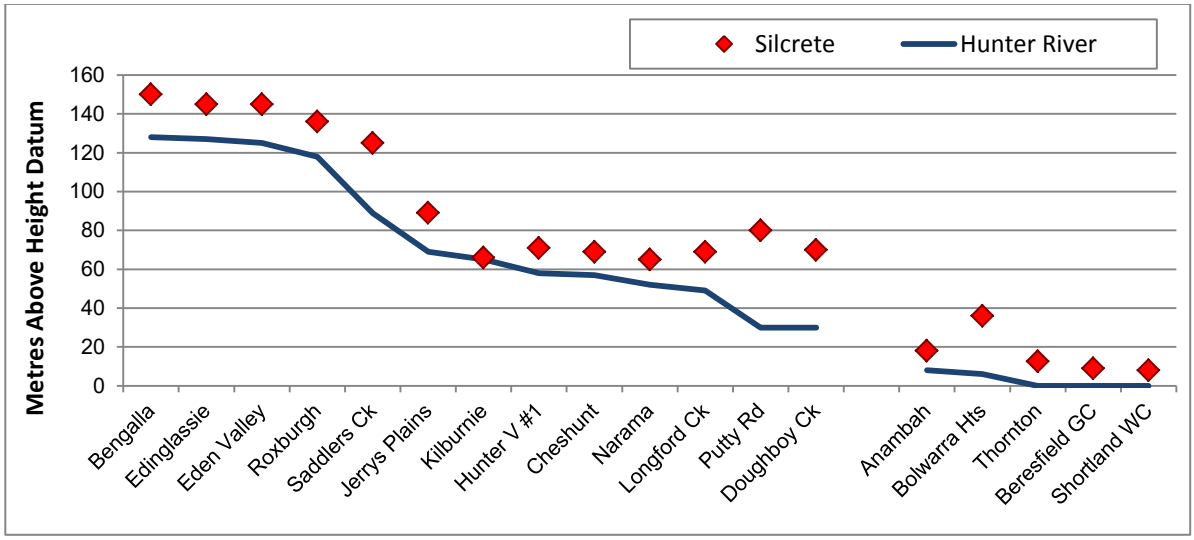


Figure 6 Elevation of reported silcrete locations

Location (from north-west to south-east)	Grid reference	AHD	Mapped Geology	Comments	Reference
Kayuga	n/a	n/a	n/a	Seen within road easement	Jill Ruig, *personal communication*.1994
Bengalla (AHIMS 37-2-	294620	150 –	Pswj	Confirmed Aboriginal	White 1998; Mitchell 1997:3-

Location (from north-west to south-east)	Grid reference	AHD	Mapped Geology	Comments	Reference
579)	6425575	160m		quarry. Fluvial deposit	4.
Edinglassie	296100 6424200	143 – 147m	Cza	Edge of a terrace; blocks remnant of uniform sheet, broken *in situ* (not transported boulders). Aboriginal site 37-2-125 spatially associated.	Muswellbrook 1:25k geological map sheet – mapped as Cza; Raggatt 1938:320; Dyall 1980:4.
Eden Valley	295100 6423000	140 – 151m	Cza		
Roxburgh	292000 6421600	130 – 142m	Cza		
Saddlers Creek	295615 6412030 295675 6411530	122m, 128m	Junction Qha & Pswj	Boulders present near Aboriginal sites MAS76 and MAS52.	Koettig and Hughes 1985:31,32.
Lower Saltwater Creek, uncertain location				Cobbles along Saltwater Creek, mostly as piles of cobbles where stacked by farmers when ploughing.	Koettig and Hughes 1985:25.
Jerrys Plains village	303070 6403200	89m	Cza	On edge of terrace 130' above the Hunter River. Terrace remnant	Raggatt 1938:320; Jerrys Plains 1:25k geological map sheet.
Kilburnie (low level crossing)	306260 6400480	65m	Qha	Cobbles amongst Hunter River gravels (current bedload).	Personal observation.
Hunter Valley No.1	311580 6401720	71m	Pswj	Silcrete cobbles present, large cores and flakes, split cobble.	Brayshaw 1985:1,12; Rich 1993b:64,67; Doyles Ck 1:25k geological map sheet.
Cheshunt (Lemington)	314000 6401200	69m	Cza	BBC4, LC2. Cobbles from Tertiary sediments readily available on the hillslide	Dean-Jones 1992:21,29; Singleton 1:25k geological map sheet
Narama site R5	314210 6405310	65m	Pswj near Qha	Cobbles present; no evidence of on-site reduction.	Rich 1992 Vol.2:142,152; Camberwell 1:25k geological map sheet
Lemington	315700 6395700	62m	Conglomerate lens in Pswj	Cobbles and boulders on ridge, much disturbed; artefacts associated with northern exposure.	Brayshaw *et al*. 1996:5, Fig.2b. Singleton 1:25k geological map sheet.
Putty Road, Abbey Green	326100 6390270	80m	Czas	Boulders on stranded terrace extended over 200 acres; disturbed.	Fahey 1992:4-5; Raggatt 1938:318; Singleton 1:25k geological map sheet.
Doughboy Hollow Ck, Abbey Green	327437 6391020	70m	Czas		Singleton 1:25k geological map sheet.
Anambah	c.358520 6383830, c.358670 6383620, c.359080 6382380	18m 15m 11m	Pdl	Boulders & pieces	Tim Owen, personal communication
Bolwarra Heights	366110 6381100	36m	Pmb	Silcrete gravel weathered from conglomerates	Baker 1997:29
Thornton	374075 6372935 373731 6373200	11m 14m	Pmm	Silcrete gravels at sites 7 and 9	Kuskie 1994:29,32; Newcastle Coalfield 1:100k geological map
Beresfield Golf Course	c.373000 6370000	9m	Pt & Qa	Silcrete gravels reported by Awabakal DTOAC	Barry 2010:13-14; Newcastle Coalfield 1:100k geological map
Shortland Wetlands Centre	c. 378000 6361800	c. 8m	Qa	Dean-Jones reported tuff, but Kuskie and Kamminga confirmed silcrete	Kuskie and Kamminga 2000:359, citing Dean-Jones.

Table 2 Reported silcrete locations in the Hunter Valley

1.6 Other Raw Material Types

Kuskie and Kamminga (2000:185 onward) also briefly describe quartz, chalcedony, chert, petrified wood, quartzite, porcellanite, and dacite.. Quartz (silicon dioxide or SiO_2) can occur as veins, geodes and macrocrystals. Quartz and other raw material types often have flaws and tend to be of lesser flaking quality than indurated/silicified tuff or silcrete. Quartz, siliciified/petrified wood, other fine grained siliceous and porphyritic rock types have been observed within the bedload of the Hunter River (personal observation). Quartz also occurs within the Hawkesbury Sandstone, which outcrops in the Southern Mountains south of Singleton (*Newcastle Coalfield Regional Geology* 100k map sheet; Singleton 250k geological map sheet).

Barry (2010:13-14) reported that quartzite may occur at Nobbys Head and at other coastal locations. Dyall (1972:172) also noted that quartzite pebbles were present along the beach below Redhead Water Tower.

Porcellanite is a rare rock type used for flaked artefact production, with the largest numbers found in assemblages in the Central Hunter Lowlands around Mt Arthur (White 1999). This raw material type may have had a localised natural distribution.

Kuskie (2008b) suggested that the Munmorah Conglomerate could contain pebbles potentially suitable for production of flaked artefacts.

1.7 Summary of Results

The main findings of this study are:

- Local bedrock at Anambah and McKeachies's Run is unsuitable for the production of flaked artefacts.
- Gravels occurring in nearby outcrops of the Greta Coal Measures are unsuitable for the production of flaked artefacts.
- A variety of lithic raw materials, but especially silicified tuff, quartz, other igneous and metamorphic rocks, are generally available in gravel bars along the Hunter River. The rocks would probably have been procured as cobbles or large pebbles (e.g. more than 5cm in size). The locations of rocks of suitable size could have changed over time, as floods variously removed gravel bars or buried them under finer sediment. The course of the Hunter River within its flood plain could also have changed over time. The potential for change over time in the availability of rocks of suitable sizes makes it difficult to predict the precise locations along the Hunter River from which people could have obtained lithic materials. However, the Hunter River gravels in general could be identified as a likely source for silicified tuff, quartz, quartzite, igneous and other metamorphic rocks.
- Silcrete may occasionally occur in the Hunter River gravels. However, the predominance of silcrete in local artefact assemblages suggests that Aboriginal people preferred terrace silcrete sources over the Hunter River gravels.

- Silcrete which had been used for artefact production, has been found at Anambah (Tim Owen, *personal communication*) and at Bolwarra Heights (Baker 1997), about 3.5km east-south-east of McKeachie's Run and between c.7.5km and 9km from Anambah. No other sources of silcrete are known to occur in the Maitland area, but it is likely that other sources are present. Silcrete sources are likely to occur as remnant terraces, at varying elevations above height datum (AHD) – between c.10m and 20m AHD at Anambah and at 36m AHD at Bolwarra Heights.
- Nobbys Tuff was a significant lithic resource in the Newcastle area, often used for stone artefact production (e.g. AHIMS 2011). It occurs within the Lambton Coal Measures. It outcrops near sea level at Nobbys Head (mouth of the Hunter River) and further south at Glenrock, high up in cliffs at Shepherds Hill, Merewether (Kerr 2000, 2008), Stockrington and several other locations (Kerr 2008; Kuskie and Kamminga 2000). The Lambton Coal Measures extend into the catchment of Wallis Creek, so cobbles suitable for artefact manufacture could potentially occur within the bed load of Wallis Creek; though so far as I can ascertain, no such sources have been identified within that catchment. Nobbys Tuff would not be present in the bedload of the Hunter River upstream from Maitland.
- Occasional pieces of tuff suitable for flaked artefact manufacture occur within the Dempsey Formation of the Tomago Coal Measures. Most tuff on the ground surface was not suitable, but occasional pieces were utilised in the Woods Gully—Black Hill area (Kuskie and Kamminga 2000:357). The Dempsey Formation extends into the catchment of Buttai Creek, thence Wallis Creek, so cobbles suitable for artefact manufacture could potentially occur within the bed load of the lower reaches of Wallis Creek.
- Silicified tuff suitable for artefact production may also occur within the Adamstown Subgroup in the Dudley area (Figure 4, Dyall 1972), in the Reids Mistake Formation at Swansea Head (Brownlow 1979; Loughnan and Ray 1978), and the Belmont Insect Bed of the Croudace Bay Formation at Belmont North, snake Gully and Mt Hutton (Beattie 2007).
- Numerous other tuff formations occur in the Newcastle Coal Measures but many of these have weathered to form claystones, unsuitable for artefact manufacture (Diessel 1983; Hamilton 1971; Hawley and Brunton 1995; Hayes 2001; Laing 2012; Seedsman 1988).
- Kuskie and Kamminga (2002:360) carried out X-ray Diffraction (XRD) analysis of tuff samples. They found that the technique did not distinguish between silicified tuffs from the central Hunter Valley and those from coastal sources. However, more recent studies of the chemical composition of major tuff formations has been carried out, and Nobbys Tuff has been distinguished from several other tuff formations (Grevenitz *et al*. 2003; Kramer *et al* 2001). This suggests that it may be possible to distinguish Nobbys Tuff from other tuff formations. If so, more detailed information on tuff procurement, and the possibility of trade or exchange, may be possible.
- The present study has been preliminary only, and considerably more research into the location and nature of lithic raw material sources could usefully be conducted in the Lower Hunter Region.

1.8 References

AHMS 2011 Section 87/90 Aboriginal Heritage Impact Permit #1098622 Excavation Report. Final report. Unpublished report by Archaeological and Heritage Management Solutions to SBA Architects Pty Ltd.

Baker, N. 1994 Moffats Swamp Dune: Final Report on Archaeological Site Salvage, Testing and Artefact Analysis. Unpublished report to RZM Pty Ltd.

Baker, N. 1997 Archaeological Test Excavations at Landcom Project 12163.001,Bolwarra Heights, Hunter Valley, NSW, Report by Australian Museum Business. Services to Atkinson and Tattersall Pty Ltd and Landcom, NSW, Sydney.

Barry, F. 2010 Stone artefact report, Appendix 7 in AHMS 2011 Section 87/90 Aboriginal Heritage Impact Permit #1098622 Excavation Report for SBA Architects Pty Ltd.

Beattie, R. 2007 The geological setting and palaeoenvironmental and palaeoecological reconstructions of the Upper Permian insect beds at Belmont, New South Wales, Australia. *African Invertebrates* 48(1):41-57.

Binns, R.A. and McBryde, I. 1972 *A petrological analysis of ground-edge artefacts from Northern New South Wales*. Canberra: Australian Institute of Aboriginal Studies.

Brayshaw, H. 1985 Archaeological survey of Authorisation 341 south of Hunter Valley No.1 Mine, NSW. Unpublished report to Coal & Allied Operations Pty Ltd.

Brayshaw, H., Haglund, L. and Rich (=White), E. 1996 Lemington mine Hunter valley Southern Extension EIS: archaeological survey for Aboriginal sites. Unpublished report to Lemington Mine through Sinclair Knight Merz.

Brownlow, J.W. 1979 Discussion: The Reids Mistake Formation at Swansea Heads, New South Wales. *Journal of the Geological Society of Australia* 26:319-322.

Corkill, T. 1997 Red, yellow and black: colour and heat in archaeological stone. *Australian Archaeology* 45:54-55.

Corkill,T. 2005 Sourcing stone from the Sydney region: a hatchet job. *Australian Archaeology* 60:41-50.

Dean-Jones, P. 1990 Newcastle Bight Aboriginal sites study. Unpublished report to NPWS.

Dean-Jones, P. 1992 Lemington Coal Mines Ltd. Archaeological investigations of Aboriginal sites, proposed north western open cut area. Unpublished report to Lemington Mine.

Department of Mineral Resources 1995 *Newcastle Coalfield Regional Geology* 1:100,000 scale geological map sheet.

Diessel, C.F.K. 1983 Tuffs and tonsteins in the coal measures of New South Wales, Australia, pp.197-208. *Dixième Congrès International de Stratigraphie et de Géologie du Carbonifère*. Madrid:XICC.

Dyall, L.K. 1972 Aboriginal Occupation of the Dudley-Jewells Swamp Area *Hunter Natural History,* pp.168-177.

Engel, B.A. 1966 1:250,000 *Geological series explanatory notes Newcastle Sheet S1 56-2 Australian National Grid* Sydney: Department of Mines.

Fahey, M. 1992 Geomorphological assessment of archaeological sites "H" and "L" and the Doctors Creek Valley on the Warkworth Mining Lease at Mt Thorley in the Hunter Valley, N.S.W. Unpublished report prepared by Warkworth Mining Pty Ltd to Haglund and Associates.

Fahey, M. 1994 Geomorphological assessment; archaeological sites "W6", "W7", "W8", "W9", "W10" and "C" and the Sandy Hollow and Dight's Creek catchments. Unpublished report prepared by Warkworth Mining Pty Ltd to Haglund and Associates.

GML 2012 McKeachie's Run top soil stripping. Archaeological technical report. Unpublished draft report to Stockland.

Grevenitz, P., Carr, P. and Hutton, A. 2003 Origin, alteration and geochemical correlation of Late Permian airfall tuffs in coal measures, Sydney Basin, Australia. *International Journal of Coal Geology* 55(1):27-46.

Hamilton, J.D. 1971 Beidellitic Montmorillonite from Swansea, New South Wales. *Clay Minerals* 9:107-123.

Hawley, S.P. and Brunton, J.S. 1995 *The Newcastle Coalfield: Notes to accompany te 1:100,000 Newcastle Coalfield regional geological map*. Coal and Petroleum Geology Branch Department of Mineral Resources. Geological Survey Report No. GS1995/256.

Hayes, P.J. 2001 Towards high productivity under a "claystone" roof: Great Northern Seam support management experiences at Chain Valley, Moonee and Wallarah Collieries, pp.71-84. In Aziz, N. (ed) *Coal 2001: Coal Operators' Geotechnology Colloquium*. University of Wollongong & the Australasian Institute of Mining and Metallurgy.

HBHC 2001 Proposed Highway Link F3 to Branxton update of archaeological assessment. Unpublished report by Helen Brayshaw Heritage Consultants to the NSW Roads and Traffic Authority through Connell Wagner Pty Ltd.

Hughes, P.J. 1984 NSW National Parks and Wildlife Service Hunter Valley region archaeological project stage 1: An overview of the archaeology of the Hunter Valley, its environmental setting and the impact of development. Unpublished report to the NSW National Parks and Wildlife Service.

Kerr, R. 2000 Nobbys Tuff – the rocks of Nobbys Head. Retrieved 16 July 2012 from http://www.newcastle.edu.au/Resources/Divisions/Academic/Library/Cultural%20Collections/pdf/kerr-nobbys.pdf.

Kerr, R. 2008 The Bathers Way: geology and landscape. Report to Newcastle Tourism & City Strategy, Newcastle City.

Koettig, M. and Hughes, P.J. 1985 Archaeological investigations at Plashett Dam, Mount Arthur North and Mount Arthur South in the Hunter valley, New South Wales. Vol.2: The archaeological survey. Unpublished report by ANUTECH Pty Ltd to the Electricity Commission of New South Wales and Mount Arthur South Coal Pty Ltd.

Kramer, W., Weatherall, G. and Offer, R. 2001 Origin and correlation of tuffs in the Permian Newcastle and Wollombi Coal Measures, NSW, Australia, using chemical fingerprinting. *International Journal of Coal Geology* 47(2):115-135.

Kuskie, P.J. 1994 Further archaeological investigations of Lot 1 DP 559519, Thornton, NSW. Unpublished report to Gutteridge, Haskins and Davey Pty Ltd.

Kuskie, P.J. and Kamminga, J. 2000 Salvage of Aboriginal archaeological sites in relation to the F3 Freeway near Lenaghans Drive, Black Hill, New South Wales. Report by South East Archaeology to the Roads and Traffic Authority of New South Wales.

Kuskie, P.J. 2008a Bloomfield Colliery, Hunter Valley, New South Wales: Completion of mining and rehabilitation project – Aboriginal heritage impact assessment. Unpublished report by South East Archaeology Pty Ltd to Bloomfield Collieries Pty Ltd.

Kuskie, P.J. 2008b Tasman Coal Mine (Panels 1 – 17) SMP application: Aboriginal heritage assessment. Unpublished report to Donaldson Coal Pty Ltd.

Laing, W.P. 2012 Cathering Hill Bay Development Control Plan and exclusion from General Housing Code, File: 11-21806 of 20 March 2012. Addendum 1 to Original Submission 19 April 2012. Retrieved 22 July 2012 from http://www.planning.nsw.gov.au/LinkClick.aspx?fileticket=_Gy4WMUOIGY%3D&tabid=205&mid=1081&language=en-AU

Loughnan, F.C. and Ray, A.S. 1978 The Reid's Mistake Formation at Swansea Head, New South Wales. *Journal of the Geological Society of Australia.* 25(8):473-481.

MDCA 2004 Aboriginal Archaeological Test Excavation Report: The Boardwalk site Honeysuckle Drive, Newcastle, NSW. Unpublished report to Stronach Pty Ltd.

MDCA 2008 Aboriginal Archaeological Excavation Report. Partial Salvage of AB Campsite 1 (AHIMS #38-8-0866) at Oakhampton Road, Aberglasslyn, NSW. Unpublished report to Pulver Cooper & Blackley Pty Ltd on behalf of Stockland Developments Pty Ltd.

Mitchell, P.B. 1997 Bengalla Mine Project. Aboriginal archaeological site B10. Appendix 4 in White, E. 1998 Archaeological salvage of sties B10 & B33, Bengalla Mine, Hunter Valley, NSW. Unpublished report to Bengalla Mining Company.

Raggatt, H.G. 1938 Note on some silicified terrace sands ("grey billy") in the Hunter Valley (N.S.W.). Journal of the Royal Society of New South Wales LXXII:318-324.

Reeves, J. and Coulter, N. 2006 Archaeological survey for Aboriginal heritage sites: proposed third Hunter River crossing, Maitland, New South Wales. Unpublished draft report to NSW Roads and Traffic Authority.

Retallack, G.J., Sheldon, N.D., Carr, P.F., Fanning, M., Thompson, C.A., Williams, M.L., Jones, B.G. and Hutton, A. 2011 Multiple Early Triassic greenhouse crises impeded recovery from Late Permian mass extinction. *Palaeogeography, Palaeoclimatology, Palaeoecology* 308:233-251.

Rich (= White), E. 1992 Narama salvage project, lower Bayswater Creek, Hunter Valley, NSW. Vol. 1. Unpublished report by Brayshaw McDonald Pty Ltd to Envirosciences Pty Ltd and Narama Joint Venture

Rich (=White), E. 1993a Proposed Bengalla coal mine, Muswellbrook, NSW: archaeological survey for Aboriginal sites. Unpublished report to Envirosciences Pty Ltd and Bengalla Joint Venture.

Rich (=White), E. 1993b Archaeological investigation of sites 37-5-63 and 37-5-126 Hunter Valley No.1 Mine. Unpublished report to Coal & Allied Operations Pty Ltd.

Seedsman, R.W. 1988 Mining in proximity to the Awaba Tuff. *Fifth Australia – New Zealand Conference on Geomechanics: prediction versus performance, preprints of papers*, pp.229-235. Barton, ACT, Australia: Institution of Engineers.

Steele, D. 2005 Preliminary Aboriginal archaeological survey and assessment proposed upgrade of State Highway SH23, Shortland to Sandgate New south Wales. Report to the NSW Roads and Traffic Authority.

White, E. 1998 Archaeological salvage of sites B10 and B33, Bengalla Mine, Hunter Valley, NSW. Unpublished report to Bengalla Mining Company.

White, E. 1999 From Artefacts to the Actions of People in Prehistory: A Behavioural Study of the W2 Stone Artefact Assemblage, Hunter Valley, NSW. Unpublished MPhil Thesis, Department of Archaeology, University of Sydney, Sydney.

1.9 Glossary of Technical Terms

Analcime. A white, grey, or colourless mineral, consisting of hydrated sodium aluminium silicate in cubic crystalline form. Structurally and chemically it is more similar to feldspars. Analcime occurs as a primary mineral in some basalt and other alkaline igneous rocks. It sometimes occurs as cavity and vesicle fillings in rocks.

Authigenic. A mineral or rock found where it formed during sedimentation by precipitation or recrystallization. Common sedimentary authigenic minerals include calcium carbonate[3], apatite[4], and clays [5]. For any mineral to be precipitated, the water must be oversaturated with respect to that mineral.

Beidellite. A clay mineral of the montmorillonite group in which Si^{4+} has been replaced by Al^{3+} and in which there is virtual absence of Mg or Fe replacing Al. http://www.answers.com/topic/beidellite-mineralogy#ixzz20kM29vSX.

Bentonite. An impure clay, with differing dominant elements, such as potassium, sodium, calcium and aluminium.

Biotite. A dark mica, consisting of iron, magnesium, aluminium, silicon, oxygen and hydrogen, which form sheets weakly bound together by potassium ions.

Boulder. A rock more than 25.6cm (10 inches) in size.

Cobble: A rock more than 6.4cm in size.

Cryptocrystalline. A rock texture made up of such minute crystals that its crystalline nature is only vaguely revealed even microscopically. Felsites and rhyolites are volcanic *Cryptocrystalline* rocks, and chert and flint are cryptocrystalline simentaedry rocks.

Devitrification. The formation of crystals in a previously non-crystalline substance, such as magma, volcanic glass or rhyolite.

Feldspar. A group of minerals containing aluminum and the silica and includes aluminum silicates of soda (sodium oxide), potassium (potassium oxide), or lime (calcium oxide). They are generally pale in colour. It forms in a variety of thermal environments, during the crystallization of liquid rock (magma), by metamorphism of rocks deep in the earth, and in sedimentary processes. Varieties include orthoclase, microcline and plagioclase feldspars. Feldspar is the single most abundant mineral group on Earth. They are easily weathered, and will eventually form clay

Felsic. A rock which contains more than 75% quartz, orthoclase and plagioclase. Felsic rocks are usually light in colour.

Kaolinite. A clay mineral, consisting of aluminium, silica, oxygen and hydroxide.

Montmorillonite. A very soft group of minerals that typically form in microscopic crystals, forming a clay. It is the main constituent of the volcanic ash weathering product bentonite

Orthoclase. A common feldspar.

Pebble: A rock less than 6.4cm in size.

Plagioclase. A common feldspar.

Porcellanite. A hard, dense rock somewhat similar in appearance to unglazed porcelain. It is often an impure variety of chert containing clay and calcareous matter.

Pyroclastic. Rocks composed solely or primarily of volcanic fragments or clasts.

Quartzite. Metamorphosed sandstone. Sandstone is converted into quartzite through heating and pressure usually related to tectonic compression within orogenic belts. Quartzite is usually white to gray, but pink and red can occur due to varying amounts of iron oxide.

Rhyolite. An igneous silica rock which crystallises at relatively low temperatures. Its composition is similar to granite. It may be suitable for flaked artefact production.

Sanidine. The high temperature form of potassium feldspar, typically occurring in obsidian, rhyolite and trachyte.

Silcrete. An indurated soil duricrust formed when silica dissolved and resolidified as a cement, forming a hard and resistant rock.

Silicified or indurated tuff. Tuff which has been cemented by silica after deposition.

Silicified or petrified wood. A fossil wood, in which the organic materials were replaced with minerals, especially silica, retaining the original structure of the stem tissue. The petrifaction process occurs underground, when wood becomes buried under sediment and is initially preserved due to a lack of oxygen which inhibits aerobic decomposition. Mineral-laden water flowing through the sediment deposits minerals in the plant's cells; as the plant's lignin and cellulose decay, a stone mould forms in its place.

Tonstein. Hard, compact mudrock that is composed mainly of the mineral kaolin and often some carbonaceous matter. Tonsteins occur as distinctive, thin, layers in coal seams throughout the

world. They formed as the result of the alteration of volcanic ash falls in a low salinity, acidic swamp environment.

Tuff. A type of rock consisting of consolidated volcanic ash ejected from vents during a volcanic eruption.

Vitric tuff. A tuff composed primarily of volcanic glass fragments.

Welded tuff. A pyroclastic rock, of any origin, that was sufficiently hot at the time of deposition to weld together.

X-Ray Diffraction (XRD). This is a versatile, non-destructive technique that reveals detailed information about the chemical composition and crystal structure of materials. An X-ray beam is projected onto a crystalline material at an angle, and diffraction occurs when the distance traveled by the rays reflected from successive planes differs by a complete number of wavelengths. Retrieved 2nd Sept 2012 from http://www.panalytical.com/index.cfm?pid=135