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PRELIMINARY (ENVIRONMENTAL) SITE INVESTIGATION

PROPOSED CHILD CARE CENTRE

33 STEAM STREET MAITLAND, NSW

LOT 1 DP 1317541

For: BROWN COMMERCIAL BUILDING P/L

24/06/2025

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Document – E25 023-A_33SteamStMaitland_PSI.Rpt

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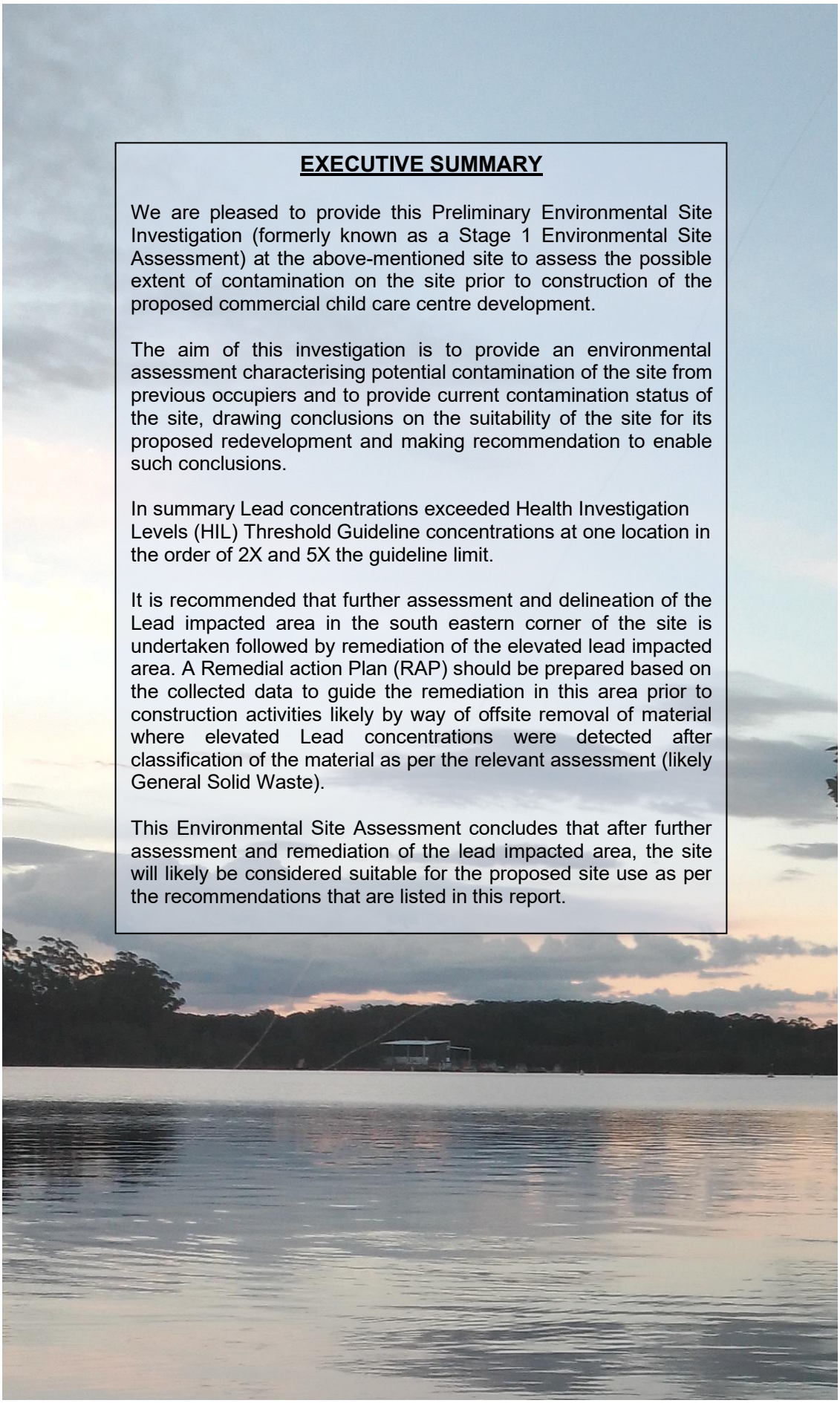
LOT 1 DP 1317541

DOCUMENT CONTROL

Report Issue #	Copies	Recipient		
1	Email PDF	BROWN COMMERCIAL BUILDING	C/o – Caitlin O'Brien	
1	Secure PDF	AUSTRALIAN GEOMECHANICS SOCIETY	**Recipient** Sanko Server	CERTIFIED PROFESSIONAL SOIL SCIENTIST CPSS
Prepared By:		Damien Sankowsky *BE(Env) CPSS* Principal Geotechnical / Environmental Engineer Australian Geomechanics Society (AGS) Member – EA ID 5879317 Certified Professional Soil Scientist # 12219		

This report should be read in conjunction with the listed referenced reports



EXECUTIVE SUMMARY

We are pleased to provide this Preliminary Environmental Site Investigation (formerly known as a Stage 1 Environmental Site Assessment) at the above-mentioned site to assess the possible extent of contamination on the site prior to construction of the proposed commercial child care centre development.

The aim of this investigation is to provide an environmental assessment characterising potential contamination of the site from previous occupiers and to provide current contamination status of the site, drawing conclusions on the suitability of the site for its proposed redevelopment and making recommendation to enable such conclusions.

In summary Lead concentrations exceeded Health Investigation Levels (HIL) Threshold Guideline concentrations at one location in the order of 2X and 5X the guideline limit.

It is recommended that further assessment and delineation of the Lead impacted area in the south eastern corner of the site is undertaken followed by remediation of the elevated lead impacted area. A Remedial action Plan (RAP) should be prepared based on the collected data to guide the remediation in this area prior to construction activities likely by way of offsite removal of material where elevated Lead concentrations were detected after classification of the material as per the relevant assessment (likely General Solid Waste).

This Environmental Site Assessment concludes that after further assessment and remediation of the lead impacted area, the site will likely be considered suitable for the proposed site use as per the recommendations that are listed in this report.

Table of Contents

Assessment Objectives:

The project objectives of a Preliminary (Environmental) Site Investigation (PSI) are to satisfy the general requirements of State Environmental Planning Policy No.55 (SEPP 55) in accordance with the NSW EPA Guidelines for Consultants Reporting on Contaminated Land – Contaminated Land Guidelines (2020).

Specifically, this PSI will consider the potential for historical activities to have caused contamination at the Site and determine the suitability of the land for use consistent with Commercial / Industrial 'D' in the National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1) ('NEPM', NEPC, 2013).

As extracted from the NSW EPA Guidelines for Consultants Reporting on Contaminated Land – Contaminated Land Guidelines (2020), the following assessment is required for a Preliminary Site Investigation:

The objective of the preliminary site investigation and associated report is to assess whether contamination has the potential to exist on the site and whether further investigation is needed.

Key factors include:

- *the purpose of the investigation*
- *the site history*
- *past and present potentially contaminating activities (on- and off-site sources)*
- *potentially contaminated media*
- *the condition of the site and surrounding environment*
- *the geological and hydrogeological setting*
- *a preliminary assessment of site contamination and contaminants of potential concern*
- *a conceptual site model*
- *identification of data gaps in the assessment of site contamination*
- *recommendations for further investigation.*

An appraisal of the site history is fundamental to the preliminary investigation and may be used to assess the likelihood of site contamination. It is important to review and assess all relevant information about the site, including information available from planning authorities and the EPA and information obtained during site inspections.

A preliminary site investigation report must adequately identify potential human and ecological receptors (on and off-site) and identify potentially affected media (soil, sediment, groundwater, surface water, soil vapour and indoor and outdoor air). The report must also indicate all contaminants of potential concern including emerging contaminants that have been identified during the preliminary site investigation.

Where a complete site history clearly shows that activities have been non-contaminating, there are no impacts from off-site contamination sources, and observations do not indicate any potential for contamination, there may be no need for further investigation or site sampling.

However, where contaminating activities are suspected or known to have occurred, or if the site history is incomplete, it may be necessary to undertake a preliminary sampling and analysis program to assess the need for a detailed investigation (as undertaken in this assessment).

Scope of Works:

The following assessment has been undertaken on the site:

- Identification of potentially contaminating activities and Contaminants of Concern (CoC's) that are currently being performed on the site and that may have been performed on the site in the past;

- Completion of a Site Walkover Inspection

- A desktop study including the following:

  - a review of published information and information held in file related to soils, geology and hydrogeology;

  - review of previous assessments undertaken on the site;

  - a review of historical aerial photography;

  - interviews with the people familiar with the history and operations of the site (if available);

  - a review of NSW Office of Environment and Heritage (OEH) notices under the Contaminated Land Management Act (1997);

  - a search of the NSW EPA database;

  - a review and collation of the above information and identification of potential Areas of Environmental Concern (AECs) and potential Chemicals of Concern (CoCs);

- **Development and implementation of a Preliminary Sampling and Analysis Program as per the NSW EPA Contaminated Land Guidelines (2020) and the Desktop Study data;**

- Completion of a field investigation in to collect soil samples to be tested for CoC's identified by known information and the data collected from the desktop study;

- Data has been reviewed and reported against the relevant NEPM Health Investigation Levels (HIL's) and determination has been made to if further assessment, management and/or a Remedial Action Plan (RAP) or Environmental Management Plan (EMP) is required, in accordance with the relevant sections of the *National Environmental Protection Measures 1999 (Contaminated Sites) (Amended 2013),* the *NSW EPA Guidelines for Consultants Reporting on Contaminated Land – Contaminated Land Guidelines 2020* and the *NSW EPA Contaminated Sites – Sample Design Guidelines 1995.*

- Reporting assessment is based on historical information, the proposed field investigation data and the National Environmental Protection Measure 1999 (NEPM) (Amended 2013).

- A Preliminary Site Investigation report has been prepared describing the work undertaken on the site and making an assessment on the following:

  - If the site is suitable for proposed use;

  - Or if further investigation, a Remedial Action Plan (RAP) or Environmental Management Plan (EMP) is required is required.

The PSI was conducted in accordance with:

• ASC NEPM 2013.

• Australian Standard ('AS') 4482.1-2005: Guide to the investigation and sampling of sites with potentially contaminated soil, Part 1: Non-volatile and semi-volatile compounds.

• AS 4482.2-1999: Guide to the investigation and sampling of sites with potentially contaminated soil, Part 2: Volatile substances.

• Australia New Zealand Environmental and Conservation Council ('ANZECC') and Agriculture and Resource Management Council of Australia and New Zealand ('ARMCANZ') (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Volume 1, The Guidelines ('ANZECC 2000').

• ANZECC and ARMCANZ (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality ('ANZECC 2018').

• Department of Urban Affairs and Planning and Environment Protection Authority ('EPA') (1998) Managing Land Contamination, Planning Guidelines, SEPP 55 – Remediation of Land.

• Friebel, E & Nadebaum, P 2011, Health Screening Levels for Petroleum Hydrocarbons in soil and Groundwater. Part 1: Technical development document, CRC CARE Technical Report no. 10, CRC for Contamination Assessment and Remediation of the Environment ('CRC CARE'), Adelaide, Australia.

• National Health and Medical Research Council ('NHMRC') (2008) Guidelines for Managing Risk in Recreational Waters.

• NHMRC and National Resource Management Ministerial Council ('NRMMC') (2011) National Water Quality Management Strategy, Australian Drinking Water Guidelines 6, 2011 (version 3.5 updated August 2018) ('ADWG 2011').

• NSW Department of Environment and Conservation ('DEC') Guidelines for the Assessment and Management of Groundwater Contamination ('NSW DEC Groundwater Guidelines').

• NSW Environment Protection Authority ('EPA') (1995) Sampling Design Guidelines.

• NSW EPA (2014) Technical Note: Investigation of Service Station Sites.

• NSW EPA (2017) Guidelines for the NSW Auditor Scheme (3rd Edition) ('NSW Auditor Guidelines').

• NSW OEH (2011) Contaminated Sites Guidelines for Consultants reporting on Contaminated Sites.

• United State Environment Protection Agency ('USEPA') (2006) Guidance on Systematic Planning Using the Data Quality Objectives Process, ref: EPA QA/G-4.

• NSW EPA Excavated Natural Material Order (2014).

• Acid Sulfate Soil Manual (1998), NSW Acid Sulfate Soils Management Advisory Committee ('NSW ASS Manual').

• National Acid Sulfate Soils Guidance (2018) National Acid Sulfate Soils Sampling and Identification Methods Manual), Water Quality Australia ('National ASS Guidance').

1 INTRODUCTION

The purpose of this PSI investigation is to obtain past and current information about possible contamination levels and distribution on the site, namely 33 Steam Street Maitland and to review all data on the site.

It has been indicated by the Maitland City Council that a Preliminary Site Investigation is required to be undertaken on the site prior to the approval of the proposed site use.

Based on the former site use, namely residential dwellings and commercial buildings, a Preliminary Environmental Site Investigation that includes a Preliminary Sampling and Analysis Program has been completed to provide the required data to assess the current possible contamination status of the site and to determine if the site is suitable for the proposed redevelopment or if further assessment, remediation or management of the site is required prior to the proposed development.

1.1 Existing, Former and Proposed Development Details

1.1.1 Site Details, Existing Development and Former Developments

The site is located on the southern side of Steam Street immediately north of Alan Walsh Drive and immediately north west of the roundabout that intersects Alan Walsh Drive and Church Street adjacent to the Maitland Train Station and is about 80m north of the existing rail line in the location as shown on the attached Figure 1.

The site currently comprises vacant land that has disturbed finished levels associated with the demolition of the former buildings that were formerly located on the site. The current existing site features are shown on the attached Figure 3.

Historically the site has comprised buildings on the eastern portion of the site between at least 1944 and around 2015 when the remaining buildings on the site were demolished and the site has remained vacant since then.

1.1.2 Proposed Development Details

The proposed development involves the construction of a split level commercial child care centre comprising buildings and a play area on the upper eastern portion of the site and vehicle parking on the lower western portion of the site as shown on the attached Figure 2 – Proposed Development.

The Health Investigation Limits for the proposed development is categorised as HIL 'A' – Residential with Access to Soil including Child Care Centres

1.2 Summary of Previous Site Assessments

Previous investigations have not been undertaken on the site to the best of our knowledge.

2 SITE IDENTIFICATION DETAILS

Table 1 below contains a summary of the site details.

TABLE 1 – SUMMARY OF SITE DETAILS

SITE ADDRESS:	33 Steam Street, Maitland, NSW, 2320
SITE AREA:	Total Area – 1,500m^2 Perimeter of 165m.
SITE IDENTIFICATION	Lot 1 DP 1317541 Lat 33°44'12"S Long 151°33'05”E
CURRENT AND PREVIOUS LANDUSE:	Currently the site does not contain any development. Prior to this the site comprised buildings between 1944 and 2015.
PROPOSED LANDUSE:	The proposed land use involves the construction of a commercial child care centre.
ADJOINING SITE USES:	The area surrounding the site comprises a residential dwelling and a commercial building to the east, Steam Street and dwellings to the north and Alan Walsh Drive with vacant land and the rail line to the south and west of the site

3 SITE TOPOGRAPHY, GEOLOGY AND HYDROLOGY

3.1 Site Topography

Topographically the site is located on moderately undulating alluvial deposits associated with the Hunter River system that is situated about 1.5km north of the site.

Locally the site has a general trend of sloping from the higher eastern portion of the site down to the lower flatter area on the western side of the road adjacent to Alan Walsh Drive with a gully that runs through the centre of the site in an east-west orientation with existing topography lines shown on the attached Figure 2.

There was no evidence of significant areas of soil erosion or groundwater or surface water seepage noted over the main portion of the site with a large amount of rain being recorded in the area over the few months prior to the assessment.

3.2 Site Geology

Reference to the 1:250K Newcastle Regional Geology Map S1 56-2 indicates that the site is underlain by Quaternary Alluvial deposits comprising sand, gravel, silt and clay with residual deposits to the south of the site as shown below.

3.3 Acid Sulfate Soil Risk

Reference to eSpade indicates that that the site is not in an area of known Acid Sulfate Soils as shown below with the possibility of ASS material below 4m depth on the lowest western corner of the site:

SITE

3.4 Soil Landscape

Reference to the eSpade Soil landscape map indicates that the majority of the eastern portion of the site is located in Rivermead (ri) soils with the following properties:

Landscape—moderately broad to extensive, level to gently undulating alluvial terraces in the Hunter Plain and Paterson Mountains regions. Slope 0–4%, elevation is 5–20 m, local relief is 5–10 m. Cleared tall open-forest.

Soils—deep (>200 cm), well-drained Yellow Earths (Gn2.41, Gn2.42) and Red Earths (Gn2.15, Gn2.44) and shallow (<35 cm) to deep (>200 cm), moderately well to imperfectly drained Brown Podzolic Soils (Db1.21), with some Chocolate Soils (Db3.11) and deep (>130 cm), moderately well-drained Brown Clays (Ug5.16).

Qualities and Limitations—high foundation hazard, localised flood hazard, seasonal waterlogging on imperfectly drained terraces.

LOCATION

Moderately broad to extensive alluvial terraces in the Hunter Plain and Paterson Mountains regions. Examples include Maitland, Bolwarra and Woodville, with common occurrences around Paterson. Type location is at Rivermead on the Paterson Road, 3 km north of Woodville (Area reference 3 **69*****E, 63 **86*****N).

LANDSCAPE

Geology and Regolith

Quaternary or Tertiary aged alluvium—sand, silt and clay. Alluvial terrace deposits at Largs are Pleistocene in age and overlie a shell-rich estuarine sand (Thom and Murray-Wallace 1988).

Topography

Moderately broad to extensive (200–2 000 m), level to gently undulating terrace surfaces. Slopes are 0–4%, elevation is 5–20 m, local relief is 5–10 m. The gently undulating rises may represent a series of relict levee deposits.

Vegetation

Completely cleared tall open-forest. Remnant vegetation includes *Eucalyptus tereticornis* (forest red gum) and *Eucalyptus moluccana* (grey box).

Land Use

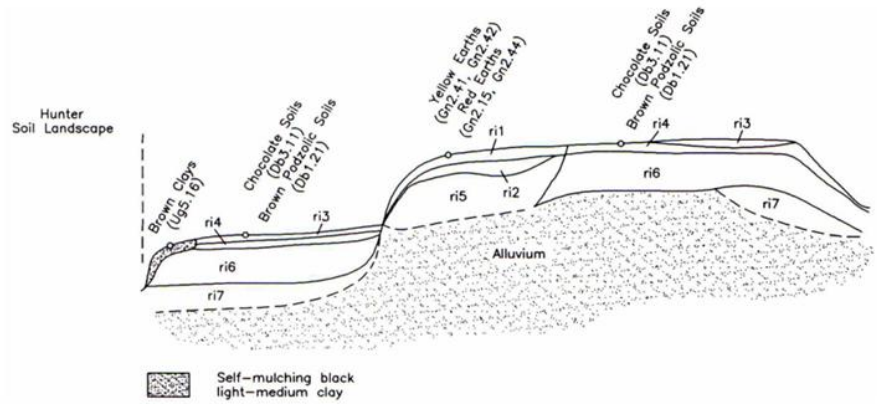
The urban centres of Maitland and Bolwarra Heights occupy part of the landscape. The remainder is predominantly beef cattle grazing with some dairying around Woodville.

Existing Land Degradation

Minor sheet erosion occurs in areas which have high run-on, abutting hillslopes. Bare earthen batters are prone to rill erosion.

Included Soil Landscapes

Small areas of Beresfield **(be)**, Bolwarra Heights **(bh)**, Seaham **(se)** and Vacy **(va)** soil landscapes may have been included near the boundary between Rivermead and the adjoining hard rock soil landscapes.



■ *Schematic cross-section of Rivermead soil landscape illustrating the occurrence and relationship of the dominant soil materials.*

3.5 Geotechnical Parameters

Site geotechnical parameters are detailed in the following Table 1;

TABLE 1 – SUMMARY OF SOIL TYPES ENCOUNTERED AT BORE HOLE LOCATIONS

SOIL UNIT	SOIL TYPE	DESCRIPTION	DEPTH BGL
UNIT 1	FILL	Silty SAND; fine to medium grained, dark brown, low plasticity fines, dry becoming moist, loose, bricks @ various depths and locations	0.5 – 1.5
UNIT 2	ALLUVIUM	Sandy CLAY; low to medium plasticity, dark brown to black, moisture less than or equal to the plastic limit, stiff	0.5 – 3.0 +

Standing groundwater was NOT encountered in the boreholes above termination depth of 3m at the time of assessment. It should be noted that fluctuations in the groundwater levels can occur as a result of seasonal variations, temperature, rainfall and other similar factors, the influence of which may not have been apparent at the time of investigation.

EXAMPLES OF BOREHOLE SPOIL

4 SUMMARY OF HISTORICAL INFORMATION AND CONTAMINANTS / AREAS OF CONCERN

4.1 Current Site Use

Currently the site is vacant as seen in the photographs below:

Current Site Use

4.1 Previous Site Uses

The western portion of the site has comprised vacant land since at least 1944 to the present time, with a building on the eastern portion, likely a commercial building or possibly a residence being on the site from at least 1944 until it was demolished around 2015. Some likely residential structures were located in the centre portion of the site between the early 1980's until they were removed prior to 2006 with the site being completely vacant since at least 2015.

4.2 Review of Aerial Photographs:

Photographs of the site have been attached for the following years with features noted below in Table 4:

TABLE 4 – HISTORICAL AERIAL PHOTOGRAPHS

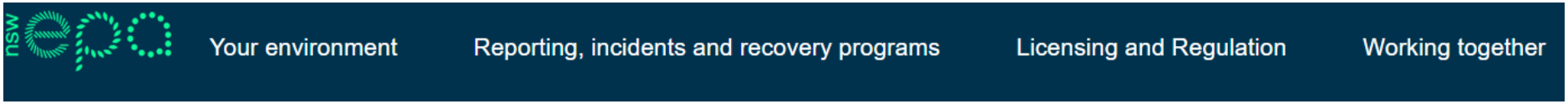
YEAR	SITE	SURROUNDING AREA
1944 Black and White	There is a building in the eastern portion of the site, likely a commercial building but possibly a residential or mixed use building. A small structure can be seen in the centre portion of the site (likely a shed) and behind the building (likely an outhouse?)	Buildings are located to the immediate east of the site, Steam Street and dwellings are located to the north, vacant land to the west and vacant land and the rail line to the south of the site.
1953 Colour	The site remains similar to the previous image.	The site remains similar to the previous image.
1966 Black and White	The site remains similar to the previous image.	The site remains similar to the previous image.
1974 Black and White	The site remains similar to the previous image.	The site remains similar to the previous image.
1984 Black and White	Likely residential structures can be seen in the centre portion of the site with some small trees on the western portion. The building on the eastern portion of the site remains.	The site remains similar to the previous image.

YEAR	SITE	SURROUNDING AREA
1993 Colour	The structures in the centre portion of the site and the building on the eastern portion of the suite are clearly evident with the western portion of the site remaining clear.	Alan Walsh Drive can be seen to the west and south of the site and a round about in now located to the south east of the site adjacent to Maitland Railway Station.
2006 Colour	The structures in the centre portion of the site are no longer evident and the building on the eastern portion of the site can still be seen.	The site remains similar to the previous image.
2014 Colour	The site remains similar to the previous image.	The site remains similar to the previous image.
2015 Colour	All buildings are no longer evident on the site with the site now being vacant.	The site remains similar to the previous image.
2019 Colour	The site remains similar to the previous image with vehicles parked in the south eastern corner.	The site remains similar to the previous image.
2025 Colour	The site in its current configuration	The site remains similar to the previous image.

CURRENT SITE SONFIGURATION AT TIME OF ASSESSMENT

4.3 Search of the NSW EPA Contaminated Sites Register:

A search of the NSW EPA Contaminated Sites Register indicates that the following sites have Contaminated Land Record Notices in the suburb of MAITLAND, with none of the notices being current and the site not located on the list:



Home Public registers Contaminated land record of notices

Search results

Your search for: Suburb: MAITLAND

Matched 2 notices relating to 1 site.

Search Again Refine Search

Suburb	Address	Site Name	Notices related to this site
MAITLAND	Charles STREET	Maitland Gasworks	2 current

Page 1 of 1

20 June 2025

The Maitland Gasworks Site is 600m east of the subject site.

The current notices listed above for the Former Maitland gasworks are shown below:

Site and notice details

Your search for: Suburb: MAITLAND 2 notices on 1 site were matched.

Return to list of search results

Search Again | Refine Search

Area No: 3100

The information below was correct at the time the notices were issued.

Site: Maitland Gasworks
Address: Charles STREET, MAITLAND
LGA: MAITLAND

Lot CP/ SP 41681 Lot 1/ DP 47810 Lot 2/ DP 47810 Lot CP/ SP 49106 Lot 1/ DP 557937 Lot 9/ DP 720658
Lot 2/ DP 815585 Lot 3/ DP 815585

Notices relating to this site (2 current and 0 former)

(Map) where available, maps show the part of the site affected by the notice

* notice matched search criteria

Notice recipient	Notice type & number		Status	Date
Marien Holdings Pty Ltd	Section 35 EHC Act Order *	368	Current	Issued 26 Sep 1990
Marien Holdings Pty Ltd	Section 35 EHC Act Order *	367	Current	Issued 19 Jul 1989

20 June 2025

The current notices listed above are shown below:

The Secretary
Marien Holdings Pty Ltd
Greenway House
311 High Street
MAITLAND NSW 2323

271550A1
CH:SH

26 SEP 1990

Notice # 368

Environmentally Hazardous Chemicals Act, 1985
Notice Under Section 35

1. Marien Holdings Pty Ltd ("the Company") is the occupier of premises:

- located at Charles Street, Maitland, NSW 2303 and formerly known as the Maitland Gasworks; and
- contaminated by the prescribed activity of the keeping of chemical wastes,, namely coal tar sludges and spent catalysts; and
- deemed to be contaminated by reason of their being Environmentally degraded.

TAKE NOTICE THAT:-

In accordance with the powers vested in the State Pollution Control Commission by the provisions of Section 35 of the Environmentally Hazardous Chemicals Act, 1985, the Commission from the date of this notice, hereby directs that:

1 All work carried out on these premises with the intention of, or having the effect, of

(a) reducing the contamination of the premises; or

(b) restoring or rehabilitating the premises; or

(c) removing or disposing of, any contaminated material or any soil, sand, rock, water or other solid or liquid material of any kind from the premises;

which would result in the disturbance of any land on that part of the premises which lies below the plastic membrane, laid down below the present remediated surface of the premises, shall be carried out only after prior notice to the Commission and in accordance with an approval, in writing, given by the Commission.

2 Where the premises to which this notice relates is to be sold, or responsibility for the premises otherwise relinquished, and the occupier is also the owner of the premises, the occupier shall inform, in writing, any intending purchaser or occupier of the conditions of this notice, during negotiations for the sale or transfer of the premises; and

3 (a) Where the occupier of the premises intends or is advised that the premises are to be sold or that the occupancy of the premises is to be transferred, the occupier shall notify the Commission, in writing, of the impending sale or transfer and, where it may be advised, of the name of the prospective owner or occupier, subject to clause (b), at least one month prior to the date of the impending sale or transfer; and

(b) Where such intention is formed or advice is given within one month of the intended sale or transfer of the premises, the occupier shall notify the Commission, in writing, immediately after such intention is formed or advice given.

Professor John Niland
Director
per:

(signed)
D Nicolaisen
Acting Regional Manager
Hunter and North Coast

Dated 26 SEP 1990

The Secretary
Marien Holdings Pty Ltd
Greenway House
341 High Street
MAITLAND NSW 2323

271550A1 CH:SB

Notice # 367

19 JUL 1989

ENVIRONMENTALLY HAZARDOUS CHEMICALS ACT, 1985
NOTICE UNDER SECTION 35

In accordance with the powers vested in the State Pollution Control Commission by the provisions of Section 35 of the Environmentally Hazardous Chemicals Act, your company, being the occupier of premises:

- located at Charles Street, West Maitland, NSW 2303, formerly known as the Maitland Gasworks; and
- being contaminated by the prescribed activity of keeping of chemical wastes, namely coal tar sludges and spent catalysts; and
- being deemed to be contaminated by reason of their being environmentally degraded;

is directed that:

1. All work carried out on these premises with the intention of, or having the effect, of

   (a) reducing the contamination of the premises;

   (b) restoring or rehabilitating the premises;

   (c) removing from the premises and disposing of, any contaminated, material or any soil, sand, rock water or other solid or liquid material of any kind from the premises which would result in the disturbance of the surface of any land, or any structure, on the nominated premises, shall be carried out only after prior notice to the Commission and in accordance with an approval, in writing given by the Commission;

2. Where the premises to which this notice relates is to be sold, or responsibility for the premises otherwise relinquished, and the occupier is also the owner of the premises, the occupier shall inform, in writing, any intending purchaser or occupier of the conditions of this notice, during negotiations for the sale or transfer of the premises; add

3. (a) Where the occupier of the premises intends or is advised that the premises are to be sold or that the occupancy of the premises is to be transferred, the occupier shall notify the. Commission, in writing of the impending sale or transfer and, where it may be advised, of the name of the prospective owner or occupier, subject to clause (b), at least one month prior to the date of the impending sale or transfer; and

   (b) Where such intention is formed or advice is given within one month of the intended sale or transfer of the premises, the occupier shall notify the Commission, in writing, immediately after such intention is formed or advice given.

P STANDEN
Director
per:

(signed)
B M Gibbs
Regional Manager
Hunter and North Coast
(by authorisatlon)

Dated 19 JUL 1989

There are four sites in Wyong that are designated as NSW EPA Notified Sites as shown below with the subject site not on the list:

MAITLAND	Maitland Gasworks	Charles STREET	Gasworks	Contamination currently regulated under CLM Act
MAITLAND	Hannan and High Street	Hannan Street and High STREET	Service Station	Regulation under CLM Act not required
MAITLAND	Coles Express Service Station	235 High STREET	Service Station	Regulation under CLM Act not required

The Mailand Gasworks site is regulated as per the current notice details above.

The Hannan and High Street existing Service Station is 900m north of the site and the existing cioles service Station in >1km east of the site.

The following sites in the suburb of WYONG have POEO Licences, Applications, Notices, Audits or Pollution Studies and Reduction Programs at the time of assessment with the site not being subject to any current or former POEO Licence etc.

Your search for: **General Search** with the following criteria

Suburb - maitland
returned 34 results

Export to excel 1 of 2 Pages Search Again

Number	Name	Location	Type	Status	Issued date
13319	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	POEO licence	Surrendered	16 Nov 2010
1123696	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	20 Jan 2011
1128406	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	16 Jun 2011
1500016	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	04 Aug 2011
1500747	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	11 Aug 2011
1502555	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	05 Dec 2011
1504545	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	01 Mar 2012
1505942	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	11 May 2012
3085763661	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	Penalty Notice	Issued	29 May 2012
1509364	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	01 Nov 2012
1525809	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Main Northern Railway, MAITLAND, NSW 2320	s.80 Surrender of a Licence	Issued	03 Dec 2014
11080	DONALDSON COAL PTY LTD	John Renshaw Drive, MAITLAND, NSW 2320	POEO licence	Surrendered	13 Sep 2000
1024231	DONALDSON COAL PTY LTD	John Renshaw Drive, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	12 Aug 2003
1037686	DONALDSON COAL PTY LTD	John Renshaw Drive, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	25 Jun 2004
1071926	DONALDSON COAL PTY LTD	John Renshaw Drive, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	15 May 2007
1080261	DONALDSON COAL PTY LTD	John Renshaw Drive, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	22 Nov 2007
1084597	DONALDSON COAL PTY LTD	John Renshaw Drive, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	09 Jul 2008
1092843	DONALDSON COAL PTY LTD	John Renshaw Drive, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	29 Oct 2008
1104354	DONALDSON COAL PTY LTD	John Renshaw Drive, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	27 Nov 2009
1502503	DONALDSON COAL PTY LTD	John Renshaw Drive, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	02 Dec 2011

1 2

20 June 2025

Your search for: **General Search** with the following criteria

Suburb - maitland
returned 34 results

Export to excel 2 of 2 Pages Search Again

Number	Name	Location	Type	Status	Issued date
1563932	DONALDSON COAL PTY LTD	John Renshaw Drive, MAITLAND, NSW 2320	s.80 Surrender of a Licence	Issued	01 Oct 2021
10602	HUNTER AND NEW ENGLAND AREA HEALTH SERVICE	550-560 HIGH STREET, MAITLAND, NSW 2320	POEO licence	No longer in force	09 Oct 2000
10393	MAITLAND CITY COUNCIL	., MAITLAND, NSW 2320	POEO licence	Issued	27 Jan 2000
1005556	MAITLAND CITY COUNCIL	., MAITLAND, NSW 2320	s.58 Licence Variation	Issued	15 May 2001
1524567	MAITLAND CITY COUNCIL	., MAITLAND, NSW 2320	s.58 Licence Variation	Issued	06 Feb 2015
544	QUARRY PRODUCTS (NEWCASTLE) PTY LTD	ALLANDALE ROAD, MAITLAND, NSW 2320	POEO licence	Issued	08 Dec 1999
1003273	QUARRY PRODUCTS (NEWCASTLE) PTY LTD	ALLANDALE ROAD, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	20 Apr 2001
1128692	QUARRY PRODUCTS (NEWCASTLE) PTY LTD	ALLANDALE ROAD, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	15 Jun 2011
1503054	QUARRY PRODUCTS (NEWCASTLE) PTY LTD	ALLANDALE ROAD, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	30 Dec 2011
1537648	QUARRY PRODUCTS (NEWCASTLE) PTY LTD	ALLANDALE ROAD, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	29 Feb 2016
12439	STATE OF NEW SOUTH WALES (Department of Primary Industries - Lands)	Waterways within the Hunter Valley Flood Mitigation Scheme, MAITLAND, NSW 2320	POEO licence	Surrendered	13 Feb 2007
1504670	STATE OF NEW SOUTH WALES (Department of Primary Industries - Lands)	Waterways within the Hunter Valley Flood Mitigation Scheme, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	12 Sep 2012
1528943	STATE OF NEW SOUTH WALES (Department of Primary Industries - Lands)	Waterways within the Hunter Valley Flood Mitigation Scheme, MAITLAND, NSW 2320	s.58 Licence Variation	Issued	12 Mar 2015
1529614	STATE OF NEW SOUTH WALES (Department of Primary Industries - Lands)	Waterways within the Hunter Valley Flood Mitigation Scheme, MAITLAND, NSW 2320	s.80 Surrender of a Licence	Issued	09 Jun 2015

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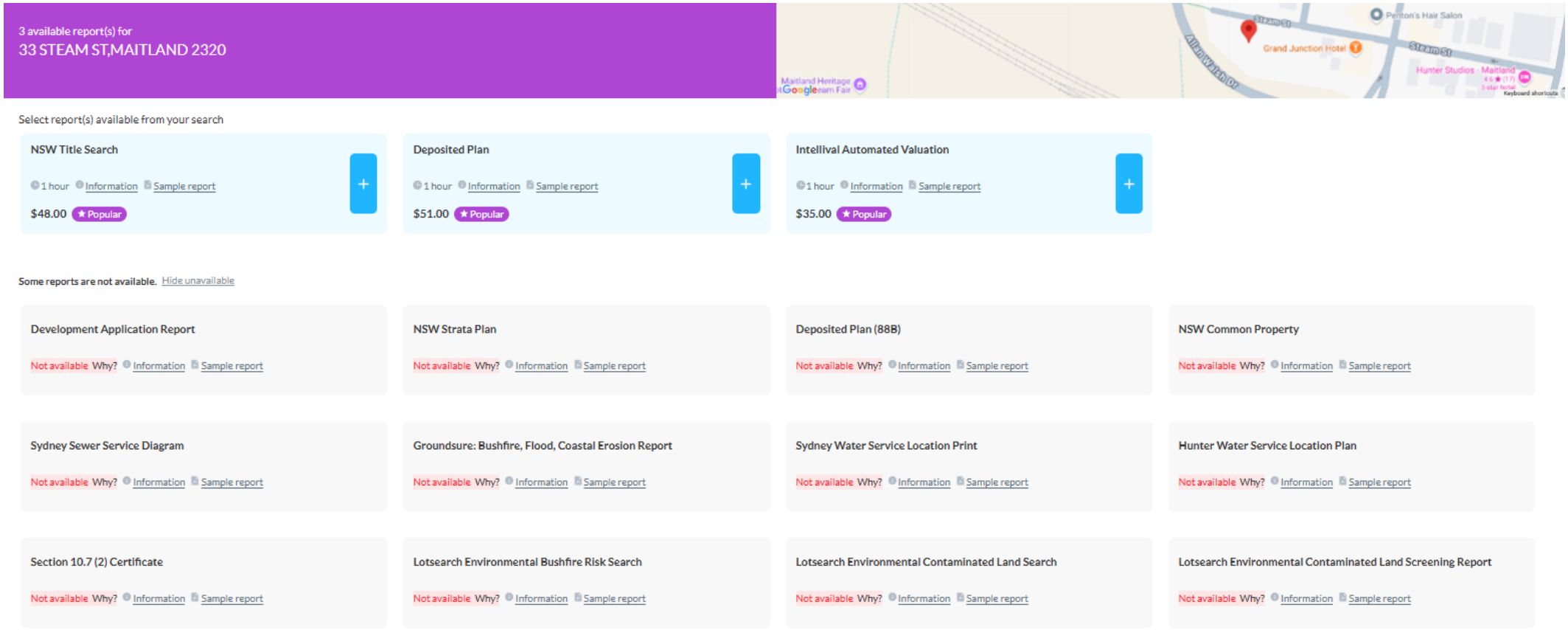
20 June 2025

4.4 LotSearch Environmental Risk - Contaminated Land Search

Contaminated Land Search documents are unavailable for the site as shown below:



4.5 Summary of Areas of Concern (AoC's) and Chemicals of Concern (CoC's)

A summary of the AoC's and CoC's is contained in Table 5 below:

TABLE 5 – POTENTIAL AECS AND COCS

AoC	POTENTIAL CONTAMINATING ACTIVITY	POTENTIAL COCS	LIKELIHOOD OF CONTAMINATION*	COMMENT
1 Imported Fill over the site	Importation of historical fill material onto the site or created during activities associated with the former site structures	Heavy Metals, TRH, BTEX, PAH, OCP, OPP, Asbestos, Foreign Material	Low - Med	Fill material was detected over the eastern portion of the site with some mounded areas on the higher south eastern portion of the site. This material contained inert anthropogenic material such as brick, concrete, tile and metal. Lead concentrations were detected above Health Investigation Levels at one location, with further assessment followed by remediation of the area being recommended to make the site suitable for the proposed use.
2 Former and Current Site Use of the lot	Buildings and activities formerly undertaken on the eastern portion of the site	Heavy Metals, TRH, BTEX, PAH, OCP, OPP, Asbestos, Foreign Material	Low	The site has comprised of building at various stages on the higher eastern portion of the site. The structures have been demolished over time with bricks and evidence of footing systems remaining on the north eastern portion of the site Fibro material was not observed at the time of assessment however dense surface vegetation covered the site. Preparation of an Unexpected Contaminated Material Finds Protocol is recommended prior to development.
3 Adjacent commercial and industrial activities	Commercial activities to the north and east of the site	Heavy Metals, TRH, BTEX, PAH,	Low	The surrounding developments are primarily light commercial with heavy industry not located adjacent to the site at the time of assessment or previously. Notified contaminated sites or other areas of concern are lot located within an area of influence of the subject site.

It is important to note that this is not an assessment of the financial risk associated with the AEC in the event contamination is detected, but a qualitative assessment of the probability of contamination being detected at the potential AEC. Metals – Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc; TPH – Total Petroleum Hydrocarbons; PAH – Polycyclic Aromatic Hydrocarbons; OCP – Organochlorine Pesticides; OPP – Organophosphorus Pesticides, UPSS denoted Underground Petroleum Storage Systems

4.6 Assessment of Information Integrity

It is assessed that the integrity of the assessment of information is correct as supplied by the relevant regulatory sources and attached documents.

5 VISUAL ASSESSMENT

A site investigation, comprising of a detailed site walkover and of a preliminary intrusive soil investigation that was undertaken on 30/04/2025 that involved undertaking a detailed site observation assessment and the excavation of 5 boreholes.

Visual assessment of the site indicated the following visual sources of *possible* contamination;

- Importation of historical fill material onto the site or material created during activities associated with the former site structures;
- Buildings and activities formerly undertaken on the eastern portion of the site including bricks and concrete footings noted on the surface under the vegetation in the area of the former building on the eastern portion of the site;
- Stockpiles of material containing anthropogenic material such as bricks, concrete, timber and steel were located in the areas shown on Figure 3 with bricks and concrete also noted on the eastern portion of the site obscured by dense surface vegetation cover;
- Commercial activities to the north and east of the site;
- Vehicles parking on the south eastern corner of the site;
- Unknown material under the dense surface vegetation on the site at the time of assessment.

Vegetation on the site comprised of very dense grass with shrubs and small trees scattered around the site predominantly on the southern boundary with all vegetation appearing to be very healthy with no die back or dead areas.

Chemical waste material was not observed on the site and odours were not noted over the site at the time of assessment.

6 SOIL ASSESSMENT

6.1 Sample and Analysis Quality Plan

- The *NSW EPA Contaminated Land Guidelines – Sampling Design Part 1 – Application (2022)* indicates that a Judgmental Sampling Pattern is required for this Preliminary Site Investigation.
- Based on the site comprising a total area of approximately 1,500m^2 (0.15 Ha) with a disturbed area of 1,000m^2 it is assessed that eight (8) sample locations are required to detect a 13.2m diameter hotspot with a 95% confidence limit.
- Identified data gaps will be addressed by completing additional assessments;

6.2 Sampling Methodology

Borehole locations were selected prior to commencement of excavation based on a onsite features such as locations of former development ensuring an appropriate spread of the site was sampled including up gradient and down gradient areas. All borehole locations are shown on the attached Figure 3 and used a combination of machine and hand augured techniques due to access requirements.

Soil samples were taken from various depths from BH1 to BH5. The depth at which the soil samples were taken and tested was dictated by changes in soil characteristics and other such factors as odour and colour. Out of the collected samples, nine (9) sample locations plus one (1) duplicate sample was selected to be forwarded to Envirolabs NATA Laboratory for analytical testing.

All sampling was undertaken in accordance with all relevant Australian Standards, including *AS 1726 – 1993 – Geotechnical Site Investigations*, *NSW EPA Sample Design Guidelines* with reference to the CLM Act, NEPM (2013) Schedules and associated guidelines as detailed in the reference list. All laboratories used were NATA Certified.

6.3 QA/QC

New neoprene gloves were worn during sampling and replaced prior to collection of each sample directly from the auger. All collected samples were placed in laboratory supplied glass with Teflon coated lids. Decontamination of sampling equipment was carried out with Decon 90 and clean water. Samples were then placed on ice and transported to a fridge at our premises prior to dispatch to the laboratory.

Field screening involved visual observation to determine if the material was uncontrolled fill or natural topsoils or residual material. A Chain of Custody form was prepared and accompanied samples to the laboratory. Laboratory QA/QC procedures are detailed in the attached laboratory testing results.

All QA/QC documentation supplied by the laboratory is contained in Envirolabs document referenced in this report and a duplicate sample was collected, with results detailed in the attached Results table with Duplicate samples described there.

6.4 Soil Test Results Summary

The attached laboratory testing results of the collected soil samples compared to the relevant NEPM Health Based Investigation Levels (HBIL's) for Residential "A" including Child Care Centres, Ecological Investigation Levels (EIL's) and Ecological Screening Level's (ESL's) – Urban Residential Guideline Thresholds are detailed in the Attached Soil Test Results Table and are summarised below:

HYDROCARBONS

Laboratory testing results for soil samples tested indicate that **TRH, PAH's and BTEX levels detected are below** the relevant guideline threshold concentrations at ALL test locations with the following exceptions at BH1 and BH3:

BH1 – 2.0m

Benzo(a)pyrene – 1.9mg/kg detected

Under the Health Investigation Limit (HIL) Threshold of 3 mg/kg

3X the Ecological Screening Level (ESL) Threshold of 0.7mg/kg

BH3 – 0.0m

Benzo(a)pyrene – 1.1mg/kg detected

Under the Health Investigation Limit (HIL) Threshold of 3 mg/kg

1.5X the Ecological Screening Level (ESL) Threshold of 0.7mg/kg

HEAVY Metals

Laboratory testing results for soil samples tested indicate that **metal levels detected are below** the relevant guideline threshold concentrations at ALL test locations with the following exceptions at BH2 and BH3:

BH2 – 1.0m

Lead – 1,600mg/kg detected

5X the Health Investigation Limit (HIL) Threshold of 300 mg/kg

No Data for the Ecological Screening Level (ESL) Threshold

Zink – 1,800mg/kg detected

Under the Health Investigation Limit (HIL) Threshold of 7,400 mg/kg

6X for the Ecological Screening Level (ESL) Threshold of 310 mg/kg

BH2 – 1.8m

Lead – 580mg/kg detected

2X the Health Investigation Limit (HIL) Threshold of 300 mg/kg

No Data for the Ecological Screening Level (ESL) Threshold

BH3 – 0.0m

Zink – 440mg/kg detected

Under the Health Investigation Limit (HIL) Threshold of 7,400 mg/kg

1.5X for the Ecological Screening Level (ESL) Threshold of 310 mg/kg

PESTICIDES

Laboratory testing results for soil samples tested indicate that **OC/OP levels were not detected** in any of the samples tested at ALL test locations.

6.4.1 Threshold Guideline Exceedances

In summary, laboratory test results for Contaminants of Concern of collected soil samples indicated that Lead concentrations were above guideline thresholds for Health Investigation Levels (HIL's), at one location, namely BH2 and Benzo(a)pyrene concentrations exceeding Ecological Screening Level **(**ESL's) guideline thresholds at two locations, namely BH1 and BH3 with Health Investigation Levels (HIL's) not exceeded at BH1 and BH3,

7 RECOMMENDATIONS

Contaminants of Concern were NOT encountered above the relevant Health Investigation Levels over the majority of the site, with the exception of the south eastern corner of the site where elevated lead levels were detected in the location as shown on Figure 3

Minor exceedances of Ecological Investigation Level (EIL) Threshold Guidelines for Benzo(a)pyrene were detected at two locations and also for Zink at two locations as shown on Figure 3.

Health Investigation Level (HIL) Threshold Guideline exceedances for Lead were in the order of 2X and 5X the guideline limit at the location shown on the attached Figure 3, namely the location of BH2.

It is recommended that further assessment and delineation of the lead impacted area in the south eastern corner of the site be undertaken followed by remediation of this area. A Remedial action Plan (RAP) should be prepared based on the collected data to guide the remediation of this area of the site prior to construction activities by way of offsite removal of contaminated material where elevated Lead concentrations were detected after classification as per the relevant assessment (likely General Solid Waste).

It is assessed that former or surrounding site uses have not resulted in significant contamination from CoC's on the site and it is recommended that the site will be suitable for the proposed use after the following actions have been undertaken;

- General clean-up of the site including removal of building demolition waste such as bricks, concrete, timber and metal and removal of the stockpiles of material containing anthropogenic material;

- **Further assessment and delineation of the lead impacted area in the south eastern corner of the site in the area shown on Figure 4;**

- Preparation of a Remedial Action Plan (RAP) to remediate the lead impacted area followed by Validation Assessment (VA) to ensure that the remediation has been successful;

- Any bitumen / asphalt / concrete material that requires offsite removal should be stockpiled separately and can be removed offsite after material classification as per the NSW EPA The Recovered Aggregate Exemption 2014;

- An Unexpected Contaminated Material Finds Protocol (UCMFP) should be prepared prior to development of the site and implemented if required;

- Any material including excavation spoil generated during the proposed development of the site that require offsite removal should be removed offsite after Waste Classification Assessment as per the referenced NSW EPA Waste Classification Guidelines with all receipts and reports for material disposed offsite being retained (likely General Soild Waste with some ENM);

- Any material imported onto the site during the proposed development is either quarry sourced material with receipts, recycled aggregate accompanied by the relevant receipts and classification certificates OR Virgin / Excavated Natural Material also accompanied by material classification certificates.

8 CONTAMINATION SOURCES

The following sources of possible contaminated areas and possible contamination were identified;

Possible Onsite Contaminated Areas

- Importation of historical fill material onto the site or material created during activities associated with the demolition of former site structures;

- Buildings and activities formerly undertaken on the eastern portion of the site;

- Stockpiles of material containing anthropogenic material such as bricks, concrete, timber and steel and concrete and bricks on the surface of the eastern portion of the site;

- Commercial activities to the north and east of the site;

- Vehicles parking on the south eastern corner of the site;

- Unknown material under the dense surface vegetation on the site at the time of assessment.

Possible Offsite Contaminated Areas

- Commercial buildings to the east and north of the site;

- Rail corridor to the south of the site.

Contaminants of Concern (CoC's)

The following contaminants of concern were tested for in soil samples collected:

- TRH (Total Recoverable Hydrocarbons);

- Total PAH's (Polycyclic Aromatic Hydrocarbons);

- BTEX (Benzene, Toluene, Ethyl Benzene and Xylene);

- Naphthalene;

- Organochlorine Pesticides / Organophosphorous Pesticides (OC/OP);

- Lead and select heavy metals including cadmium, chromium, zinc, copper, mercury, arsenic and nickel;

9 CONCEPTUAL SITE MODEL

This Conceptual Site Model (CSM) is specific to this site and is based on a review of all available information, including site inspections / investigations, available data and historical searches.

The following sensitive receptors have been identified on the site;

- Nearby residents and businesses in both the short and long term;
- Site personnel working on any re-development of the site;
- Long term site users and occupiers after construction of the development;
- Any nearby waterways;
- Groundwater.

All potential contamination sources are noted in Section 8 – Contamination Sources. At the time of assessment, fill was detected on the site as shown on the attached borehole engineering logs. The majority of the surface water exited the site by either overland flow through the gully intersecting the site from the east to the west with some surface infiltration. At the time of assessment, groundwater seepage was not detected above auger termination depth of up to 3m as shown on the attached borehole logs. The site layout and possible contamination sources can be seen on the attached Figures.

See Section 3 – Site Geology and Hydrology above for detailed site geology and groundwater information. In summary, onsite material encountered comprised of Topsoil overlying Sandy CLAY FILL overlying Silty Sandy CLAY alluvial material.

It is assessed that the following potential contamination migration pathways are present on the site;

- Contaminated material being removed offsite during re-development;

- Migration of contaminants into and through the groundwater during rain events.

The nature and extent of contamination considered likely to be found on the site is summarised above, with the site deemed to be able to be made suitable for the proposed development after further assessment, remediation and validation as per Section 7.0 to eliminate the need for Environmental Management of the site.

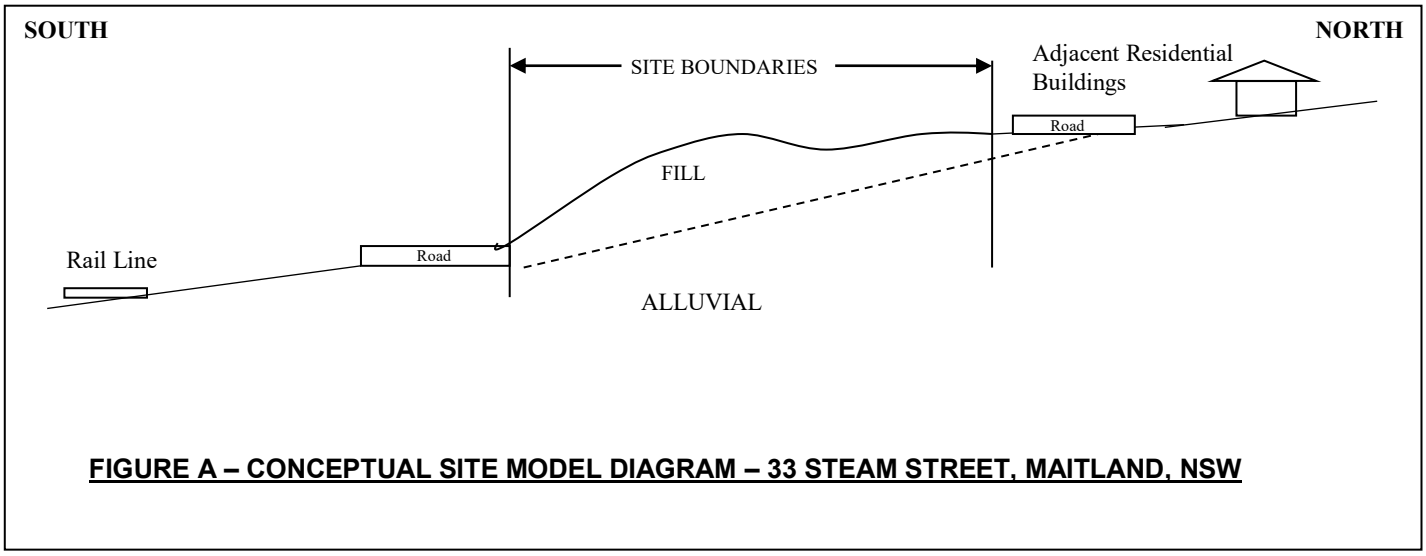


FIGURE A – CONCEPTUAL SITE MODEL DIAGRAM – 33 STEAM STREET, MAITLAND, NSW

10 DATA QUALITY OBJECTIVITIES (DQO's)

The objective of this investigation is to determine the extent of possible onsite contamination and provide baseline contamination data for the site. Further soil and groundwater assessment may be required if further development of the site is proposed or if unexpected contamination is discovered.

The first stage of the process is to provide data to indicate that the site is suitable for the proposed continuing land use activity.

A conceptual Site Model has been detailed in Section 9 above.

Site boundaries are indicated on the attached Figures.

Decisions to be made and the criteria to be used is listed as follows;

- Assessment of the contamination type and distribution on the site will be made using all previous investigations carried out onsite with reference to the NSW EPA Guidelines for the NSW Site Auditor Scheme and the NEPM (2013);

- Assessment of the groundwater contamination using criteria described in the NEPM (2013);

To minimise the potential of decisions errors all data will be assessed against the NSW EPA Guidelines for the NSW Site Auditor Scheme – Appendix V – Quality Assurance and Quality Control.

It is assumed that some errors may be contained within the assembled data and information. If it is found during material excavation that conditions encountered onsite differ significantly from those suggested by the collected data, an environmental consultant should be contacted and made aware of the situation.

11 GUIDELINES TO BE USED

The following guidelines from the NEPM (2013) were followed during the assessment process;

Schedule B—General guidelines for the assessment of site contamination

The following general guidelines provide guidance on the possible ways of achieving the desired environmental outcome (PART 3 of the Measure) for the assessment of site contamination and should only be considered in relation to the assessment of site contamination.

Index of guidelines

12 FURTHER ASSESSMENT REQUIREMENTS

It is assessed that data gaps on the site be addressed by undertaking further assessment of the lead impacted area in the south eastern corner of the site to delineate the extent of lead impacted material on the site followed by the development of a Remedial Action Plan based on the data obtained for the site.

Development of a Sample Analysis Quality Plan (SAQP) should be prepared prior to undertaking the additional assessment to guide the assessment process.

13 LONG TERM SITE MANAGEMENT

Long term environmental management should not be required for the development proposed for the site on the condition that the Remediation and Validation Program is successful.

14 CONCLUSIONS

This report presents the findings of a PSI undertaken for the proposed development at 33 Steam Street, Maitland, NSW and was required to satisfy requirements from Central Coast Council as part of the DA process in accordance with SEPP 55.

The site history indicates that the site comprised buildings between at least 1944 and 2015 and has been vacant since. Prior to 1944 it is unknown or could not be ascertained what the site was used for.

Fieldwork investigations comprised of a site walkover and excavation of five (5) boreholes and the collection of nine (9) primary samples and one (1) duplicate sample submitted to Envirolabs NATA Accredited Laboratory for testing of identified CoC's.

The following sources of possible types of environmental contamination were identified onsite:

- Importation of historical fill material onto the site;
- Material created during activities associated with the demolition of former site structures including buildings and activities formerly undertaken on the eastern portion of the site including bricks and concrete footings noted on the surface under the vegetation in the area of the former building on the eastern portion of the site and also at a depth of 1.1 to 1.4m at BH1 and BH2;
- Stockpiles of material containing anthropogenic material such as bricks, concrete, timber and steel;
- Commercial activities to the north and east of the site;
- Vehicles parking on the south eastern corner of the site;
- Unknown material under the dense surface vegetation on the site at the time of assessment.

The geotechnical conditions on the site generally comprise topsoil overlying Clayey SAND FILL material underlain by alluvial CLAYS to at least 3m depth with groundwater not detected above termination depth.

Based on the analytical testing exceedances of the adopted criteria for Lead concentrations were reported in two of the samples collected at one test location (BH2).

It is assessed that further assessment of the site is undertaken to guide the remediation and validation actions required to make the site suitable for the proposed development.

Summary of Findings and Conclusion

The assessment and reporting on the site has been completed in accordance with Maitland City Council requirements and the general requirements of the State Environmental Planning Policy No. 55 (SEPP55). All reporting has been undertaken in accordance with the *Consultants Reporting on Contaminated Land – Contaminated Land Guidelines (NSW EPA 2020)* and the *Guidelines for the NSW State Auditor Scheme (NSW EPA 3nd Ed 2017).*

Data assembled on the site at the time of assessment indicates that after successful remediation of the site there will be a low chance of potential risk of exposure of CoC's to human receptors during construction activities or occupiers on a long term basis.

This Environmental Site Assessment concludes that after further assessment and remediation of the lead impacted area, the site will likely be considered suitable for the proposed site use as per the recommendations that are listed above in Section 7 and is consistent with the *National Environmental Protection Council (NEPC) National Environmental Protection (Assessment of Site Contamination) Measure (NEPM 2013) – Schedule B1, Table 1A(1), Column A – Residential Including Child Care Centres* and that the site assessment objectives of this PSI report have been achieved.

15 ASSUMPTIONS AND LIMITATIONS

It is the nature of contaminated site investigations that the degree of variability in site conditions cannot be known completely and no sampling and analysis program can eliminate all uncertainty concerning the condition of the site. Professional judgement must be exercised in the collection and interpretation of the data.

In preparing this assessment, current guidelines for assessment and management of contaminated land were followed. This work has been conducted in good faith in accordance with Sanko's understanding of the client's brief and general accepted practice for environmental consulting.

This assessment was prepared with the objective of providing guidance on the remediation and validation activities to be undertaken. No warranty, expressed or implied, is made as to the information and professional advice included in this report. Anyone using this document does so at their own risk and should satisfy themselves concerning the applicability of its application and where necessary should seek expert advice in relation to the particular situation.

If you have any further questions about this report, please contact the undersigned.

For and on behalf of
Sanko Excavation Environmental and Civil Services P/L

Damien Sankowsky *BE(Env) CPSS*

Principal Geotechnical / Environmental Engineer
Australian Geomechanics Society (AGS) Member – EA ID 5879317
Certified Professional Soil Scientist # 12219

Attachments:

- *References*
- *Report Limitations*
- *Site Photographs*
- *Historical Aerial Photographs*
- *Figure 1 – Site Location*
- *Figure 2 – Proposed Development*
- *Figure 3 – Borehole Locations*
- *Figure 4 – Approximate Area Requiring Further Assessment and Delineation*
- *Log Explanation Sheets*
- *Engineering Borehole Logs (BH1 to BH5)*
- *Laboratory Testing Summary Table*
- *Laboratory Test Results*
- *Brown Commercial Building Project Number BCO503 Rev 16 dated 21/11/2024*

References:

- *NEPC National Environmental Protection Measures NEPM (2013)*
- *Guidelines for Consultants Reporting on Contaminated Land (NSW EPA 2020)*
- *NSW EPA Contaminated Land Guidelines – Sampling Design Part 1 – Application (2022)*
- *NSW EPA Waste Classification Guideline, Part 1: Classifying Waste*
- *NSW EPA Guidelines for the NSW Site Auditor Scheme (3nd edition)*
- *Guidelines for the Assessment and Management of Groundwater Contamination (DECC 2007)*
- *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (DECC 2009)*
- *Site Validation Reporting (DECCW 2010b)*
- *Decommissioning, Abandonment and Removal of UPSS Infrastructure (DECWW 2010)*

REPORT LIMITATIONS

Sanko Excavation Environmental and Civil Service Pty Ltd have undertaken a site assessment in accordance with current industry and professional standards. The scope of works were limited to that as set out in the proposal as refered to in this investigation. This report is based upon limited site investigation and subsurface sampling and laboratory testing of samples as set out in the forementioned proposal. Report findings are based upon site conditions at the time of investigation and as such can not be relied upon for unqualified warranties or assume liablity for site conditions not observed and/or accessable during or at the time of investigation. The works are restricted to the site detailed in the report with no offsite investigations conducted. Despite all resaonable care and dilligance taken ground conditions encountered and contaminant concentrations may not represent conditions between sample locations. Site characteristics may also change subsequent to this investigation due to natural processes, chemical reactions, spilling or leaking of contaminants, change in water levels or dumping of fill. All observations and interpretation is made from a limited number of observation points assuming geological and chemical conditions are representative across the site. No other warranties are made or intended. Third parties should seek their own independent advice regarding report contents. This report has been prepared exclusively for the client as detailed on the report and remains the property of this company and the client and can not be reproduced without the written consent of the client as detailed on the report and can then only be reproduced in its entirety.

Site Photographs

PSI **33 STEAM STREET, MAITLAND, NSW** **JUNE 2025**

Site Photographs

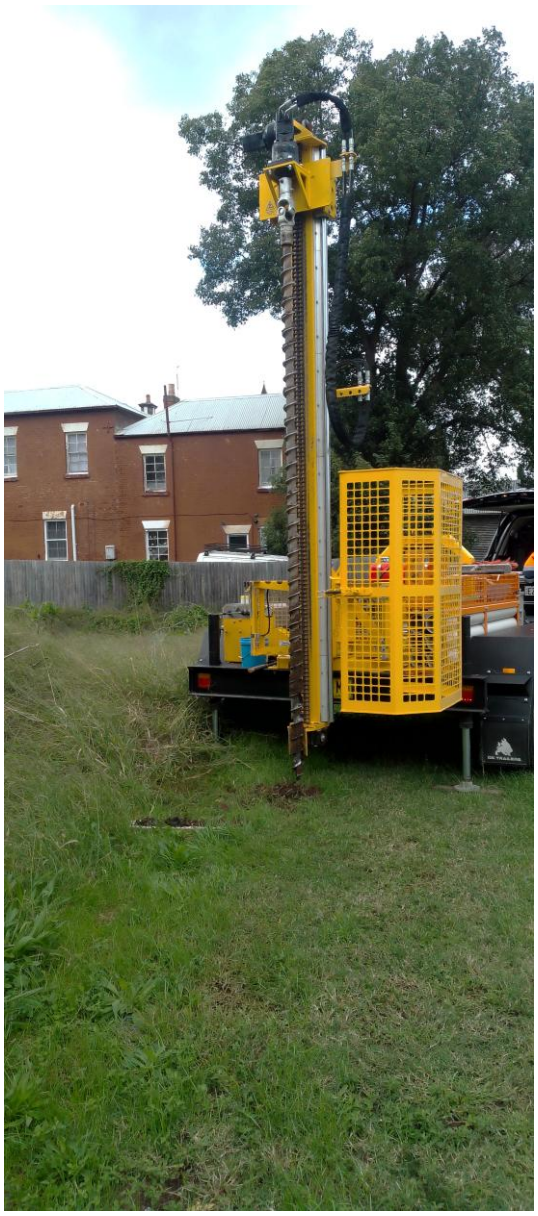
PSI **33 STEAM STREET, MAITLAND, NSW** **JUNE 2025**

Site Photographs

PSI **33 STEAM STREET, MAITLAND, NSW** **JUNE 2025**

Site Photographs

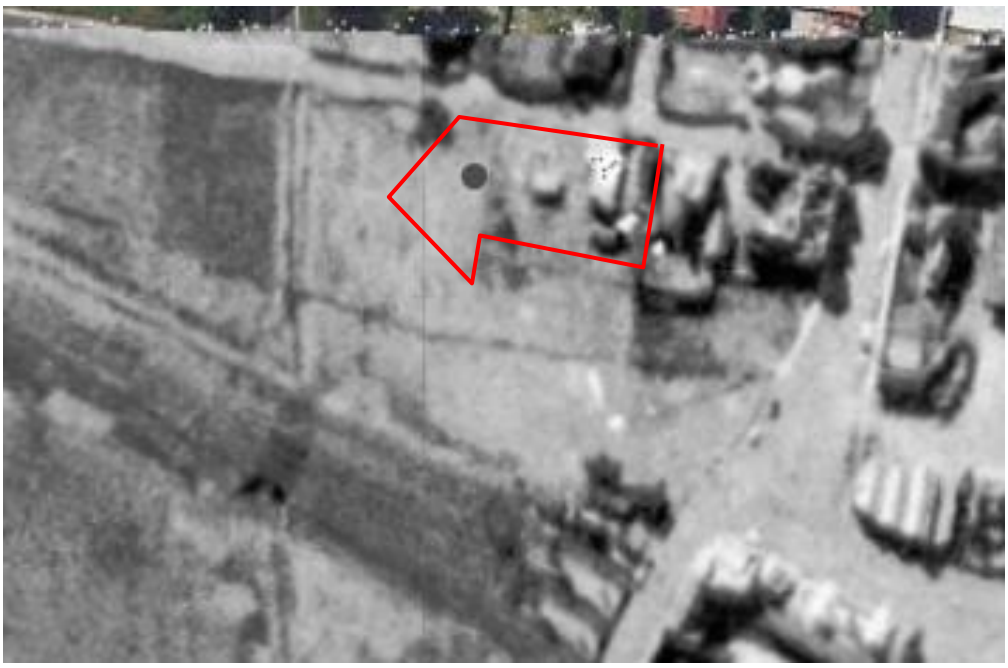
PSI **33 STEAM STREET, MAITLAND, NSW** **JUNE 2025**



Site Photographs

PSI **33 STEAM STREET, MAITLAND, NSW** **JUNE 2025**

1944



1953

Historical Photographs

1966

1974

Historical Photographs

1984

1993

Historical Photographs

2006

2014

Historical Photographs

2015

2019

Historical Photographs

2025

Historical Photographs

PSI **33 STEAM STREET, MAITLAND, NSW** **JUNE 2025**

FIGURE 1 – SITE LOCATION

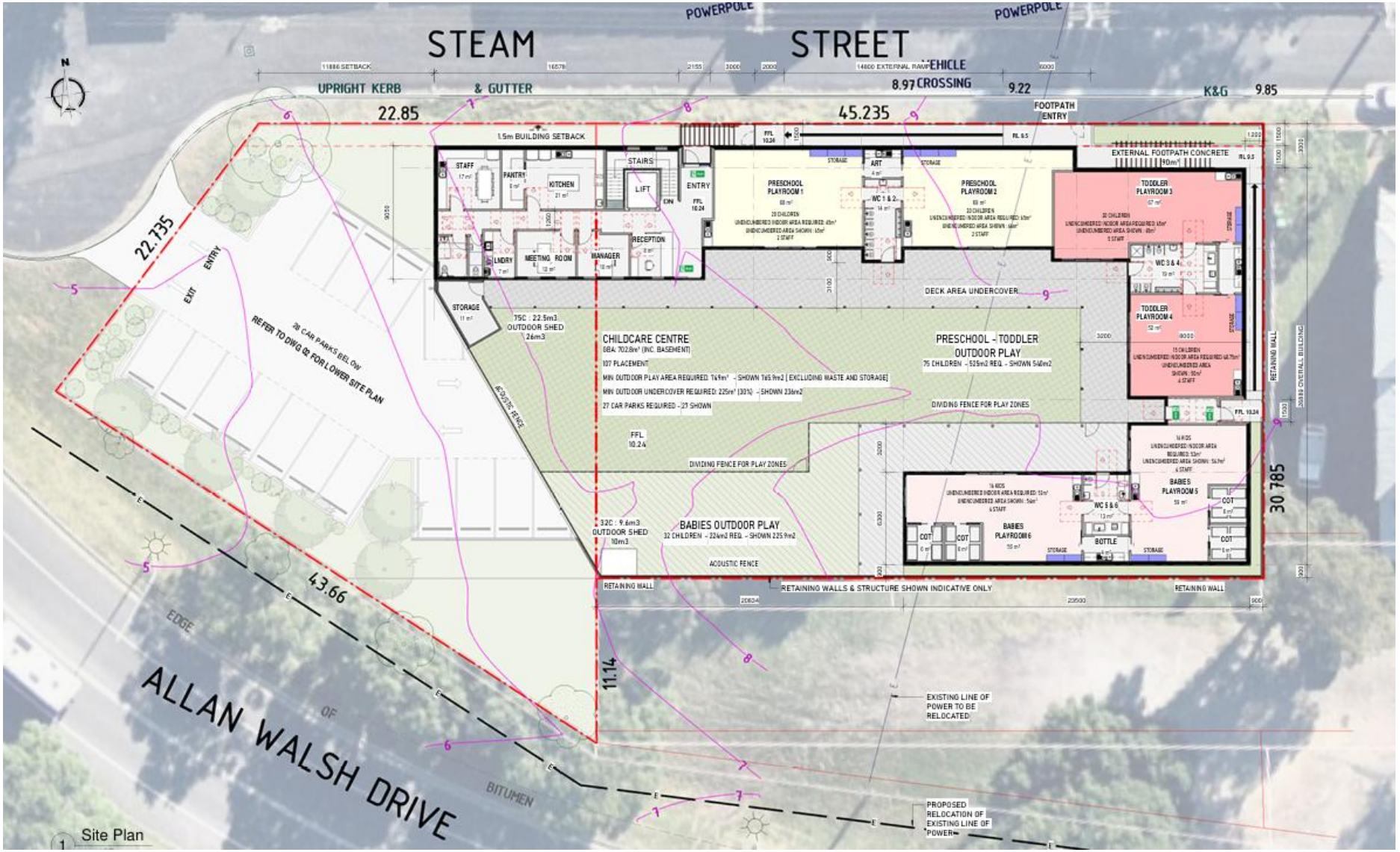
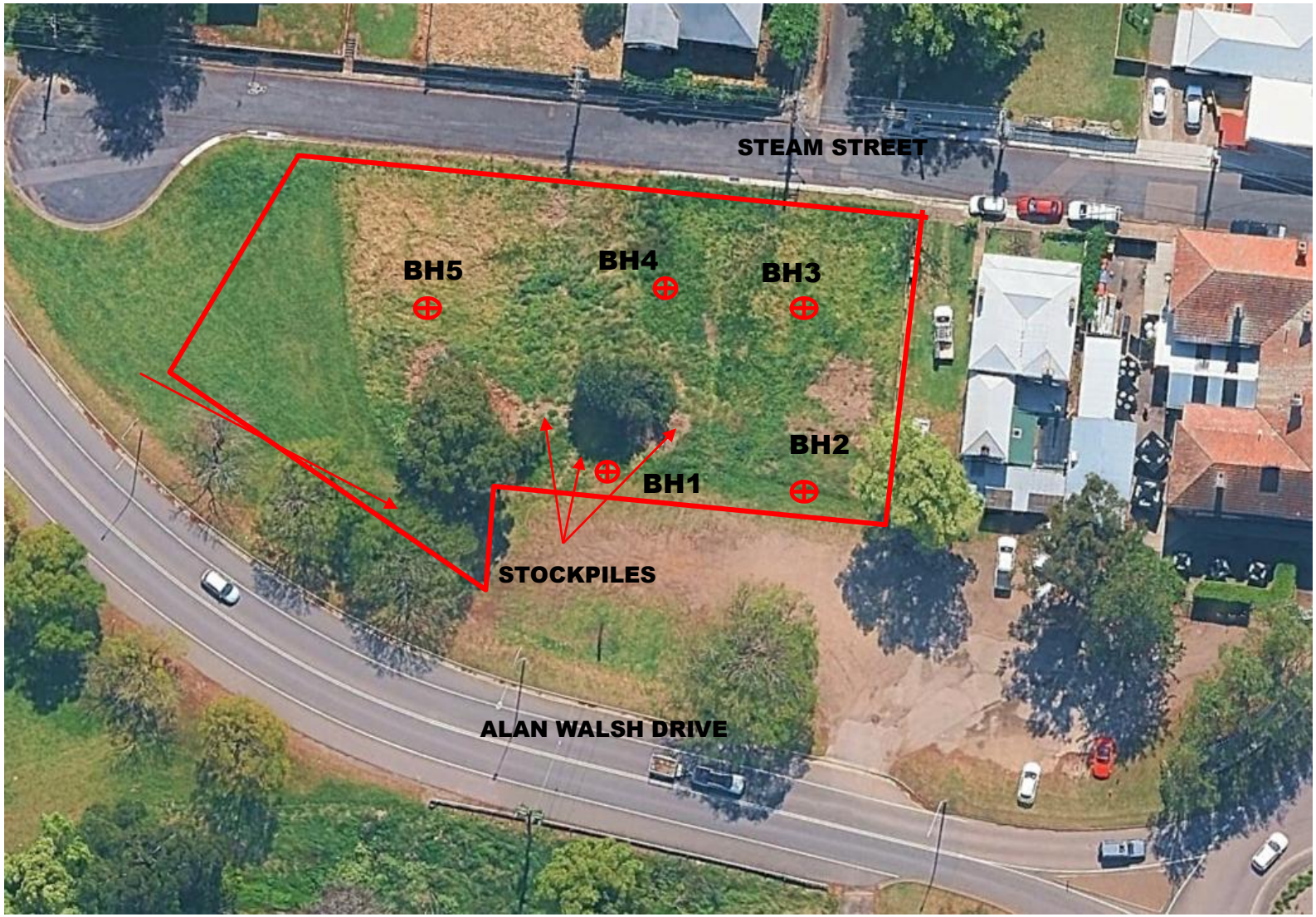


FIGURE 2 – PROPOSED DEVELPMENT

PSI **33 STEAM STREET, MAITLAND, NSW** **JUNE 2025**



BH1 – 2.0m
Benzo(a)pyrene – 1.9mg/kg detected
Under the Health Investigation Limit (HIL) Threshold of 3 mg/kg
3X the Ecological Screening Level (ESL) Threshold of 0.7mg/kg

BH2 – 1.0m
Lead – 1,600mg/kg detected
5X the Health Investigation Limit (HIL) Threshold of 300 mg/kg
No Data for the Ecological Screening Level (ESL) Threshold
Zink – 1,800mg/kg detected
Under the Health Investigation Limit (HIL) Threshold of 7,400 mg/kg
6X for the Ecological Screening Level (ESL) Threshold of 310 mg/kg

BH2 – 1.8m
Lead – 580mg/kg detected
2X the Health Investigation Limit (HIL) Threshold of 300 mg/kg
No Data for the Ecological Screening Level (ESL) Threshold

BH3 – 0.0m
Zink – 440mg/kg detected
Under the Health Investigation Limit (HIL) Threshold of 7,400 mg/kg
1.5X for the Ecological Screening Level (ESL) Threshold of 310 mg/kg

BH3 – 0.0m
Benzo(a)pyrene – 1.1mg/kg detected
Under the Health Investigation Limit (HIL) Threshold of 3 mg/kg
1.5X the Ecological Screening Level (ESL) Threshold of 0.7mg/kg

FIGURE 3 – SITE FEATURES AND BOREHOLE LOCATIONS

PSI **33 STEAM STREET, MAITLAND, NSW** **JUNE 2025**

FIGURE 4 – APPROXIMATE AREA REQUIRING FURTHER ASSESSMENT AND DELINEATION

PSI **33 STEAM STREET, MAITLAND, NSW** **JUNE 2025**

DEFINITION:

In engineering terms soil includes every type of uncemented or partially cemented inorganic or organic material found in the ground. In practice, if the material can be remoulded or disintegrated by hand in its field condition or in water it is described as a soil. Other materials are described using rock description terms.

CLASSIFICATION SYMBOL & SOIL NAME

Soils are described in accordance with the Unified Soil Classification (UCS) as shown in the table on Sheet 2.

PARTICLE SIZE DESCRIPTIVE TERMS

NAME	SUBDIVISION	SIZE
Boulders		>200 mm
Cobbles		63 mm to 200 mm
Gravel	coarse	20 mm to 63 mm
	medium	6 mm to 20 mm
	fine	2.36 mm to 6 mm
Sand	coarse	600 µm to 2.36 mm
	medium	200 µm to 600 µm
	fine	75 µm to 200 µm

MOISTURE CONDITION

Dry Looks and feels dry. Cohesive and cemented soils are hard, friable or powdery. Uncemented granular soils run freely through hands.

Moist Soil feels cool and darkened in colour. Cohesive soils can be moulded. Granular soils tend to cohere.

Wet As for moist but with free water forming on hands when handled.

CONSISTENCY OF COHESIVE SOILS

TERM	UNDRAINED STRENGTH s_u (kPa)	FIELD GUIDE
Very Soft	<12	A finger can be pushed well into the soil with little effort.
Soft	12 - 25	A finger can be pushed into the soil to about 25mm depth.
Firm	25 - 50	The soil can be indented about 5mm with the thumb, but not penetrated.
Stiff	50 - 100	The surface of the soil can be indented with the thumb, but not penetrated.
Very Stiff	100 - 200	The surface of the soil can be marked, but not indented with thumb pressure.
Hard	>200	The surface of the soil can be marked only with the thumbnail.
Friable	–	Crumbles or powders when scraped by thumbnail.

DENSITY OF GRANULAR SOILS

TERM	DENSITY INDEX (%)
Very loose	Less than 15
Loose	15 - 35
Medium Dense	35 - 65
Dense	65 - 85
Very Dense	Greater than 85

MINOR COMPONENTS

TERM	ASSESSMENT GUIDE	PROPORTION OF MINOR COMPONENT IN:
Trace of	Presence just detectable by feel or eye, but soil properties little or no different to general properties of primary component.	Coarse grained soils: <5% Fine grained soils: <15%
With some	Presence easily detected by feel or eye, soil properties little different to general properties of primary component.	Coarse grained soils: 5 - 12% Fine grained soils: 15 - 30%

SOIL STRUCTURE

ZONING		CEMENTING	
Layers	Continuous across exposure or sample.	Weakly cemented	Easily broken up by hand in air or water.
Lenses	Discontinuous layers of lenticular shape.	Moderately cemented	Effort is required to break up the soil by hand in air or water.
Pockets	Irregular inclusions of different material.		

GEOLOGICAL ORIGIN

WEATHERED IN PLACE SOILS

Extremely weathered material	Structure and fabric of parent rock visible.
Residual soil	Structure and fabric of parent rock not visible.

TRANSPORTED SOILS

Aeolian soil	Deposited by wind.
Alluvial soil	Deposited by streams and rivers.
Colluvial soil	Deposited on slopes (transported downslope by gravity).
Fill	Man made deposit. Fill may be significantly more variable between tested locations than naturally occurring soils.
Lacustrine soil	Deposited by lakes.
Marine soil	Deposited in ocean basins, bays, beaches and estuaries.

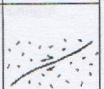
SOIL DESCRIPTION EXPLANATION SHEET 1/2

SOIL CLASSIFICATION INCLUDING IDENTIFICATION AND DESCRIPTION

FIELD IDENTIFICATION PROCEDURES (Excluding particles larger than 60 mm and basing fractions on estimated mass)						USC	PRIMARY NAME
COARSE GRAINED SOILS More than 50% of materials less than 63 mm is larger than 0.075 mm	(A 0.075 mm particle is about the smallest particle visible to the naked eye)	GRAVELS More than half of coarse fraction is larger than 2.0 mm	CLEAN GRAVELS (Little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes.		GW	GRAVEL
				Predominantly one size or a range of sizes with more intermediate sizes missing.		GP	GRAVEL
			GRAVELS WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML below)		GM	SILTY GRAVEL
				Plastic fines (for identification procedures see CL below)		GC	CLAYEY GRAVEL
		SANDS More than half of coarse fraction is smaller than 2.0 mm	CLEAN SANDS (Little or no fines)	Wide range in grain sizes and substantial amounts of all intermediate sizes missing		SW	SAND
				Predominantly one size or a range of sizes with some intermediate sizes missing.		SP	SAND
			SANDS WITH FINES (Appreciable amount of fines)	Non-plastic fines (for identification procedures see ML below).		SM	SILTY SAND
				Plastic fines (for identification procedures see CL below).		SC	CLAYEY SAND
FINE GRAINED SOILS More than 50% of material less than 63 mm is smaller than 0.075 mm		IDENTIFICATION PROCEDURES ON FRACTIONS <0.2 mm.					
		SILTS & CLAYS Liquid limit less than 50	DRY STRENGTH	DILATANCY	TOUGHNESS		
			None to Low	Quick to slow	None	ML	SILT
			Medium to High	None	Medium	CL	CLAY
			Low to medium	Slow to very slow	Low	OL	ORGANIC SILT
		SILTS & CLAYS Liquid limit greater than 50	Low to medium	Slow to very slow	Low to medium	MH	SILT
			High	None	High	CH	CLAY
			Medium to High	None	Low to medium	OH	ORGANIC CLAY
HIGHLY ORGANIC SOILS		Readily identified by colour, odour, spongy feel and frequently by fibrous texture.				Pt	PEAT

• Low plasticity – Liquid Limit W_L less than 35%. • Modium plasticity – W_L between 35% and 50%.

COMMON DEFECTS IN SOIL

TERM	DEFINITION	DIAGRAM
PARTING	A surface or crack across which the soil has little or no tensile strength. Parallel or sub parallel to layering (eg bedding). May be open or closed.	
JOINT	A surface or crack across which the soil has little or no tensile strength but which is not parallel or sub parallel to layering. May be open or closed. The term 'fissure' may be used for irregular joints <0.2 m in length.	
SHEARED ZONE	Zone in clayey soil with roughly parallel near planar, curved or undulating boundaries containing closely spaced, smooth or slickensided, curved intersecting joints which divide the mass into lenticular or wedge shaped blocks.	
SHEARED SURFACE	A near planar curved or undulating, smooth, polished or slickensided surface in clayey soil. The polished or slickensided surface indicates that movement (in many cases very little) has occurred along the defect.	

TERM	DEFINITION	DIAGRAM
SOFTENED ZONE	A zone in clayey soil, usually adjacent to a defect in which the soil has a higher moisture content than elsewhere.	
TUBE	Tubular cavity. May occur singly or as one of a large number of separate or inter-connected tubes. Walls often coated with clay or strengthened by denser packing of grains. May contain organic matter	
TUBE CAST	Roughly cylindrical elongated body of soil different from the soil mass in which it occurs. In some cases the soil which makes up the tube cast is cemented.	
INFILLED SEAM	Sheet or wall like body of soil substance or mass with roughly planar to irregular near parallel boundaries which cuts through a soil mass. Formed by infilling of open joints.	

72810 / 07-06

SOIL DESCRIPTION EXPLANATION SHEET 2/2

LOCATION:	**33 STEAM STREET, MAITLAND, NSW**
JOB NUMBER:	**E25 023**
DATE:	**30/04/2025**
METHOD / LOGGED BY:	**TRAILER RIG / DS**

BH - 1

DEPTH (m BGL)	MATERIAL PROPERTIES	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0 – 1.5	Sandy CLAY; low plasticity, brown, fine to medium sand, some fine angular gravel, M<WP, firm becoming stiff, bricks fragments @ 1.4 – 1.5m	FILL Bricks @ 1.4 – 1.5m
1.5 – 3.0+	Sandy Silty CLAY; low to medium plasticity, dark brown to black, fine to medium grained sand, low plasticity fines sand, M<=Wp, stiff	ALLUVIUM

BH1 TERMINATED AT 3.0m (Limit of Investigation)

SEEPAGE OR GROUNDWATER NOT ENCOUNTERED

0 0.5 1.0 1.5 2.0 2.0 3.0m

LOCATION:	**33 STEAM STREET, MAITLAND, NSW**
JOB NUMBER:	**E25 023**
DATE:	**30/04/2025**
METHOD / LOGGED BY:	**TRAILER RIG / DS**

BH - 2

DEPTH (m BGL)	MATERIAL PROPERTIES	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0 – 1.4	Sandy CLAY; low plasticity, dark brown, fine to coarse sand, some fine angular gravel, M<WP, firm becoming stiff, brick fragments at 1.1 to 1.4m	FILL Bricks @ 1.1 – 1.4m
1.4 – 3.0+	Sandy Silty CLAY; low to medium plasticity, dark brown to black, fine to medium grained sand, low plasticity fines sand, M<=Wp, stiff	ALLUVIUM

BH2 TERMINATED AT 3.0m (Limit of Investigation)

SEEPAGE OR GROUNDWATER NOT ENCOUNTERED

0 0.5 1.0 1.5 2.0 2.0 3.0m

LOCATION:	**33 STEAM STREET, MAITLAND, NSW**
JOB NUMBER:	**E25 023**
DATE:	**30/04/2025**
METHOD / LOGGED BY:	**HAND AUGER / DS**

BH - 3

DEPTH (m BGL)	MATERIAL PROPERTIES	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0 – 0.5	Sandy CLAY; low plasticity, dark brown, fine to coarse sand, some fine angular gravel, M<WP, firm	FILL Bricks on surface
0.5 – 1.0+	Sandy Silty CLAY; low to medium plasticity, dark brown to black, fine to medium grained sand, low plasticity fines sand, M<=Wp, stiff	ALLUVIUM

BH3 TERMINATED AT 1.0m (Limit of Investigation)

SEEPAGE OR GROUNDWATER NOT ENCOUNTERED

LOCATION:	**33 STEAM STREET, MAITLAND, NSW**
JOB NUMBER:	**E25 023**
DATE:	**30/04/2025**
METHOD / LOGGED BY:	**HAND AUGER / DS**

BH - 4

DEPTH (m BGL)	MATERIAL PROPERTIES	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0 – 0.3	Sandy CLAY; low plasticity, brown, fine to coarse sand, some fine angular gravel, M<WP, firm	FILL
0.3 – 1.0+	Sandy Silty CLAY; low to medium plasticity, dark brown to black, fine to medium grained sand, low plasticity fines sand, M<=Wp, stiff	ALLUVIUM

BH4 TERMINATED AT 1.0m (Limit of Investigation)

SEEPAGE OR GROUNDWATER NOT ENCOUNTERED

LOCATION:	**33 STEAM STREET, MAITLAND, NSW**
JOB NUMBER:	**E25 023**
DATE:	**30/04/2025**
METHOD / LOGGED BY:	**HAND AUGER / DS**

BH - 5

DEPTH (m BGL)	MATERIAL PROPERTIES	STRUCTURE AND ADDITIONAL OBSERVATIONS
0.0 – 0.5	Sandy CLAY; low plasticity, brown, fine to coarse sand, some fine angular gravel, M<WP, firm	FILL Bricks on surface
0.5 – 1.0+	Sandy Silty CLAY; low to medium plasticity, dark brown to black, fine to medium grained sand, low plasticity fines sand, M<=Wp, stiff	ALLUVIUM

BH5 TERMINATED AT 1.0m (Limit of Investigation)

SEEPAGE OR GROUNDWATER NOT ENCOUNTERED

RESULTS TABLE - SOIL

Sample	PQL	GUIDELINES*										BH1	BH1	BH2	BH2	BH3	BH3	BH4	BH5	DUP	
Depth		HSL A[a]					ESL UR[b]		ML UR[c]			1.2	2.0	1.0	1.8	0.0	0.6	0.2	0.7	5/0.7	
Date		Sand 0<1	Silt 0<1	Silt 1-2	Silt 2-4	Silt >4	Coarse	Fine	Coarse	Fine	DC A^	30/04	30/04	30/04	30/04	30/04	30/04	30/04	30/04	30/04	
Material Profile												S C	S C	S C	S C	S C	S C	S C	S C	S C	
Strata												SIlt	Silt	Silt	Silt	Silt	Silt	SIlt	Silt	Silt	
BTEX																					
Benzene	0.2	0.5	0.7	1	2	3	50	65			140	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Toluene	0.5	160	480	NL	NL	NL	85	105			21K	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Ethylbenzene	0.5	55	420	NL	NL	NL	70	125			5.9K	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
m&p Xylene	0.5											BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Ortho-xylene	0.5											BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Total Xylene	3	110	310	NL	NL	NL	105	45			17K	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
PAH																					
Naphlhlalne	1	5	NL	NL	NL	NL					2.2K	BDL	0.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
TRH																					
C6-10	10								700	800	5.6K	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
C>10-16	50								1000	1000	4.2K	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
C>16-34	100								2500	3500	5.8K	220	BDL	BDL	280	170	820	BDL	BDL	BDL	
C>34-40	100								10000	10000	8.1K	270	BDL	BDL	BDL	BDL	110	BDL	BDL	BDL	
F1	10	45	50	90	150	290	180	180				BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
F2	50	110	280	NL	NL	NL	120	120				BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	

Bold RED exceedes guidelines from NEMP 1999 (Amended 2013) - Health Screening Levels (HSL) High Density / Urban Residential (ESL/ML/UR)

BDL Denotes Below Detection Limits All units in mg/kg **NL** Denotes No Limit as vapour considered not a risk for this compound

* Guidelines from NEMP 1999 (Amended 2013) ^ DC A from CRC Care TR10 2011 – Direct Contact (DC) 'A' (Residential Childcare)

[a] Vapour Based Health Screening Levels (HSL's) 'A' –Residential Including Childcare Blank entry denotes No Data

[b] ESL UR from Ecological Screening Levels – Urban Residential (UR)

[c] ML UR Management Limits of Urban Residential Sites

RESULTS TABLE - SOIL

Sample	PQL	Guidelines *		BH1	BH1	BH2	BH2	BH3	BH3	BH4	BH5	DUP	
Depth		HIL 'A'[e]	EIL/ESL	1.2	2.0	1.0	1.8	0.0	0.6	0.2	0.7	5/0.7	
Date			UR[f]	30/04	30/04	30/04	30/04	30/04	30/04	30/04	30/04	30/04	
			Profile	SIlt	Silt	Silt	Silt	Silt	Silt				
PAH													
Naphthalene	0.5		170	BDL	0.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Acenaphthylene	0.5			BDL	0.3	0.2	BDL	0.3	BDL	BDL	BDL	BDL	
Acenaphthene	0.5			BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Fluorene	0.5			BDL	0.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL	
Phenanthrene	0.5			0.7	1.8	0.8	0.5	1.2	BDL	0.4	0.4	0.4	
Anthracene	0.5			0.2	0.4	0.2	BDL	0.4	BDL	0.1	0.1	0.1	
Fluoranthene	0.5			1.2	3.8	2.2	1.1	2.4	0.2	0.9	0.8	1	
Pyrene	0.5			1.2	3.6	2.1	1	2.3	0.2	0.8	0.7	0.8	
Benzo(a)anthracene	0.5			0.4	1.4	08	0.4	1	BDL	0.3	0.3	0.4	
Chrysene	0.5			0.5	1.5	1.1	0.4	1.0	0.1	0.4	0.4	0.5	
Benzo(b,j+k)fluoranthene	1			1	2.7	2.0	0.9	2	BDL	0.6	0.6	0.7	
Benzo(a)pyrene (TEQ)	0.5	3	0.7	0.62	1.9	0.4	0.54	1.1	0.1	0.4	0.3	0.4	
Indeno(1,2,3-c,d)pyrene	0.5			0.5	1.3	0.8	0.3	0.7	BDL	0.2	0.2	0.2	
Dibenzo(a,h) anthracene	0.5			BDL	0.1	BDL	BDL	0.1	BDL	BDL	BDL	BDL	
Benzo(g,h,i)perylene	0.5			0.5	1.3	0.8	0.4	0.7	BDL	0.3	0.2	0.2	
Total +PAH	0.5	300		6.9	20	12	5.6	13	0.69	4.2	4.0	4.6	
METALS													
Arsenic	5	100	100	<4	<4	14	6	<4	<4	<4	<4	<4	
Cadmium	1	20		<0.4	<0.4	2	0.4	0.5	<0.4	<0.4	<0.4	<0.4	
Chromium	2	100	550	30	30	50	46	29	33	31	28	31	
Copper	5	6000	320	20	31	110	51	22	24	12	10	9	
Lead	5	300		54	130	**1600**	**580**	110	54	91	87	47	
Mercury	0.1	40	130	<0.1	0.2	0.2	0.2	0.1	0.1	0.1	<0.1	<0.1	
Nickel	2	400	400	22	37	47	41	47	43	14	13	13	
Zink	5	7400	310	83	230	1800	390	440	150	230	200	180	

* Guidelines from NEMP 1999 (Amended 2013)

Results in **Red BOLD** exceed HIL Guideline Levels and Red exceed EIL UR Guideline Levels

[e] HIL - Health Investigation Levels 'A' –Residential Including Childcare

[f] EIL/ESL UR from Ecological Investigation/Screening Levels – Urban Residential (UR)

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CERTIFICATE OF ANALYSIS 379758

Client Details

Client	Sanko excavation Environmental & Civil Services
Attention	Damien Sankowsky
Address	76 Wollombi Rd, Millfield, NSW, 2325

Sample Details

Your Reference	**E25023-33 Steam St Maitland, NSW**
Number of Samples	9 Soil
Date samples received	06/05/2025
Date completed instructions received	06/05/2025

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	13/05/2025
Date of Issue	13/05/2025

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Results Approved By
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Jack Wallis, Senior Chemist
Liam Timmins, Organics Supervisor

Authorised By
Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		379758-1	379758-2	379758-3	379758-4	379758-5
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		1.2	2.0	1.0	1.8	0.0
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	08/05/2025	08/05/2025	08/05/2025	08/05/2025	08/05/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	109	104	100	98	100

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		379758-6	379758-7	379758-8	379758-9
Your Reference	UNITS	BH3	BH4	BH5	DUP
Depth		0.6	0.2	0.7	-
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	08/05/2025	08/05/2025	08/05/2025	08/05/2025
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25
vTRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	101	103	96	102

svTRH (C10-C40) in Soil						
Our Reference		379758-1	379758-2	379758-3	379758-4	379758-5
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		1.2	2.0	1.0	1.8	0.0
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	07/05/2025	07/05/2025	07/05/2025	07/05/2025	07/05/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	103	101	104	89	98

svTRH (C10-C40) in Soil					
Our Reference		379758-6	379758-7	379758-8	379758-9
Your Reference	UNITS	BH3	BH4	BH5	DUP
Depth		0.6	0.2	0.7	-
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	07/05/2025	08/05/2025	08/05/2025	08/05/2025
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50
TRH >C_{10} -C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50
Surrogate o-Terphenyl	%	88	97	87	88

PAHs in Soil						
Our Reference		379758-1	379758-2	379758-3	379758-4	379758-5
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		1.2	2.0	1.0	1.8	0.0
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	12/05/2025	12/05/2025	12/05/2025	12/05/2025	12/05/2025
Naphthalene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	0.3	0.2	<0.1	0.3
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.7	1.8	0.8	0.5	1.2
Anthracene	mg/kg	0.2	0.4	0.2	<0.1	0.4
Fluoranthene	mg/kg	1.2	3.8	2.2	1.1	2.4
Pyrene	mg/kg	1.2	3.6	2.1	1	2.3
Benzo(a)anthracene	mg/kg	0.4	1.4	0.8	0.4	1
Chrysene	mg/kg	0.5	1.5	1.1	0.4	1.0
Benzo(b,j+k)fluoranthene	mg/kg	1	2.7	2.0	0.9	2
Benzo(a)pyrene	mg/kg	0.62	1.9	0.4	0.54	1.1
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	1.3	0.8	0.3	0.7
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.1	<0.1	<0.1	0.1
Benzo(g,h,i)perylene	mg/kg	0.5	1.3	0.8	0.4	0.7
Total +ve PAH's	mg/kg	6.9	20	12	5.6	13
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.8	2.6	0.7	0.7	1.6
Benzo(a)pyrene TEQ calc(half)	mg/kg	0.9	2.6	0.8	0.8	1.6
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.9	2.6	0.8	0.8	1.6
Surrogate p-Terphenyl-d14	%	87	87	90	89	91

PAHs in Soil					
Our Reference		379758-6	379758-7	379758-8	379758-9
Your Reference	UNITS	BH3	BH4	BH5	DUP
Depth		0.6	0.2	0.7	-
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	12/05/2025	12/05/2025	12/05/2025	12/05/2025
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.4	0.4	0.4
Anthracene	mg/kg	<0.1	0.1	0.1	0.1
Fluoranthene	mg/kg	0.2	0.9	0.8	1
Pyrene	mg/kg	0.2	0.8	0.7	0.8
Benzo(a)anthracene	mg/kg	<0.1	0.3	0.3	0.4
Chrysene	mg/kg	0.1	0.4	0.4	0.5
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.6	0.6	0.7
Benzo(a)pyrene	mg/kg	0.1	0.4	0.3	0.4
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.2	0.2	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.2	0.2	0.2
Total +ve PAH's	mg/kg	0.69	4.2	4.0	4.6
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	0.5	0.5	0.6
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	0.6	0.6	0.6
Surrogate p-Terphenyl-d14	%	92	88	88	90

Organochlorine Pesticides in soil						
Our Reference		379758-1	379758-2	379758-3	379758-4	379758-5
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		1.2	2.0	1.0	1.8	0.0
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	12/05/2025	12/05/2025	12/05/2025	12/05/2025	12/05/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	81	79	81	81	84

Organochlorine Pesticides in soil					
Our Reference		379758-6	379758-7	379758-8	379758-9
Your Reference	UNITS	BH3	BH4	BH5	DUP
Depth		0.6	0.2	0.7	-
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	12/05/2025	12/05/2025	12/05/2025	12/05/2025
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Mirex	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Total Positive Aldrin+Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	84	79	80	77

Organophosphorus Pesticides in Soil						
Our Reference		379758-1	379758-2	379758-3	379758-4	379758-5
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		1.2	2.0	1.0	1.8	0.0
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	12/05/2025	12/05/2025	12/05/2025	12/05/2025	12/05/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	81	79	81	81	84

Organophosphorus Pesticides in Soil					
Our Reference		379758-6	379758-7	379758-8	379758-9
Your Reference	UNITS	BH3	BH4	BH5	DUP
Depth		0.6	0.2	0.7	-
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	12/05/2025	12/05/2025	12/05/2025	12/05/2025
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Mevinphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Phorate	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Disulfoton	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion-Methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenthion	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Methidathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenamiphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Phosalone	mg/kg	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Coumaphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 4-Chloro-3-NBTF	%	84	79	80	77

PCBs in Soil						
Our Reference		379758-1	379758-2	379758-3	379758-4	379758-5
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		1.2	2.0	1.0	1.8	0.0
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	12/05/2025	12/05/2025	12/05/2025	12/05/2025	12/05/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	100	96	99	98	102

PCBs in Soil					
Our Reference		379758-6	379758-7	379758-8	379758-9
Your Reference	UNITS	BH3	BH4	BH5	DUP
Depth		0.6	0.2	0.7	-
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	12/05/2025	12/05/2025	12/05/2025	12/05/2025
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate 2-Fluorobiphenyl	%	101	96	97	95

Acid Extractable metals in soil						
Our Reference		379758-1	379758-2	379758-3	379758-4	379758-5
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		1.2	2.0	1.0	1.8	0.0
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/05/2025	07/05/2025	07/05/2025	07/05/2025	07/05/2025
Date analysed	-	07/05/2025	07/05/2025	07/05/2025	07/05/2025	07/05/2025
Arsenic	mg/kg	<4	<4	14	6	<4
Cadmium	mg/kg	<0.4	<0.4	2	0.4	0.5
Chromium	mg/kg	30	30	50	46	29
Copper	mg/kg	20	31	110	51	22
Lead	mg/kg	54	130	1,600	580	110
Mercury	mg/kg	<0.1	0.2	0.2	0.2	0.1
Nickel	mg/kg	22	37	47	41	27
Zinc	mg/kg	83	230	1,600	390	440

Acid Extractable metals in soil						
Our Reference		379758-6	379758-7	379758-8	379758-9	379758-10
Your Reference	UNITS	BH3	BH4	BH5	DUP	BH1 - [TRIPLICATE]
Depth		0.6	0.2	0.7	-	1.2
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	07/05/2025	07/05/2025	07/05/2025	07/05/2025	07/05/2025
Date analysed	-	07/05/2025	07/05/2025	07/05/2025	07/05/2025	07/05/2025
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	33	31	28	31	31
Copper	mg/kg	24	12	10	9	18
Lead	mg/kg	94	91	67	47	49
Mercury	mg/kg	0.1	0.1	<0.1	<0.1	0.1
Nickel	mg/kg	43	14	13	13	22
Zinc	mg/kg	150	230	200	180	65

Moisture						
Our Reference		379758-1	379758-2	379758-3	379758-4	379758-5
Your Reference	UNITS	BH1	BH1	BH2	BH2	BH3
Depth		1.2	2.0	1.0	1.8	0.0
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	07/05/2025	07/05/2025	07/05/2025	07/05/2025	07/05/2025
Moisture	%	16	18	27	19	26

Moisture					
Our Reference		379758-6	379758-7	379758-8	379758-9
Your Reference	UNITS	BH3	BH4	BH5	DUP
Depth		0.6	0.2	0.7	-
Date Sampled		30/04/2025	30/04/2025	30/04/2025	30/04/2025
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	06/05/2025	06/05/2025	06/05/2025	06/05/2025
Date analysed	-	07/05/2025	07/05/2025	07/05/2025	07/05/2025
Moisture	%	22	18	18	18

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES. Total Phosphate determined stochiometrically from Phosphorus (assumed to be present as Phosphate). Where salts (oxides, chlorides etc.) are calculated from the element concentration stoichiometrically there is no guarantee that the salt form is completely soluble in the acids used in the preparation.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021/022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD and/or GC-MS/GC-MSMS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	379758-2
Date extracted	-			06/05/2025	1	06/05/2025	06/05/2025		06/05/2025	06/05/2025
Date analysed	-			08/05/2025	1	08/05/2025	08/05/2025		08/05/2025	08/05/2025
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	98	94
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	98	94
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	102	99
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	94	92
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	103	98
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	95	90
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	99	94
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	107	1	109	105	4	108	108

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	379758-2
Date extracted	-			07/05/2025	1	06/05/2025	06/05/2025		07/05/2025	06/05/2025
Date analysed	-			07/05/2025	1	07/05/2025	07/05/2025		07/05/2025	07/05/2025
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	88	85
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	83	83
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	96
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	88	85
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	<100	0	83	83
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	114	96
Surrogate o-Terphenyl	%		Org-020	91	1	103	89	15	91	90

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	379758-2
Date extracted	-			06/05/2025	1	06/05/2025	06/05/2025		06/05/2025	06/05/2025
Date analysed	-			12/05/2025	1	12/05/2025	12/05/2025		12/05/2025	12/05/2025
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	111	85
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	109	92
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	90
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	0.7	0.2	111	120	#
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.2	<0.1	67	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	1.2	0.4	100	118	#
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	1.2	0.4	100	117	#
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	0.4	0.2	67	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	0.2	86	103	#
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	1	0.4	86	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	0.62	0.2	102	104	#
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	0.2	86	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	0.5	0.2	86	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	118	1	87	87	0	112	97

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	379758-2
Date extracted	-			06/05/2025	1	06/05/2025	06/05/2025		06/05/2025	06/05/2025
Date analysed	-			12/05/2025	1	12/05/2025	12/05/2025		12/05/2025	12/05/2025
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	94
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	124	104
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	92
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	82
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	124	100
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	94
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	122	98
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	94
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	100
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	81
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Mirex	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	106	1	81	76	6	100	83

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	379758-2
Date extracted	-			06/05/2025	1	06/05/2025	06/05/2025		06/05/2025	06/05/2025
Date analysed	-			12/05/2025	1	12/05/2025	12/05/2025		12/05/2025	12/05/2025
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	109	128
Mevinphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Phorate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Disulfoton	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion-Methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	130	108
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	100
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	132	108
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	132	106
Fenthion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	98	88
Bromophos-ethyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Methidathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fenamiphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	122	133
Phosalone	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Coumaphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 4-Chloro-3-NBTF	%		Org-022/025	106	1	81	76	6	100	83

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	379758-2
Date extracted	-			06/05/2025	1	06/05/2025	06/05/2025		06/05/2025	06/05/2025
Date analysed	-			12/05/2025	1	12/05/2025	12/05/2025		12/05/2025	12/05/2025
Aroclor 1016	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	63	65
Aroclor 1260	mg/kg	0.1	Org-021/022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-Fluorobiphenyl	%		Org-021/022/025	128	1	100	94	6	120	101

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	379758-2
Date prepared	-			07/05/2025	1	07/05/2025	07/05/2025		07/05/2025	07/05/2025
Date analysed	-			07/05/2025	1	07/05/2025	07/05/2025		07/05/2025	07/05/2025
Arsenic	mg/kg	4	Metals-020	<4	1	<4	5	22	119	102
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	103	91
Chromium	mg/kg	1	Metals-020	<1	1	30	36	18	107	96
Copper	mg/kg	1	Metals-020	<1	1	20	38	62	105	107
Lead	mg/kg	1	Metals-020	<1	1	54	160	99	110	130
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	0.3	100	103	99
Nickel	mg/kg	1	Metals-020	<1	1	22	27	20	109	97
Zinc	mg/kg	1	Metals-020	<1	1	83	200	83	115	#

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Air volumes are typically provided by customers (often as flow rate(s) and sampling time(s) and/or simply volumes) sampled or exposure times (determines 'volume' passive badges are exposed to)). Hence in such circumstances the volume measurement is inevitably not covered by Envirolab's NATA accreditation. An exception may occur where Envirolab Newcastle does the sampling where accreditation exists for certain types of sampling and hence volume determination(s). Note air volumes are often used to determine concentrations for dust and/or analyses on filters, sorbents and in impingers. For canister sampling, the air volume is covered by Envirolab's NATA accreditation.

Urine Analysis - The BEI values listed are taken from the 2022 edition of "TLVs and BEIs Threshold Limits" by ACGIH.

Report Comments

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 379758-1 for Cu, Pb & Zn. Therefore a triplicate result has been issued as laboratory sample number 379758-10.
- # Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

PAH_S:
- # Percent recovery for the matrix spike is not possible to report as the high concentration of analytes in sample 379758-2 have caused interference.
- The RPD for duplicate results is accepted due to the non homogenous nature of sample 379958-1.

X9 (8 + DUP).

CHAIN OF CUSTODY - Client

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Contact Person: Damien Sankowsky
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0407 434 604
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Email: seecservices@hotmail.com

Client Project Name / Number / Site etc (to report title): ELS023 – 33 STEAM ST
PO No.: MAITLAND, NSW
Envirolab Quote No.: 175Y109C3
Data results required:
Or choose: Standard / same day / 1 day / 2 day / 3 day
Note: Inform lab in advance if urgent turnaround is required - surcharges apply
Additional report format: esdat / equis /
Lab Comments: COMBO 6 - TRH/BTEX/PAH/OCOP/PCB/HM8.

Envirolab Sample ID	Client Sample ID or Information	Depth	Date sampled	Type of sample	COMBO 6	Provide as much information about the sample as you can
1	BH1	1.2	30/4	SOIL JAR	/	
2	BH1	2.0	"	"	/	
3	BH2	1.0			/	
4	BH2	1.8			/	
5	BH3	0.0			/	
6	BH3	0.6			/	
7	BH4	0.2			/	
8	BH5	0.7			/	
9	DUP	-	↑	↓	/	

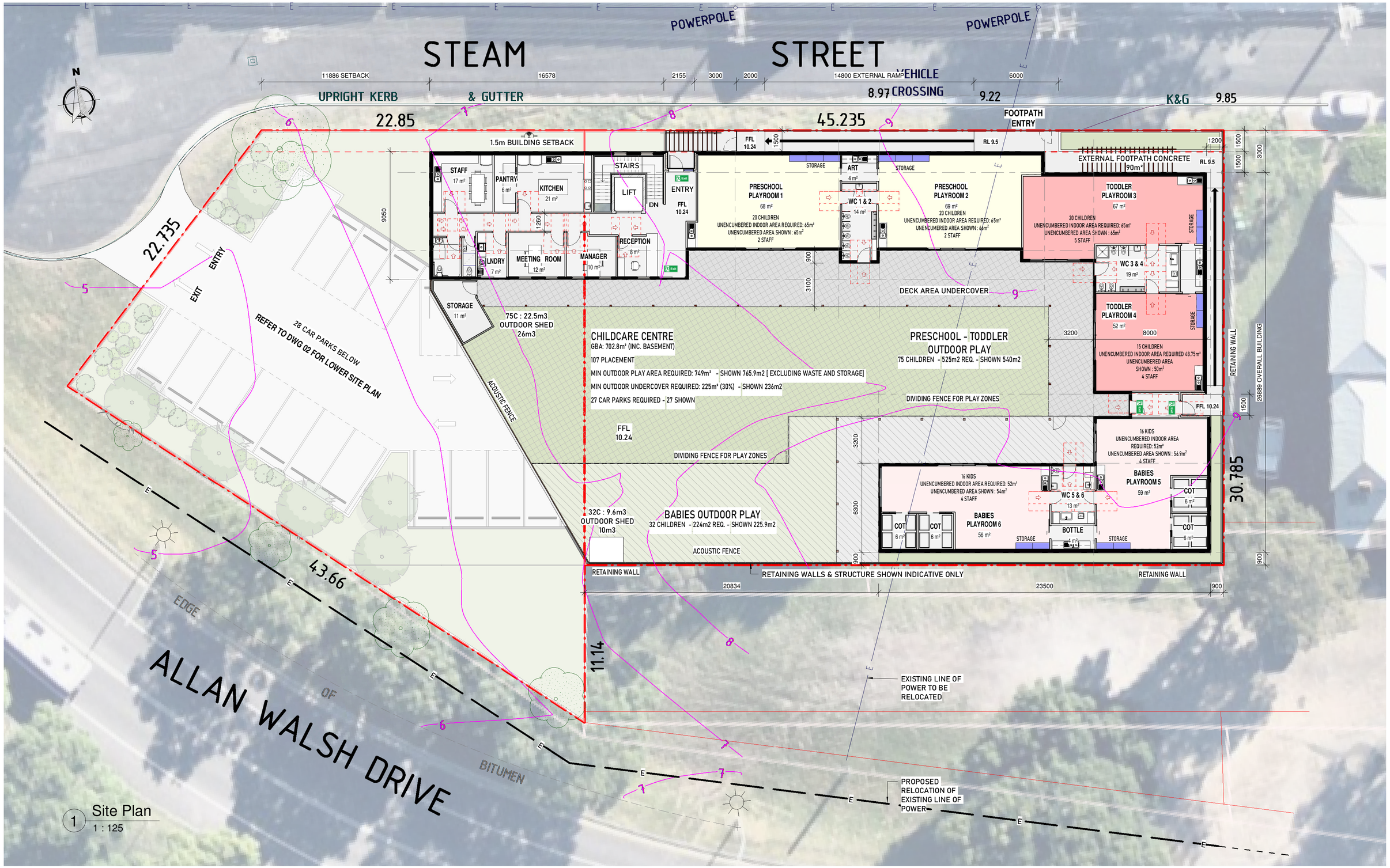
Relinquished by (Company): SMWCS
Print Name: D. SMKOWSKY
Date & Time: 1/5/25
Signature:

Received by (Company): ELS SYD
Print Name: K. chavez
Date & Time: 06/05/25 1115
Signature: KC

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 379758
Date Received: 06/05/25
Time Received: 1115
Received By: KC
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Lab use only:
Samples Received: Cool or Ambient (circle one)
Temperature Received at: 12 **(If applicable)**
Transported by: Hand delivered / courier

INVOICE DETAILS: BROGAN COMMERCIAL BUILDING P/L POBOX 596 EAST MAITLAND.



1 Site Plan
1 : 125

BROWN COMMERCIAL BUILDING
www.brownbuild.com.au
2 Elwell Close
Beresfield, NSW 2322
PO Box 596
East Maitland NSW 2323
Ph: (02)4966 0218

Rev.	Description	Date	Issued by
16	DRAFT REVIEW	21.11.24	M.Marshall
17	SITE REDRAWN	17.01.25	LT
18	ELEVATIONS	03.03.25	M.Marshall
19	CLIENT REVS	07.03.25	M.Marshall
20	CLIENT REVS	07.03.25	M.Marshall
21	CLIENT REVS	10.03.25	M.Marshall
22	CLIENT REVS	13.03.25	M.Marshall

0 1 2 4 6m

NOTES:
1. All dimensions, levels, and setouts are to be verified on site prior to fabrication or construction.
2. Written dimensions take precedence over scaled ones

Project: CHILDCARE CENTRE

Sheet Title: UPPER SITE PLAN

Project No: BCO503

Lot: 33 - 32 **DP:** 1193849 **No:** 27-33 **Street:** STEAM STREET **Suburb:** MAITLAND

Client: BROWN COMMERCIAL

Project Status: CONCEPT PLANS ONLY

Scale: 1 : 125 on A1

Revision: 22

DWG No: 01

STEAM STREET

POWERPOLE

POWERPOLE

SRV - Small Rigid Vehicle

UPRIGHT KERB & GUTTER

FFL 6.0

22.85

VEHICLE CROSSING

8.97

9.22

K&G 9.85

45.235

RETAINING WALL

STAIRS

BASEMENT FLOOR ENTRANCE
24m²

LIFT

UP

FFL 6.04
FOYER

LINE OF BUILDING ABOVE

1.5 x 2.0m CLEAR ZONE

RETAINING WALL

RETAINING WALL

1504

2676

3500

2600

SRV LOADING ZONE
6.6m x 3.5

22.735

ENTRY

EXIT

7000

1200

5400

STAFF PARKING

STAFF PARKING

STAFF PARKING

STAFF PARKING

LINE OF BUILDING ABOVE

RETAINING WALL

APPROX 3.6m CLEARANCE

LINE OF OUTDOOR PLAY AREA ABOVE

EXTERNAL CONCRETE
902m²
INC. DRIVEWAY

12100

RETAINING WALL

RETAINING WALL

BICYCLE

30.785

43.66

EDGE OF BITUMEN

ALLAN WALSH DRIVE

11.14

EXISTING LINE OF POWER TO BE RELOCATED

PROPOSED RELOCATION OF EXISTING LINE OF POWER

N

6.4
1.05
3.8

SRV - Small Rigid Vehicle	
Overall Length	6.400m
Overall Width	2.330m
Overall Body Height	3.500m
Min Body Ground Clearance	0.398m
Track Width	2.330m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	7.100m

1 6.04 LWR CP
1 : 125

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0 1 2 4 6m

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Project: CHILDCARE CENTRE

Sheet Title: LOWER SITE PLAN

Project No: BCO503

Lot: 33 - 32 **DP:** 1193849 **No:** 27-33 **Street:** STEAM STREET **Suburb:** MAITLAND

Client: BROWN COMMERCIAL

Project Status: CONCEPT PLANS ONLY

Scale: 1 : 125 on A1

Revision: 22

DWG No: 02

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22	CLIENT REVS	13.03.25	M.Marshall

0 1 2 4 6m

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Project: CHILDCARE CENTRE

Sheet Title: ELEVATIONS

Project No: BCO503

Lot: 33 - 32 **DP:** 1193849 **No:** 27-33 **Street:** STEAM STREET **Suburb:** MAITLAND

Client: BROWN COMMERCIAL

Project Status: CONCEPT PLANS ONLY

Scale: 1 : 1 on A1

Revision: 22

DWG No: 03

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22	CLIENT REVS	13.03.25	M.Marshall

0 1 2 4 6m

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Project: CHILDCARE CENTRE

Sheet Title: ELEVATIONS

Project No: BCO503

Lot: 33 - 32 **DP:** 1193849 **No:** 27-33 **Street:** STEAM STREET **Suburb:** MAITLAND

Client: BROWN COMMERCIAL

Project Status: CONCEPT PLANS ONLY

Scale: 1 : 1 on A1

Revision: 22

DWG No: 04

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22	CLIENT REVS	13.03.25	M.Marshall

0 1 2 4 6m

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Project: CHILDCARE CENTRE

Sheet Title: ELEVATIONS

Project No: BCO503

Lot: 33 - 32 **DP:** 1193849 **No:** 27-33 **Street:** STEAM STREET **Suburb:** MAITLAND

Client: BROWN COMMERCIAL

Project Status: CONCEPT PLANS ONLY

Scale: 1 : 1 on A1

Revision: 22

DWG No: 05