
Contamination Assessment

Wyndella Road,
Lochinvar, NSW

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Executive Summary

Qualtest Laboratory NSW Pty Ltd (Qualtest) has carried out a Detailed Contamination Assessment (DCA) for Lochinvar Developments Pty Ltd (LD) C/- ADW Johnson for a site located at 898 New England Highway, Lochinvar, NSW (the site).

The site comprises Lots 2, 3, 4, 5, 6 and 9 DP 747391, and Lots 12 and 13 DP1219648. The site is zoned R1 General Residential and covers an area of approximately 22ha. The site is proposed to be subdivided for residential development, with associated roads and services. The purpose of the DCA was to support the Development Application (DA) submission to Maitland City Council for the proposed subdivision.

The objectives of the DCA were to provide an assessment of the likelihood for contamination to be present on the site from past uses and activities, and provide recommendations on the need for further assessment, management and/or remediation (if required).

In order to achieve the above objective, Qualtest carried out the following scope:

- Desktop study and site history review;
- Site walkover;
- Collection of soil samples from 51 test pits (TP01, TP01A to TP50) and two surface sample locations (SS6 to SS7);
- Collection of three surface water samples (Dam1 Dam2, LC1) and three sediment samples (SS1 to SS3) from two dams and Lochinvar Creek, located in the south eastern portion of the site;
- Laboratory analysis of selected soil, sediment and surface water samples from a suite of common contaminants; and,
- Data assessment and preparation of a Detailed Contamination Assessment Report.

The site history showed of the site has been vacant land (most likely livestock grazing) from the 1970's and remains vacant land (used for livestock grazing) to the present day. A barn has been present in the south eastern portion of the site since prior to the 1970's.

During the site walkover the barn located in the south eastern portion of the site was observed to have been constructed from brick and metal with concrete flooring and possible ACM roof sheeting. A stockpile with concrete stairs, bricks and concrete blocks was observed along the north boundary of the site and an area of buried fill was observed to the west of the stockpile. Areas of fill were observed along the central western boundary of the site and on the dam walls. The fill was observed to contain wood and anthropogenic materials, metal and concrete drainage pipes were also observed.

Two AEC's were identified for the site:

1. Current and former buildings on the site- Weathering of potentially hazardous materials (asbestos, lead paint, galvanised metals), Use of pesticides and weedicides around buildings, Storage of machinery, vehicles and oils; and
2. Imported Fill/storage of waste in stockpiles, stock crossing and over piping - Potential use of contaminated imported fill/storage of waste (concrete, bricks, rock, tiles and ACM).

Soil sampling and analysis of surface and fill soils in the areas of the AECs above was carried out. The field investigations identified three waste pits on the site and concentrations of ACM, and/or PAHs above the adopted human health and/or ecological criteria.

Surface water sampling identified metal concentrations including chromium, copper, and zinc, exceeded the adopted guidelines. Given the long history of farming in the region, the

concentrations of metals in the surface water are considered to represent background conditions.

The Conceptual Site Model (CSM) indicated that a complete exposure pathway exists for current and future site users, construction/maintenance workers and the environment, due to elevated concentrations of ACM, PAHs and/or anthropogenic materials in the waste pits and surface soils surrounding the onsite barn.

The identified soil contamination will require remediation and/or management as part of the proposed development. To date, the following soil contamination will require remediation management:

- ACM above human health criteria and zinc above ecological criteria in surface soils surrounding the barn in the south eastern portion of the site;
- ACM above the adopted human health criteria in Waste Pit 2 and ACM and PAHs above human health and ecological criteria in Waste Pit 3; and
- Anthropogenic materials observed in Waste Pit 1 to Waste Pit 3 and Stockpile 1 will also require removal/management for aesthetic reasons.

Based on the results of the Detailed Contamination Assessment it is considered the site can be made suitable for the proposed residential development, with the following recommendations:

- Due to the volume of material observed in the waste pits, and the low sampling density additional soil sampling for the waste pits is recommended. This additional assessment can be included in the Remediation Action Plan for the site (see bullet point below).
- Preparation of a Remediation Action Plan (RAP) will be required to outline the remediation for the soil contamination identified.
- Preparation of a Contaminated Land Management Plan for use during earthworks and construction of the development, which will include:
 - Guidance to the workers on identifying potentially contaminating materials such as slag impacted soil, asbestos containing material and,
 - Unexpected Finds Procedure (UFP); and
 - Procedures for handling, management and disposal/re-use of contaminated soil and surface water, if encountered.

Provided the recommendations made within this report are implemented, it is considered that the site could be rendered suitable, from a contamination point of view, for the proposed residential development.

This report was prepared in general accordance with the relevant sections of the NSW EPA (2020) Guidelines for Consultants Reporting on Contaminated Land and the National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013), NEPC 2013, Canberra (referred to as ASC NEPM 2013).

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Figure 2 – Site Features Plan

Figure 3A – Sampling Plan

Figure 3B – Sampling/Exceedance Plan – TP25 to TP28

Figure 3C – Sampling Exceedance Plan

Figure 4A – Waste Pit 1 – TP01/TP01A

Figure 4B – Waste Pit 2 – TP32

Figure 4C – Stockpile 1

Figure 4D – Waste Pit 3 – TP50

Figure 5 – Draft Proposed Subdivision Plan

Figure 6 – Previous Assessment Sample Locations

Appendix B: Tables: Table 1 – Soil Analytical Results

Table 2 – Asbestos Results

Table 3 – Waste Classification Analytical Results

Table 4 – Surface Water Analytical Results

Table 5 – Quality Control Results

Appendix C: Groundwater Bore Search

Appendix D: Historical Titles

Appendix E: Aerial Photographs

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Appendix G: NSW EPA Records

Appendix H: Section 10.7

Appendix I: Data Validation Report

Appendix J: Laboratory Documentation

1.0 Introduction

Qualtest Laboratory NSW Pty Ltd (Qualtest) has carried out a Detailed Contamination Assessment (DCA) for Lochinvar Developments Pty Ltd (LD) C/- ADW Johnson for a site located at 898 New England Highway, Lochinvar, NSW (the site). Figure 1A, Appendix A, shows the site location.

The site comprises Lots 2, 3, 4, 5, 6 and 9 DP 747391, and Lots 12 and 13 DP1219648. A plan showing the existing lot layout is shown on Figure 1B, Appendix A. The site is zoned R1 General Residential and covers an area of approximately 22ha. The site is proposed to be subdivided for residential development, with associated roads and services. The purpose of the DCA was to support the Development Application (DA) submission to Maitland City Council for the proposed subdivision. A preliminary proposed subdivision plan is shown on Figure 5, Appendix A.

This report was prepared in general accordance with the relevant sections of the NSW EPA (2020) Guidelines for Consultants Reporting on Contaminated Land and the *National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013)*, NEPC 2013, Canberra (referred to as ASC NEPM 2013).

1.1 Objectives

The objectives of the DCA were to provide an assessment of the likelihood for contamination to be present on the site from past uses and activities, and provide recommendations on the need for further assessment, management and/or remediation (if required).

1.2 Scope of Works

In order to achieve the above objective, Qualtest carried out the following scope:

- Desktop study and site history review;
- Site walkover;
- Collection of soil samples from 51 test pits (TP01, TP01A to TP50) and two surface sample locations (SS6 to SS7);
- Collection of three surface water samples (Dam1 Dam2, LC1) and three sediment samples (SS1 to SS3) from two dams and Lochinvar Creek, located in the south eastern portion of the site;
- Laboratory analysis of selected soil, sediment and surface water samples from a suite of common contaminants; and,
- Data assessment and preparation of a Detailed Contamination Assessment Report.

2.0 Site Description

2.1 Site Identification

General site information is provided below in Table 2.1. The site location is shown in Figure 1, Appendix A.

Table 2.1: Summary of Site Details

Site Address:	898 New England Highway, Lochinvar, NSW
Approximate site area and dimensions:	Approx. 22 ha Approx. 670m long by 420m wide at its longest and widest points
Title Identification Details:	Lots 2, 3, 4, 5, 6 and 9 DP747391, and Lots 12 and 13 DP 1219648 within the Maitland local government area, Parish of Gosforth, County of Northumberland
Current Zoning	R1 General Residential
Current Ownership:	The Trustees of the Sisters of St Joseph, Maitland NSW
Current Occupier:	Vacant land
Previous and Current Landuse:	Farming/vacant land
Proposed Landuse:	Residential development
Adjoining Site Uses:	Rural residential properties to the north, east, south and west. St Joseph's College to the west and New England Highway forms the southern boundary.
Site Coordinates for approx. centre of site:	32°41'48.55 S 151°27'46.07 E

2.2 Topography and Drainage

Reference to the NSW Land and Property Information Spatial Information Exchange website (<https://six.nsw.gov.au/wps/portal/>) indicated the elevation of the site was between 20m and 60m AHD.

During the site investigation the northern portion of the site sloped down towards the south west flowing into onsite dams and tributaries of Lochinvar Creek, located in the central and south eastern portion of the site. Site slope directions are shown on Figures 2, Appendix A.

The ground surface consisted of grass. Rain falling on the site would be expected to infiltrate into the site surface. Excess surface water was expected to follow the site topography, and flow into onsite dams then into Lochinvar Creek. Lochinvar Creek would likely flow to the north and discharge into the Hunter River located approximately 2.5km north of the site.

2.3 Regional Geology

Reference to the 1:100,000 Newcastle Coalfields Regional Geology map indicates that the site is underlain by Dalwood Group, Lochinvar Formation, consisting of “basalt, siltstone, sandstone”.

2.4 Hydrogeology

Groundwater beneath the site is anticipated to be present in a semi-confined aquifer within residual soils and/or weathered rock. Groundwater is expected to be greater than 10m below ground surface (bgs). Shallower water bearing zones may be encountered along Lochinvar Creek. Groundwater flow direction is anticipated to flow north, eventually discharging into the Hunter River located approximately 2.5km north of the site.

It should be noted that groundwater conditions can vary due to rainfall and other influences including regional groundwater flow, temperature, permeability, recharge areas, surface condition, and subsoil drainage.

A search of the NSW Department of Primary Industries (Office of Water) registered groundwater bores located within a 500m radius of the site was undertaken. The search revealed that there was one bore located within this radius. A copy of the search is provided in Appendix C.

Bore ID	Installation Date	Purpose	Approx. Distance and Gradient from Site	Water Bearing Zones (mbgs)
GW060900	1/03/1985	Stock, Domestic	Located approx. 260m west of the site – cross gradient.	4.20 – 4.90 10.00 – 10.70 13.40 – 13.70

Notes: NK – not known; N – North, E – East, S – South, W - West

2.5 Acid Sulfate Soils

Reference to the Acid Sulfate Soil online database from State of NSW and Department of Planning, Industry and Environment, 2021 (<https://espade.environment.nsw.gov.au>) the site is located within an area of “no known occurrence” of acid sulfate soils (ASS).

Based on the Maitland Local Environmental Plan (LEP), 2011 the site is located within a Class 5 for ASS. The LEP defines Class 5 as requiring development consent based on the following works; “*Works within 500m of adjacent Class 1, 2, 3, or 4 land that is below 5 metres Australian Height Datum and by which the water table is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.*”

3.0 Site History Review

A site history review was undertaken as part of the PCA, and included:

- A review of historical titles for Lot 13 DP1219648;
- A review of aerial photography from the past 50 years;
- A review of Section 10.7 Certificate from Maitland City Council;
- Search of the NSW EPA’s list of contaminated sites applying to the site and nearby properties; and
- A site walkover to help identify current and previous activities carried out on the site, identify surrounding land uses, and assess Areas of Environmental Concern (AECs) and Chemicals of Potential Concern (COPCs).

The information provided from the above reviews is summarised in the sections below.

3.1 Title Review

A search of historical titles for Lot 13 DP1219648 was undertaken by Advanced Legal Searchers Pty Ltd in February 2021.

A list of past registered proprietors for Lot 13 DP1219648 dating back to 1912, was obtained. The results of the search are included in Appendix D and presented below in Table 3.1 below.

Table 3.2: Summary of Historical Titles – Lot 13 DP1219648

Date	Owner
01 Dec 1952– to present (Feb 2021)	The Trustees of the Sisters of St. Joseph, Maitland
31 Mar 1947	Douglas Stewart Corner, business manager / executor Ian Macdonald Corner, grazier / executor Stewart Corner, estate
17 Jan 1934	Stewart Corner, grazier
04 Aug 1912	Matilda Agnes White, the wife of William Burgess White, engineer / executrix Alfred Edward Brown, estate

The historical title search indicated that the site has predominately been owned by private individuals, with occupations listed as widow, grazier and business manager. The current site owner The Trustee of the Sisters of St. Joseph, Maitland purchased the Lots in 1952.

3.2 Aerial Photograph Review

Aerial photographs of the site from 1971, 1976, 1987 and 1993 were obtained from the NSW Government Spatial Portal (<https://portal.spatial.nsw.gov.au/>), and satellite images from Google Earth for 2004, 2010 and 2020, were assessed by a Qualtest Environmental Scientist. The results of the aerial photograph review are summarised below in Table 3.2. The aerial photographs are presented in Appendix E.

Table 3.2: Aerial Photograph Review

Year	Site	Surrounding Land
1971	The site appears to be vacant cleared land, except for a structure/shed which is present along the northern boundary of the site and a second structure/shed located in the central southern portion of the site. Two dams are present in the central portion of the site. Lochinvar Creek is present in the southern portion of the site.	The surrounding area appears to be mostly vacant cleared land. The school (St Josephs College) can be observed to the south east of the site. Rural residential/residential dwellings are present south of the site. Wyndella Road is present to the east of the site and appears unpaved. The New England Highway is present to the south of the site and appears to be paved.

	Some rock outcropping is present in the north western portion of the site.	
1976	Some tracks are present through the northern portion of the site surrounding the northern dam. A fenced off area is present in the north west containing lines of trees.	Slight increase in housing density appears to have occurred to the south and south-west. The remaining surrounding area appears similar to the 1971 aerial photograph.
1987	The site appears relatively similar to the 1976 aerial photograph.	Two rural residential dwellings with driveways from Wyndella Road have been constructed to the east of the site. Housing density has increased to the south and south-west and east. The remaining surrounding area appears similar to the 1976 aerial photograph.
1993	The site appears relatively similar to the 1987 aerial photograph.	Slight increase in housing density to the south-west and to the east. The remaining surrounding area appears similar to the 1987 aerial photograph.
2004	The site appears relatively similar to the 1993 aerial photograph.	Slight increase in housing density to the south-west and to the east. The remaining surrounding area appears similar to the 1993 aerial photograph.
2010	The site appears relatively similar to the 2004 aerial photograph.	The area to east and south west of the site has been developed further. The remaining surrounding area appears similar to the 2004 aerial photograph.
2020	A fenced off area of disturbed land, possible stockpiles, is present in the south eastern portion of the site adjacent to Wyndella Road. The remainder of the site appears relatively similar to the 2010 aerial photograph.	The surrounding area appears similar to the 2010 aerial photograph.

3.3 Site Observations

A Qualtest Environmental Scientist visited the site on 3 February 2022. Selected site photographs are presented in Appendix F. A summary of the site features is outlined below:

- The site consisted of mostly cleared grassland, with land used for stock (cattle) grazing. Several small to medium sized trees were observed in the northern portion (see photograph 1).
- Lochinvar Creek was observed running in an approximate east-west direction in the southern portion of the site. Lochinvar Creek was observed to be well vegetated. Water within Lochinvar Creek was observed to be mostly stagnant (see photographs 2 and 3).
- Two dams were observed in the northern/central portion of the site. The dam walls were observed to have been constructed of fill materials, most likely sourced from the dam during excavation. Trace amounts of concrete was observed at the surface of the fill. Several black poly pipes were observed coming from the dam walls. The dams water overflows would be expected to drain to the south (see photograph 4).
- A stockpile (SP1) about 30m³ containing some concrete stairs, large concrete blocks and concrete bricks was observed in the northern portion of the site and area of potential fill was also observed to the west of SP1 (see photograph 5).
- An exposed metal and concrete drainage pipe was observed along the central western boundary of the site. Some concrete, bricks, tiles were observed in fill covering the exposed pipe (see photograph 6).
- A barn constructed of brick, metal clad roofing and concrete floor was observed in the central portion of the site. Some possible asbestos containing materials (ACM) were observed in parts of the roofing and on the ground surface. A tractor, hay, some general waste including old fuel drums (2.5L-5L) and wooden pallets were observed on the concrete flooring. The concrete flooring was observed to be in a relatively good condition with minor staining and cracks (see photographs 7 to 10).
- A sewer main was observed running in an east-west direction in the southern portion of the site.

3.4 NSW EPA Records & Environment Protection Licenses

Contaminated Land Records

A search of the NSW EPA database of notices issued under the Contaminated Land Management Act, 1997 (CLM Act) revealed there were two properties within the Maitland City Council Area:

- Former Gasworks Site, Corner of Melbourne Street and Brisbane Street, East Maitland - located >10km south-east of the site; and,
- Maitland Gasworks, Charles Street, Maitland – located >10km south-east of the site.

Based on the distance of the site from the above properties (greater than 10km) the risk of the above properties impacting the site is considered to be low.

A search of sites that have been notified to NSW EPA as contaminated (as of 8 October 2022) was also carried out. The search identified no properties within the Lochinvar suburb which had been notified to the NSW EPA as being contaminated.

A copy of the above searches are provided in Appendix G.

Penalty Notices

The Protection of the Environment Operations (POEO) register under Section 308 of the POEO Act 1997, was searched for Penalty Notices for the suburb of Lochinvar, NSW. The search identified no properties within the Lochinvar suburb which had Penalty Notices (current and/or former) issued.

A copy of the above search is provided in Appendix G.

Environment Protection Licenses (EPLs)

The Protection of the Environment Operations (POEO) register under Section 308 of the POEO Act 1997, was searched for Environment Protection Licenses (EPLs) for the suburb of Lochinvar, NSW. The search revealed no properties within the Lochinvar suburb which had current and/or former EPLs.

A copy of the above search is provided in Appendix G.

NSW EPA PFAS Investigation Program

Based on a review of the NSW EPA Government PFAS Investigation Program ([ref: https://www.epa.nsw.gov.au/your-environment/contaminated-land/pfas-investigation-program](https://www.epa.nsw.gov.au/your-environment/contaminated-land/pfas-investigation-program)), there are no properties in the suburb of Lochinvar that have been identified as a site that is likely to have used large quantities of PFAS.

NSW EPA Former Gasworks Sites

Based on a review of the NSW EPA website ([ref: https://www.epa.nsw.gov.au/your-environment/contaminated-land/other-contamination-issues/former-gasworks-sites](https://www.epa.nsw.gov.au/your-environment/contaminated-land/other-contamination-issues/former-gasworks-sites)), no former gasworks have been identified in the suburb of Lochinvar.

3.5 Anecdotal Information

No one familiar with the history of the site was available to provide anecdotal information.

3.6 Section 10.7 Certificate

A Section 10.7 Certificate for the site was obtained from Maitland City Council, and is presented in Appendix H. Relevant information is summarised below.

Table 3.3 - Summary of Section 10.7 Certificate for Lot 13 DP1219648

Zoning	R1 General Residential
Critical Habitat	No Local Environmental Plan or draft Local Environmental Plan identifies the land as including or comprising critical habitat.
Heritage	The land does NOT contain an item of Environmental Heritage.
Mine Subsidence	The land has NOT been proclaimed to be within a Mine Subsidence District under the meaning of section 20 of the Coal Mine Subsidence Compensation Act 2017.
Bushfire	The land is mapped as bushfire prone land and as such restrictions may apply to new development on this land.
Loose-fill Asbestos Insulation	There are no premises on the subject land listed on the register.
Contaminated Land Information	The land to which this certificate relates is NOT significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.

	<p><i>The land to which this certificate relates is NOT subject to a management order within the meaning of the Contaminated Land Management Act 1997.</i></p> <p><i>The land to which this certificate relates is NOT the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.</i></p> <p><i>The land to which this certificate relates is NOT the subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.</i></p> <p><i>Council has NOT been provided with a site audit statement, within the meaning of the Contaminated Land Management Act 1997, for the land to which this Certificate relates.</i></p>
Potential acid sulfate soils	<p>All land within the Maitland Local Government Area has the potential to contain acid sulfate soils. Clause 7.1 of the Maitland Local Environmental Plan 2011 generally applies. Development consent is required where works described in the Table to this clause are proposed on land shown on the Maitland LEP 2011 Acid Sulfate Soils Map as being of the class specified for those works.</p> <p>Based on the Maitland Local Environmental Plan (LEP), 2011 the site is located within a Class 5 for ASS. The LEP defines Class 5 as requiring development consent based on the following works; “Works within 500m of adjacent Class 1, 2, 3, or 4 land that is below 5 metres Australian Height Datum and by which the water table is likely to be lowered below 1 metre Australian Height Datum on adjacent Class 1, 2, 3 or 4 land.”</p>

3.7 Previous Reports

Qualtest carried out a post lease surface soil contamination assessment for a portion of land leased by Roads and Maritime Services (RMS) in the south eastern portion of the site in April 2020 (ref: NEW19P-0118A-AA, dated 22 April 2021).

It is understood that RMS used a portion of the leased area on site for stockpiling of material during upgrade work s of the New England Highway, located along the south eastern boundary of the site. The stockpiling area can be observed in the 2020 aerial photograph (see section 3.2, above). The stockpiled material obtained a site-specific resource recovery exemption/order from NSW EPA– Resource Recovery Order/Exemption under Part 9 Clauses 91–93 of the Protection of Environment Operations (Waste) Regulation 2014, The Lochinvar clay stockpile order/exemption 2020.

The assessment completed for the site-specific order/exemption identified some elevated metal concentrations, and therefore RMS required an assessment of metal concentrations of the site surface in the former stockpile footprint.

The objectives of the post lease assessment were to provide an assessment for the surface soils in the stockpile footprint, to assess for metals contamination (if any). Three surface soil samples (SS1 to SS3) were collected in the stockpile footprint and two surface samples (SS4 and SS5) were collected up gradient of the stockpiling area. A site plan showing previous stockpile and sampling locations is shown on Figure 6, Appendix A.

Based on the results of the work completed for the post lease assessment, the laboratory analysis reported concentrations of contaminants in surface soils in the former stockpile footprint, and upgradient of the former stockpile, below the adopted residential criteria. In addition, the concentrations of metals in the stockpile footprint were relatively similar to the concentrations in the two upgradient locations.

Based on the above, it was considered that the former stockpile did not cause metal contamination of the underlying surface soils.

3.8 Summary of Site History

The site history review showed:

- Based on historical aerial review, the majority of the site has been vacant land (most likely livestock grazing) from the 1970's and remains vacant land (used for livestock grazing) to the present day. A barn has been present in the south eastern portion of the site prior to the 1970's.
- During the site walkover the barn located in the south eastern portion of the site was observed to have been constructed from brick and metal with concrete flooring and possible ACM roof sheeting. A stockpile with concrete stairs, bricks and concrete blocks was observed along the north boundary of the site and an area of buried fill was observed to the west of the stockpile. Areas of fill were observed along the central western boundary of the site and on the dam walls. The fill was observed to contain wood and anthropogenic materials and metal with concrete drainage pipes also observed.

3.9 Potential Offsite Sources of Contamination

The surrounding land uses comprise a school, residential and vacant/farmland. It is considered unlikely that contamination would affect the site as a result of surrounding land uses and activities.

3.10 Gaps in the Site History

Whilst the site history is reasonably comprehensive there are some gaps identified in the review as follows:

- The origin and quality of the fill material present in the stockpiles and fill areas across the site is not known; and
- The site uses prior to the 1970's are not well known. Based on experience in the Lochinvar area and the current evidence, it was likely used for farming (livestock grazing) and/or bushland.

3.11 Areas of Environmental Concern

Table 3.11 (below) shows the areas of environmental concern (AECs) and associated Chemicals of Potential Concern (COPCs) identified through the desk study and site history for the site.

Table 3.11 – Areas of Environmental Concern and Chemicals of Potential Concern

AEC	Potentially Contaminating Activity	Potential COCs	Likelihood of Contamination
1. Current and former buildings on the site	Weathering of potentially hazardous materials (asbestos, lead paint, galvanised metals) Use of pesticides and weedicides around buildings Storage of machinery, vehicles and oils	Metals, Asbestos, PAHs, OCP	Medium to high
2. Former agricultural use including imported fill/storage of waste in stockpiles/buried fill	Potential use of contaminated imported fill/storage and burying of farm waste (concrete, ACM, bricks, rock, tiles)	TRH, BTEX, PAH, metals, Asbestos (CoPCs dependent on waste type)	Medium to high

4.0 Data Quality Objectives

4.1 Step 1 – State the Problem

The site is proposed to be re-developed into a residential subdivision. There is a potential for contaminated soil and surface water from past uses to exist on site at concentrations above the residential landuse criteria that could require remediation and or management.

Two AECs have been identified for the site:

1. Current and former buildings on the site- Weathering of potentially hazardous materials (asbestos, lead paint, galvanised metals), Use of pesticides and weedicides around buildings, Storage of machinery, vehicles and oils; and
2. Agricultural use including imported fill/storage of waste in stockpiles/buried fill - Potential use of contaminated imported fill/storage and burying of farm waste (concrete, bricks, rock, tiles).

4.2 Step 2 – Identify the Decisions

The decisions to be made based on the Preliminary Contamination Assessment (site history review, site observations and limited sampling & analysis) are:

- Will the site require a detailed contamination assessment; and
- Will the site require remediation, and if so, what level and type of remediation will be required to make the site suitable for the proposed land use, from a contamination perspective?

4.3 Step 3 – Identify the Inputs to the Decisions

Inputs into the decision are:

- Have samples been collected in the required areas of the site (the identified AECs)?
- Have samples been collected at the required frequencies and adequately represent the conditions on site?
- Is the data set adequate to perform statistical analysis, if required (i.e. calculate 95% UCL)?
- Have the samples been analysed for the COPCs identified?
- Have concentrations exceeding the adopted criteria been reported in the samples?
- If concentrations exceeding adopted criteria have been reported, will these areas require remediation and/or management?

The informational inputs into the decision are:

- Field observations;
- Laboratory results (concentrations of contaminants in soil);
- QA/QC documentation and data;
- Adopted assessment criteria (see Section 6); and,
- Relevant NSW EPA endorsed Guidelines.

The media to be sampled and analysed is:

- Soil;
- Sediment; and
- Surface water.

4.4 Step 4 – Define the Study Boundaries

The study boundary is defined laterally as the site boundary, Lots 2, 3, 4, 5, 6 and 9 DP747391 and Lots 12 and 13 DP1219648, within the Maitland local government area, Parish of Gosforth, County of Northumberland. The site is located at 898 New England Highway, Lochinvar, NSW and covers an area of approximately 22ha (refer to Figure 1, Appendix A). Vertically, the study boundary will be defined by the depth of soil contamination and/or depth to groundwater. It is anticipated the vertical boundary would be a maximum of 5m bgs.

4.5 Step 5 – Develop a Decision Rule

Chemicals of Potential Concern (COPCs) are identified in Section 3.11, above. The COPCs and the associated assessment criteria are listed in Section 6 below.

The decision rules can be defined as: -

- If the laboratory quality assurance/ quality control data are within the acceptable ranges, the data will be considered suitable for use;
- If the COPCs are reported above the adopted criteria and/or at elevated levels (where no criteria are available) then it will be considered whether further assessment, remediation and/or management measures are required; and
- Where concentrations are below the assessment criteria, then no further assessment, remediation and/or management of that contaminant, in that area, in that media, is required. This is provided samples have been collected at the required frequencies (as per NSW EPA guidelines) and adequately represent the conditions on site, if not, additional sampling may be required.

4.6 Step 6 – Specify Acceptable Limits on Decision Errors

There are two types of errors:

- Type 1 – finding that the site is contaminated, when it is not;
- Type 2 – finding that the site is uncontaminated, when it is.

To reduce the potential for errors, the following will be applied:

- Appropriate field sampling methodologies and collection of field data (including sampling frequency);
- Robust QA/QC assessment of field procedures and laboratory data;
- Appropriate sampling and analytical density;
- Use of statistics (i.e. 95% UCL) to assess arithmetic average of COPCs. Use of statistics will also take into account:
 - No sample should report a concentration more than 250% of the adopted criteria; and,
 - The standard deviation of a sample population should not exceed 50% of the adopted criteria.

4.7 Step 7 – Optimise the Design for Obtaining Data

The methodologies presented in this report are designed to meet the nominated DQOs.

Optimisation of the data collection process will be achieved by:

- Working closely with the analytical laboratories and sampling equipment suppliers so that appropriate procedures and processes are developed and implemented prior to and during the field work and that sampling, handling, and transport to, and processing by, the analytical laboratories is appropriate.
- Conduct sampling in accordance with industry best practice and Standard Operating Procedures (SOPs) for the type of sampling being conducted.

5.0 Field and Laboratory Investigations

5.1 Sampling Plan

The site is about 22ha in area. The NSW EPA (1995) Sampling Design Guidelines recommends a minimum of 250 sample locations to characterise a site of 22ha. Based on the site history assessment, two AEC's were identified. Based on the low risk of contamination for the majority of the site and to provide an assessment of the AECs identified, grid sampling across the site and judgemental sampling around current/former buildings was considered appropriate. 53 soil sampling locations and three surface water/sediment sampling locations were carried out across the site.

The sampling locations are shown on Figure 3, Appendix A.

5.2 Soil Sampling

5.2.1 Test pits

The test pits were excavated using a 1.5-tonne excavator equipped with a 500mm toothed bucket. The test pits were excavated at least 0.5m into natural soils, or a maximum of 2.0m bgs. Samples were collected at about 0.5m intervals in fill materials and the top of natural (residual)

soils. Samples were collected directly from the excavator bucket. A clean pair of nitrile gloves were used when handling each sample.

Test pit locations with known ACM contamination and/or potential ACM contamination, asbestos samples were collected using the gravimetric method, comprising collection of a 10L sample, screening through a 6.7mm sieve, and weighing of potential ACM fragments (where present). A 500gm sample was also collected for assessment of asbestos fines (AF) and fibrous asbestos (FA). Remaining asbestos samples were placed in a zip lock bag for ID analysis.

The soil samples for chemical analysis were placed into 250mL laboratory supplied glass jars and zip locked bags for laboratory analysis. Each soil sample was placed directly into an ice-chilled esky and remained chilled during fieldwork and transportation to the laboratory.

Headspace screening for volatiles contaminants using a Photo-ionisation Detector (PID) was carried out during test pitting.

5.2.2 Surface Soil Sampling

Surface samples were collected between 0.0-0.1m bgs, using hand tools. A clean pair of nitrile gloves were used when handling each sample.

The soil samples were placed into laboratory supplied containers: glass jars for chemical analysis and zip-lock bags for asbestos ID analysis. Each soil sample was placed directly into an ice-chilled esky and remained chilled during fieldwork and transportation to the laboratory.

5.3 Surface Water/Sediment Sampling

Three sediment samples (Sed1 to Sed3) and two surface water samples (Dam1, Dam2, LC1) were collected from two onsite dams in the southern portion of the site. A third sample was collected from and Lochinvar Creek located in the south eastern corner of the site.

Sediment samples were collected by hand from the creek bed and surface water samples were collected directly into laboratory supplied jars and bottles. Each sample was placed directly into an ice-chilled esky and remained chilled during transportation to the laboratory.

Field water quality readings for pH, electrical conductivity (EC), dissolved oxygen (DO), redox potential and temperature, were taken using a handheld water quality meter at each sample location.

5.4 Laboratory analysis

The samples were dispatched to the NATA-accredited Eurofins MGT laboratory under chain of custody conditions.

59 soil/sediment samples were selected for analysis as part of this CA based on field observations. The soil samples were analysed for the following:

- Total Recoverable Hydrocarbons (TRH) – 15 primary samples;
- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) – 15 primary samples;
- Polycyclic Aromatic Hydrocarbons (PAHs) – 59 primary samples;
- Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc and mercury) – 59 primary samples;
- OCP's – 5 primary samples;
- pH and Cation Exchange Capacity (CEC) – 2 primary samples;
- Asbestos (%w/w) – 10 primary soil samples; and
- Asbestos (presence/absence) – 16 primary soil samples.

Four duplicate and four triplicate samples were also analysed for heavy metals, TRHs, PAHs, and BTEX for quality control purposes.

Three surface water samples were selected for analysis as part of this CA. The surface water samples were analysed for the following:

- Total Recoverable Hydrocarbons (TRH) – 3 primary samples;
- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX) – 3 primary samples;
- Polycyclic Aromatic Hydrocarbons (PAHs) – 3 primary samples;
- Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc and mercury) – 3 primary samples; and
- OCP's – 3 primary samples;

One duplicate and one triplicate sample was also analysed for heavy metals, TRHs, PAHs, BTEX and OCPs for quality control purposes.

6.0 Investigation Criteria

6.1 Health and Ecological Levels (Soil)

The health and ecological investigation levels for soil, presented in the *National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013)*, NEPC 2013, Canberra (referred to as ASC NEPM 2013) are generally used in NSW when selecting investigation levels for chemical contaminants in soil.

The purpose of the ASC NEPM (2013) is to '*establish a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by the community which includes regulators, site assessors, environmental auditors, landowners, developers and industry*'.

ASC NEPM (2013) provides health and ecological investigation and screening levels for different exposure scenarios based on a proposed land use. Health and ecological investigation and screening levels are applicable to the first stage (Tier 1) of site assessment and are used to assist in the iterative development of a Conceptual Site Model (CSM). They are adopted as concentrations of a contaminant above which either further appropriate investigation and/or evaluation will be required, or development of an appropriate management strategy (including remediation).

Health Investigation Levels (HILs) and Health Screening levels (HSLs) are applicable for assessing human health risk via relevant exposure pathways.

The HILs were developed for a broad range of metals and organic substances. These are generic to all soil types.

The HSLs have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via inhalation and direct contact with soil and groundwater. The HSLs depend on specific soil physicochemical properties, building configurations, land use scenarios and the depth that groundwater is encountered.

Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) are applicable for assessing risk to terrestrial ecosystems under residential, open space and commercial/industrial land use scenarios. They apply to the top 2m of soil, which corresponds to the root zone and habitation zone of many species.

The EILs are associated with selected metals and organic compounds. The EILs are site specific and are determined by calculating an Ambient Background Concentration (ABC) and an

Added Contaminant Limit (ACL) for the site, which are added together to get the EIL. In the absence of ambient background concentration data, a generic ACL, based on the soils pH, Cation Exchange Capacity (CEC) and clay content, has been adopted.

The ESLs are associated with petroleum compounds and fractions and are dependent on specific soil physical properties (i.e. coarse and fine-grained soil).

It is noted the ESLs for benzo(a)pyrene (ASC NEPM, 2013) were adopted from Canadian Soil Quality Guidelines (SQGs) presented in Environment Canada (2004), and were noted to have a low-reliability. The ESLs for benzo(a)pyrene in ASC NEPM (2013) were based on a review of Canadian SQGs by Dr Michael Warne, who completed the review in February 2010. Since the completion of Warne (2010) (which are included in the publication of ASC NEPM, 2013), the Canadian SQGs for benzo(a)pyrene were revised later in 2010 (CCME 2010a,b). Therefore, CRC Care Technical Note 39 assesses the benzo(a)pyrene ESL derivation, and derives a higher reliability ESL for benzo(a)pyrene in the Australian setting. The ESLs for benzo(a)pyrene derived by CRC Care (2017) are 33mg/kg for residential and open space land uses, and 172mg/kg for commercial/industrial land uses. These have been considered where benzo(a)pyrene concentrations exceed the ESL, but do not exceed the HIL, to mitigate against unwarranted remediation that is driven by low-reliability ESLs.

Based on the proposed site use the investigation and screening levels for residential land use have been adopted, and are shown in Table 6.3, below and Table 1, Appendix B.

6.2 Asbestos Materials in Soil

The assessment of known and suspected asbestos contamination in soil is based on:

- National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013), NEPC 2013, Canberra; and
- WA DoH 2009 Guidelines of the assessment and management of asbestos contaminated sites in Western Australia, WA Department of Health and Department of Environment and Conservation.

Schedule B1, Section 4 NEPM (2013) provides guidance on the assessment of both friable and non-friable forms of asbestos in soil. This guidance is based on the WA DoH (2009) Guidelines that presented risk-based screening levels for asbestos in soil under various land use scenarios.

For the purpose of assessing asbestos impacts in soil, three groups are recognised:

- Asbestos Containing Material (ACM) – which is in sound condition although possibly broken or fragmented and the asbestos is bound in a matrix. This is restricted to material that cannot pass through a 7mm x 7mm sieve;
- Fibrous asbestos (FA) – friable asbestos material, such as severely weathered ACM, and asbestos in the form of loose fibrous material such as insulation products;
- Asbestos fines (AF) – includes free fibres of asbestos, small fibre bundles and also ACM fragments that pass through a 7mm x 7mm sieve.

The HSLs for residential land use have been adopted. Where asbestos sampling and analysis has been carried out on a presence/absence basis, then a criteria of “detected” will be adopted.

The adopted health screening levels for asbestos in soil, are shown in Table 6.3, below.

6.3 Adopted Soil Criteria

The adopted assessment criteria (for residential land use) are listed in Table 6.3 below.

Table 6.3: Adopted Soil Assessment Criteria for Human Health and Environment

COC	HIL / HSL A (mg/kg) ^{1,2}	EIL / ESL A ³ (mg/kg)
TRH C6-C10 less BTEX (F1)	45	-
TRH >C10-C16 less Naphthalene (F2)	110	-
TRH >C6 – C10	-	180
TRH >C10 – C16	-	120
TRH >C16 – C34	-	1300
TRH >C34 – C40	-	5600
Benzo(a)pyrene (CRC Care)	-	33
Carcinogenic PAH as B(a)p TEQ	3	-
Total PAHs	300	-
Arsenic	100	100
Cadmium	20	-
Chromium	100 (CrVI)	730^
Copper	6,000	230^
Lead	300	1,100
Nickel	400	230^
Mercury	40	-
Zinc	7,400	690^
Naphthalene	3	170
Benzene	0.5	65
Toluene	160	105
Ethylbenzene	55	125
Total Xylene	40	45
Asbestos – bonded and FA/AF	No visible asbestos for surface soils	-
Asbestos – FA and AF (Friable asbestos)	0.001%	-
Asbestos – bonded	0.01%	-

Notes:

¹ Based on an average pH of 6.9, average CEC of 16meq/100g and clay content of 60% and using Ambient Background Concentration obtained from Olszowy et al (1995) using urban soils, old suburbs with low traffic , 50% percentile.

NL – Not limiting

1 – ASC NEPM (2013) – Health Investigation Levels- HILA

- 2 – ASC NEPM – Soil Health Screening Levels for Vapour Intrusion, Residential, Clay 0m to <1m
- 3 – ASC NEPM (2013) – Ecological Investigation and Screening Levels, Urban Residential/Public Open Space, fine
- 4 – Benzo(a)pyrene ESL derived by CRC CARE (2017)

6.4 Surface Water Investigation Levels

For assessing surface water quality, it is first necessary to assess the beneficial uses of surface water for the site and down gradient of the investigation area being assessed. Potential beneficial uses are considered to include:

- Aquatic ecosystems – discharge to surface water bodies with the nearest water bodies being Lochinvar Creek, located along the northern and southern boundaries of the site. Lochinvar Creek flows offsite to the north into the Hunter River located approximately 2.5km north of the site. Lochinvar Creek sustains freshwater ecosystems;
- Stock watering – Use of water in Lochinvar Creek to water stock (cattle); and
- Irrigation – Potential for Lochinvar Creek to be used for irrigation purposes, down gradient of the site.

Given the above, the potential beneficial use of surface water is considered to be sustaining aquatic ecosystems, stock watering and irrigation.

The applicable guidelines are:

- ANZECC (2000) Australian and New Zealand Guidelines on Fresh and Marine Water Quality (Primary Industries – Stock Watering and Irrigation);
- ANZECC (2018) Australian and New Zealand Guidelines on Fresh and Marine Water Quality; and
- National Environmental Protection Council (NEPC) National Environmental Protection (Assessment of Site Contamination) Measure (NEPM) (ASC NEPM, 2013).

The trigger values for freshwater species presented in the ANZECC (2018) (and ASC NEPM, 2013) are considered applicable for the protection of aquatic ecosystems of the receiving waters as Lochinvar Creek is a freshwater ecosystem.

ASC NEPM (2013) has adopted the trigger values for the protection of 95% of aquatic ecosystems, except where contaminants are potentially bio-accumulative in which case the trigger values for protection of 99% of species are used.

6.5 Adopted Surface Water Criteria

The adopted surface water assessment criteria are listed in Table 6.5 below.

COC	Aquatic Ecosystem ¹ (mg/L)	Stockwatering ² (mg/L)	Irrigation ^{3##} (mg/L)
Arsenic	0.013	0.5	20
Cadmium	0.0002	0.01	0.05
Chromium	0.001	1	1
Copper	0.0014	0.0004	5

COC	Aquatic Ecosystem ¹ (mg/L)	Stockwatering ² (mg/L)	Irrigation ^{3##} (mg/L)
Lead	0.0034	0.1	5
Mercury	0.00006	0.002	0.002
Nickel	0.011	1	2
Zinc	0.008	20	5
Benzene	0.95	-	-
Toluene	0.180**	-	-
Ethylbenzene	0.080**	-	-
Xylenes	0.075**a	-	-
Anthracene	0.00001**	-	-
Benzo(a)pyrene	0.0001**	-	-
Naphthalene	0.016	-	-
4,4'-DDT	0.006	-	-
Chlordanes – Total	0.03	-	-
Endosulfan	0.03	-	-
Endrin	0.01	-	-
g-BHC (Lindane)	0.2	-	-
Heptachlor	0.01	-	-
Toxaphene	0.1	-	-

Notes:

**Low reliability value – ANZECC (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality.

a. Conservatively assumes xylene is p-xylene.

Based on short-term trigger values (STV) – Short term use, up to 20 years

1. ANZECC (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality

2. ANZECC (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Table 4.3.2

3. ANZECC (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Tables 4.2.10 and 4.2.11

7.0 Quality Assurance/Quality Control

Sampling activities were undertaken in accordance with normal, industry accepted practices and standards. The assessment of field and laboratory quality assurance / quality control (QA / QC) procedures is provided below, and a data validation report is presented in Appendix J.

In order to assess field quality assurance / quality control (QA/QC) procedures, the following quality control samples were collected and analysed:

QC Sample	Type	Laboratory	Analysis
D.302.22	Duplicate of TP01_0.0-0.1	Eurofins	TRH, BTEX, PAH, Metals
T.3.2.22	Triplicate of TP01_0.0-0.1	ALS	TRH, BTEX, PAH, Metals
D.7.2.22	Duplicate of TP35_0.0-0.1	Eurofins	TRH, BTEX, PAH, Metals
T.7.2.22	Triplicate of TP35_0.0-0.1	ALS	TRH, BTEX, PAH, Metals
D.4.2.22	Duplicate of TP16_0.0-0.1	Eurofins	TRH, BTEX, PAH, Metals
T.4.2.22	Triplicate of T16_0.0-0.1	ALS	TRH, BTEX, PAH, Metals
D1.4.2.22	Duplicate of TP37_0.0-0.1	Eurofins	TRH, BTEX, PAH, Metals
T.1.2.22	Triplicate of TP37_0.0-0.1	ALS	TRH, BTEX, PAH, Metals
WD.3.22	Duplicate Dam1	Eurofins	TRH, BTEX, PAH, Metals, OCPs
WT.3.2.22	Triplicate Dam1	ALS	TRH, BTEX, PAH, Metals, OCPs

Primary and intra lab duplicate samples were analysed by the NATA-accredited Eurofins mgt laboratory.

Table 5, Appendix B, presents the relative percentage differences (RPDs) between the primary and duplicate samples. A review of the Qualtest QA / QC results indicates that RPDs were within the acceptable range. It is noted that low concentrations can exaggerate the percentage differences with respect to small total concentrations, therefore where results for primary and duplicate sample were less than 10 time the LOR, the RPDs have been disregarded.

The laboratory internal QA/QC reports indicated that the appropriate laboratory QA / QC procedures and rates were undertaken for contamination studies, and that:

- Laboratory blank samples were free of contamination;
- Matrix spike recoveries were within the control limits;
- Laboratory duplicate RPDs were recorded within the control limits; and
- Surrogates and laboratory control samples were within the laboratories acceptable range.

Based on the above, and the data validation report in Appendix J, it is considered that the field and laboratory methods for soil sampling are appropriate and that the data obtained is usable and considered to reasonably represent the concentrations at the sampling points at the time of sampling.

8.0 Results

8.1 Subsurface Conditions

The soils observed during field works are summarised below in Table 8.1.1. The test pit logs are presented in Appendix I.

Table 8.1.1 – Summary of Geotechnical Units and Soil Types

Unit	Soil Type	Description
1A	FILL – TOPSOIL	<p>CLAY – medium to high plasticity, brown, trace fine grained sand.</p> <p>CLAY – low to medium plasticity, dark brown, with some silt.</p> <p>Sandy CLAY – low to medium plasticity, dark brown, fine to medium grained sand, with some asbestos containing material and some metal flaking in places.</p> <p>Clayey SAND – fine grained, dark brown, fines of low plasticity.</p> <p>Root affected to variable depths.</p>
1B	UNCONTROLLED FILL	<p>Sandy Gravelly CLAY, Gravelly CLAY – low to medium plasticity, brown / dark grey-brown with some orange-brown and white, fine grained sub-rounded to angular gravel.</p> <p>Sandy CLAY, CLAY – low to medium plasticity, brown to dark brown and grey-brown, fine to medium grained sand, trace gravel in places.</p> <p>Sandy GRAVEL – fine to medium grained, sub-rounded to sub-angular, fine to medium grained sand.</p> <p>CLAY – medium to high plasticity, brown, trace red-brown and orange-brown.</p> <p>With varying mixtures of (refer to logs): concrete, bricks, terracotta pipe, wood, asbestos containing material (ACM), some steel, plastic, coal, asphalt.</p> <p>Root affected surface zone in places.</p>
2	TOPSOIL	<p>Silty CLAY, CLAY - low to medium plasticity, brown to dark brown, some fine grained sand.</p> <p>Sandy CLAY - low to medium plasticity, grey-brown, dark brown, fine grained sand, with fine to coarse grained rounded to sub-angular gravel / Gravelly in places.</p> <p>CLAY - medium to high plasticity, brown to dark brown, some fine grained sand in places, trace fine grained sub-rounded gravel in places.</p> <p>Gravelly CLAY / Clayey GRAVEL in places.</p> <p>Root affected to variable depths.</p>
3	SLOPEWASH	Silty CLAY, CLAY - low to medium plasticity, brown to grey-brown.

Unit	Soil Type	Description
		Sandy CLAY, CLAY - medium plasticity, brown / grey to grey-brown, fine grained sand, with fine to coarse grained rounded to sub-rounded gravel / Gravelly in places.
4	RESIDUAL SOIL	<p>CLAY - medium to high plasticity, mixtures of brown, dark brown, pale brown, dark grey, red-brown, with some grey-brown, orange-brown, trace fine grained sand in places, some fine to medium / coarse grained rounded to sub-angular gravel in places.</p> <p>Sandy CLAY - medium plasticity, pale brown to brown, fine grained sand.</p> <p>Sandy CLAY / Clayey SAND - low to medium plasticity, brown to orange-brown, fine grained.</p> <p>Gravelly CLAY, Sandy Gravelly CLAY - medium to high plasticity, brown with some red-brown, fine to medium grained, sub-angular to sub-rounded gravel, with some extremely weathered rock.</p> <p>Clayey SAND / Sandy CLAY - fine to medium / coarse grained, brown, orange-brown, fines of low to medium plasticity, gravelly in places.</p> <p>Clayey GRAVEL – fine to coarse grained, sub-rounded to rounded, pale grey – brown, dark brown, fines of low to medium plasticity, some sand.</p> <p>Borderline Extremely Weathered Rock in places. With some highly weathered rock in places.</p>
5	EXTREMELY WEATHERED (XW) ROCK with soil properties	<p>Andesite: breaks down into Sandy CLAY - medium plasticity, pale brown to brown, fine grained sand, trace highly weathered rock.</p> <p>Sandstone: breaks down into Clayey SAND / Sandy CLAY - fine grained, orange-brown to brown, fines of low to medium plasticity, with some highly weathered sandstone.</p> <p>Sandstone: breaks down into Sandy CLAY - medium plasticity, brown to orange-brown, fine grained sand, with some highly weathered SANDSTONE - fine grained, orange-brown, estimated low to medium strength.</p>
6	HIGHLY WEATHERED (HW) TO MODERATELY WEATHERED (MW) ROCK	<p>SANDSTONE - fine grained, pale brown to brown / white, orange-brown, estimated low strength.</p> <p>SANDSTONE - fine to medium grained, brown to pale brown and orange-brown, estimated high strength, with some Sandy CLAY.</p>

Anthropogenic materials including tiles, bricks, concrete, asphalt and/or ACM were observed in TP01, TP01A, TP32 and TP50. The anthropogenic materials were observed within waste/fill pits. The location of the waste pits and stockpiles within the site, is shown on Figure 3A and 3C. The estimated outline of the waste pits are shown on Figures 4A to 4D, Appendix A.

Three waste pits and one stockpile of waste were observed during test pitting on the site. Details of the waste pits are provided below:

Location	Estimated Volume (m³)*	Description
Waste Pit 1 (TP01/TP01A)	190	Fill: Gravelly Clay/Sandy Clay, brown to dark brown and grey/brown with some orange/brown. Anthropogenic materials included concrete, bricks, terracotta pipe, wood and asbestos containing material (ACM).
Waste Pit 2 (TP32)	90	Fill: Sandy Gravelly Clay, dark brown. Anthropogenic materials included steel, concrete, bricks, plastic and ACM.
Waste pit 3 (TP50)	1170	Fill: Sandy Gravelly Clay, dark, grey/brown. Anthropogenic materials included steel, concrete, bricks, asphalt, plastic and ACM.
stockpile 1 (SS7)	30	The waste material in Stockpile 1 was mostly concrete. No ACM was observed on the surface of the stockpile.

*It is noted that as a conservative measure volume is based on maximum depth of waste observed.

No odours were observed during test pitting.

Slow groundwater inflow was observed at TP09 and TP50 at depths of about 1.20m and 1.90m, respectively. No other groundwater inflows or water levels were encountered in the other test pits during the limited time that they remained open on the day of the field investigations.

It should be noted that groundwater conditions can vary due to rainfall and other influences including regional groundwater flow, temperature, permeability, recharge areas, surface condition, and subsoil drainage.

Table 8.1.2 contains a summary of the distribution of the above geotechnical units at the test pit locations.

Table 8.1.2 – Summary Of Geotechnical Units Encountered At Test Locations

Location	Unit 1A	Unit 1B	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
	Fill – Topsoil	Uncontrolled Fill	Topsoil	Slopewash	Residual Soil	XW Rock	HW to MW Rock
Depth in metres (m)							
TP01	0.00 - 0.10	0.10 - 0.35	0.35 - 0.50	-	0.50 - 1.00	-	-
TP1A	-	0.00 - 1.60	-	-	1.60 - 1.90	-	-
TP02	-	-	0.00 - 0.35	-	0.35 - 0.90	-	-
TP03	-	-	0.00 - 0.10	0.10 - 0.25	0.25 - 0.90	-	-
TP04	-	-	0.00 - 0.15	-	0.15 - 0.80	-	-
TP05	-	-	0.00 - 0.15	-	0.15 - 0.70	-	-
TP06	-	-	0.00 - 0.20	-	0.20 - 2.00	-	-
TP07	-	-	0.00 - 0.30	-	0.30 - 0.70	-	-
TP08	-	-	0.00 - 0.10	-	0.10 - 0.70	-	-
TP09	-	-	0.00 - 0.15	-	0.15 - 2.00	-	-

Location	Unit 1A	Unit 1B	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
	Fill – Topsoil	Uncontrolled Fill	Topsoil	Slopewash	Residual Soil	XW Rock	HW to MW Rock
Depth in metres (m)							
TP10	0.00 - 0.20	0.20 - 0.50	-	-	0.50 - 0.90	-	-
TP11	-	-	0.00 - 0.05	-	0.05 - 0.60	-	-
TP12	-	-	0.00 - 0.10	0.10 - 0.25	0.25 - 0.65	-	-
TP13	-	-	0.00 - 0.10	0.10 - 0.25	0.25 - 2.00	-	-
TP14	-	0.00 - 0.15	-	0.15 - 0.25	0.25 - 0.70	-	-
TP15	-	-	0.00 - 0.05	-	0.05 - 0.60	-	-
TP16	-	-	0.00 - 0.10	-	0.10 - 1.80	1.80 - 2.00	-
TP17	-	-	0.00 - 0.10	-	0.10 - 0.70	-	-
TP18	-	-	0.00 - 0.15	0.15 - 0.25	0.30 - 0.70	-	-
TP19	-	-	0.00 - 0.03	0.03 - 0.23	0.23 - 1.00	-	1.30 - 1.32*
TP20	-	-	0.00 - 0.15	-	0.15 - 0.65	-	-
TP21	-	-	0.00 - 0.10	-	0.10 - 0.60	-	-
TP22	-	-	-	-	0.00 - 0.50	-	-
TP23	-	0.00 - 0.30	-	0.30 - 0.45	0.45 - 2.00	-	-
TP24	-	-	0.00 - 0.10	0.10 - 0.20	0.20 - 0.65	-	-
TP25	0.00 - 0.15	-	-	-	0.15 - 0.70	-	-
TP26	-	-	0.00 - 0.10	0.10 - 0.20	0.20 - 0.70	-	-
TP27	0.00 - 0.10	-	-	-	0.10 - 0.80	-	-
TP28	0.00 - 0.10	-	-	-	0.10 - 0.60	-	-
TP29	-	-	0.00 - 0.10	-	0.10 - 0.70	-	-
TP30	-	-	0.00 - 0.10	-	0.10 - 0.60	0.60 - 0.70	-
TP31	-	-	0.00 - 0.05	-	0.05 - 0.60	-	-
TP32	-	0.00 - 0.35	-	-	0.35 - 0.75	-	-
TP33	-	0.00 - 0.20	-	-	0.20 - 0.65	-	-
TP34	-	-	-	-	0.00 - 0.60	-	-
TP35	-	-	0.00 - 0.10	0.10 - 0.25	0.25 - 0.70	-	-
TP36	-	-	0.00 - 0.10	0.10 - 0.20	0.20 - 0.70	-	-
TP37	-	-	0.00 - 0.10	0.10 - 0.30	0.30 - 1.20	1.20 - 1.60	1.60 - 1.70*
TP38	-	0.00 - 0.60	0.60 - 0.80	-	0.80 - 1.30	-	-
TP39	-	-	0.00 - 0.10	-	0.10 - 0.60	-	-
TP40	-	-	0.00 - 0.10	0.10 - 0.30	0.30 - 0.70	-	-
TP41	-	-	0.00 - 0.10	0.10 - 0.30	0.30 - 0.70	-	-
TP42	-	-	0.00 - 0.20	-	0.20 - 0.70	-	-
TP43	-	-	0.00 - 0.20	-	0.20 - 0.85	-	0.85 -
TP44	-	-	0.00 - 0.10	-	0.10 - 0.60	-	0.60 - 0.80
TP45	-	-	0.00 - 0.10	0.10 - 0.30	0.30 - 0.60	-	-
TP46	-	-	0.00 - 0.20	-	-	-	0.20 - 0.51*
TP47	-	-	0.00 - 0.20	-	0.20 - 0.80	-	-
TP48	-	-	0.00 - 0.10	-	0.10 - 0.70	-	-
TP49	-	-	0.00 - 0.10	-	0.10 - 0.90	-	-

Location	Unit 1A	Unit 1B	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
	Fill – Topsoil	Uncontrolled Fill	Topsoil	Slopewash	Residual Soil	XW Rock	HW to MW Rock
Depth in metres (m)							
TP50	-	0.00 - 1.50	-	-	1.50 - 2.00	-	-
Note: * = Practical refusal of 2.7 tonne excavator met on Weathered Rock. ^ = Slow progress or Very Slow progress met on Weathered rock.							

8.2 Surface Water Field Parameters

The surface water quality parameters are summarised in Table 8.2 below.

Table 8.2 – Summary of Surface Water Quality Parameters

Sample Location	Dam 1 (Onsite dam central south of site)	Dam 2 (Onsite dam central south of site)	LC1 (Lochinvar Creek, south eastern corner of the site)
Dissolved Oxygen (mg/L)	8.20	8.44	8.57
Redox potential (mV)	99.1	97.4	104.7
Electrical conductivity ($\mu\text{S}/\text{cm}$)	292.4	316.8	663
pH	8.04	8.13	7.93
Temperature (°C)	21.3	24.4	22.2
Comments	Clear, slightly brown, no odour, some algae/weed	Clear, slightly brown, no odour	Clear, no odour, slight flow

8.3 Laboratory Results

8.3.1 Soil and Sediment

Soil and sediment analytical results for the contamination assessment are summarised in Table 1 and 2, Appendix B. The laboratory analytical reports are also included in Appendix J.

The laboratory results were compared to the investigation levels described in Sections 6. The analytical results indicated that concentrations of contaminants were reported below the adopted criteria with the exception of:

- Concentrations of chromium were reported above the adopted human health criteria of 100mg/kg in sample TP14 0.0-0.1m (110mg/kg);
- Concentrations of zinc were reported above the adopted ecological criteria of 690mg/kg in sample TP25 0.0-0.1m (1300mg/kg) and TP28 0.0-0.1m (1100mg/kg);
- Concentrations of benzo(a)pyrene were reported above the adopted ecological criteria of 33mg/kg in sample TP50 1.4-1.5m (36mg/kg);

- Concentrations of benzo(a)pyrene TEQ were reported above the adopted human health criteria of 3mg/kg in sample TP50 0.0-0.1m (22mg/kg) and TP50 1.4-1.5m (53mg/kg);
- Concentrations of total PAHs were reported above the adopted human health criteria of 300mg/kg in sample TP50 1.4-1.5m (453.3mg/kg); and
- ACM was detected above the adopted guidelines of 0.01mg/kg in TP25 0.0-0.1m (0.023mg/kg), TP27 0.0-0.1m (0.011mg/kg), TP28 0.0-0.1m (0.018mg/kg), TP32 0.0-0.1m (0.012mg/kg), TP50 0.0-0.1m (0.123mg/kg) and TP50 0.4-0.5m (0.042mg/kg).

95% Upper Confidence Limit Calculations

For concentrations of chromium and zinc exceeding the adopted investigation levels, the 95% Upper Confidence Limits (UCLs) of the average concentrations for the sample results were calculated using ProUCL in accordance with the procedures discussed in NEPM (2013) Schedule B2 Section 13 and NSW EPA (1995) Sampling Design Guidelines.

NEPM (2013) Schedule B1, Section 3.2.1 states that:

- "At the very least, the maximum and 95%UCL of the arithmetic mean contaminant concentration should be compared to the relevant Tier 1 screening criteria"*
- "The implications of localised elevated values (hotspots) should also be considered. The results should also meet the following criteria:*
 - The standard deviation of the results should be less than 50% of the relevant investigation or screening level, and*
 - No single value should exceed 250% of the relevant investigation or screening level."*

Calculation sheets for data statistics, including average, standard deviation and 95%UCL of the average, are attached in Appendix J. ProUCL calculates the UCL comparing a number of different methods, including normal distribution, lognormal distribution, gamma distribution and nonparametric. ProUCL then recommends an appropriate method for the data set.

It is noted that concentrations of benzo(a)pyrene, benzo(a)pyrene TEQ and total PAHs exceeding the adopted criteria were from waste pits observed on the site and not included in the ProUCL calculations. Not data from the waste pits were included in the Pro UCL calculations.

The 95% UCL calculations showed:

Parameter	Chromium - HIL	Zinc - EIL
No. of samples	50	50
Average	36.76	90.96
Standard Deviation	22.48	245.9
95% UCL	42.14	239.5
EIL/HIL (mg/kg)	100 (HIL)	690 (EIL)

Preliminary waste Classification

Qualtest followed the six step process described in Part 1 of the guidelines for assessing the classification of the in-situ soil on the site. According to the waste classification procedure:

- **Step 1 – Is the waste special waste?**: Due to the presence of asbestos, the material in TP01A 0.0-1, TP25 0.0-0.1m, TP26 0.0-0.1m, TP27 0.0-0.1m, TP28 0.0-0.1m, TP32 0.0-0.1m and TP50 0.0-0.1m classifies as a ‘special waste’.
- **Step 2 – Is the waste liquid waste?**: The material assessed is not to be a ‘liquid waste’ in its current form. The material requiring offsite disposal was soil and capable of being picked up by a spade or shovel.
- **Step 3 – Is the waste pre-classified?**: The material assessed is not ‘pre-classified’.
- **Step 4 – Does the waste possess hazardous characteristics?**: The material assessed does not appear to possess hazardous characteristics from the onsite observations made.
- **Step 5 - Determining a waste's classification using chemical assessment**: The material has been assessed by chemical analyses. Soil analytical results are presented in Table 3 (Appendix B). Laboratory certificates and chain of custody records are also included in Appendix K. The results show concentrations below the general solid waste (GSW) criteria (CT1), with the exception of the following which exceeded the GSW and/or restricted solid waste (RSW) criteria:
 - Exceeding GSW:
 - Chromium in TP14 0.0-0.1m.
 - Exceeding RSW:
 - Benzo(a)pyrene in TP50 0.0-0.1m and TP50 1.4-1.5m.
- **Step 6 - Is the waste putrescible or non-putrescible?**: The material is composed predominantly of soil and building materials (waste pits). NSW EPA (2014) notes that materials that are generally not classified as putrescible include soils, timber, garden trimmings, agricultural, forestry and crop materials, and natural fibrous organic and vegetative materials. Based on observations by Qualtest, the material is considered to be non-putrescible.

Based on the above, with the majority of the surface/fill soils on the site would classify as General Solid Waste in accordance with the NSW (2014) Waste Classification Guidelines, with the exception of the following:

- Surface soil surrounding TP25, TP26, TP27 and TP28 would classify as General Solid Waste (special waste - Asbestos);
- Surface soils surrounding TP14 would classify as Restricted Solid Waste. It is noted that additional leachability analysis may reduce this classification to General Solid Waste;
- Waste Pit 1 (TP01A) and Waste Pit 2 (TP32) would classify as General Solid Waste (Special; - Asbestos); and
- Waste Pit3 (TP50) would classify as Hazardous Waste (Special – Asbestos). It is noted that leachability and additional sampling may reduce the classification to RSW

The underlying residual soils on the site would likely classify as Virgin Excavated Natural Material (VENM), as long as they are not mixed with any topsoil, fill, or waste materials.

It is recommended that the waste classification of soils is confirmed prior to disposal of materials offsite.

8.3.2 Surface water

Surface water analytical results for the contamination assessment are summarised in Table 3, Appendix B. The laboratory analytical reports are also included in Appendix J.

The surface water analytical results were compared to the investigation levels described in Section 6.3. The analytical results indicated that concentrations of contaminants were reported below the adopted criteria with the exception of:

- Concentration of chromium were reported slightly above the adopted aquatic ecosystem criteria (0.001mg/L) in Dam 1(0.003mg/L);
- Concentrations of copper were reported slightly above the adopted aquatic ecosystem criteria (0.0014mg/L) in Dam1 (0.006mg/L) and LC (0.003mg/L);
- Concentrations of copper were reported slightly above the adopted stock watering criteria (0.0004mg/L) in Dam1(0.006mg/L) and LC (0.003mg/L); and
- Concentrations of zinc were reported slightly above the adopted aquatic ecosystem criteria (0.008mg/L) in Dam1 (0.019mg/L) and Dam2 (0.01mg/kg).

9.0 Conceptual Site Model

Based on the results of the contamination assessment carried out on the site, a Conceptual Site Model (CSM) has been developed. Refer to Table 9.1, below.

Table 9.1 – Preliminary Conceptual Site Model

AEC	COPC	Likelihood of Contamination	Mechanism of Contamination	Potentially Affected Media	Human & Ecological Receptors	Potential mechanisms of exposure	Potential & Complete Exposure Pathways	Comments
1. Current and former buildings on the site • Weathering of potentially hazardous materials (asbestos, lead paint, galvanised metals) • Use of pesticides and weedicides around buildings • Storage of machinery, vehicles and oils	Metals, Asbestos, PAHs, OCP	Medium to High	• Top-down leaks/spills, flakes/fibres onto soil/sediment. • Leaching of soil contaminants to surface water and groundwater.	• Soils • Surface water • Sediment • Groundwater • Aesthetics	• Current site visitors • Future construction workers & site users • Soil biota/plants and transitory wildlife • Onsite surface water – Dams and Lochinvar Creek • Groundwater dependent ecosystems	• Direct dermal contact with contaminated soil and/or surface water • Ingestion of contaminated soil, sediment and surface water • Inhalation of asbestos fibres, or contaminated soil (as dust) • Inhalation of petroleum hydrocarbon vapours • Leaching of soil contaminants to surface water and/or groundwater • Surface water and groundwater discharge to onsite dams and Lochinvar Creek.	• Complete exposure pathway for current site visitors, future construction workers and site users as concentrations of contaminants in soil collected were above the adopted criteria. • Complete exposure pathway for ecological receptors. • Incomplete exposure pathway for surface water onsite dams and Lochinvar Creek based on laboratory results of surface water and sediment samples from the Dams and Lochinvar Creek. • Likely incomplete exposure pathway to groundwater due to depth of groundwater (>3.0m bgs), expected clay subsoils, and top-down nature of soil contamination.	Samples collected – TP25 to TP28, Sed 1 to Sed 3, Dam1, Dam2, LC. Due to elevated concentrations of zinc and ACM reported in TP25, TP27 and TP28 the exposure pathway is currently complete for current site visitors, future construction workers and site users and ecological receptors.
2. Agricultural Use - Imported fill/storage of waste in stockpiles/buried fill and over piping • Potential use of contaminated imported fill/storage of waste (concrete, ACM, bricks, rock, tiles)	TRH, BTEX, PAH, metals, Asbestos	Medium to High	• Top-down leaks/spills, flakes/fibres onto soil/sediment • Leaching of soil contaminants to surface water and groundwater	• Fill soils • Underlying soils • Surface water • Sediment • Groundwater • Aesthetics	• Current site visitors • Future construction workers & site users • Soil biota/plants and transitory wildlife • Onsite surface water – Dams and Lochinvar Creek • Groundwater dependent ecosystems	• Direct dermal contact with contaminated soil, sediment, surface water and/or groundwater • Ingestion of contaminated soil, sediment and surface water • Inhalation of asbestos fibres, or contaminated soil (as dust) • Inhalation of petroleum hydrocarbon vapours • Leaching of soil contaminants to surface water and/or groundwater • Surface water and groundwater discharge to onsite dams and Lochinvar Creek.	• Complete exposure pathway for current site visitors, future construction workers and site users as concentrations of contaminants in soil collected were above the adopted criteria. • Complete exposure pathway for ecological receptors as concentrations of contaminants in soil collected were above the adopted criteria. • Incomplete exposure pathway for surface water onsite dams and Lochinvar Creek based on laboratory results of surface water and sediment samples from the Dams and Lochinvar Creek. • Incomplete exposure pathway to groundwater due to depth of groundwater (>3m) in clay soils and concentrations of contaminants in soil, collected were below adopted criteria.	Samples collected – TP01 to TP50, SS7 to SS8, Sed 1 to Sed 3, Dam1, Dam2, LC. Due to elevated concentrations of PAHs and ACM reported in TP32 (Waste Pit 2) and TP50 (Waste Pit 3) the exposure pathway is currently complete for current site visitors, future construction workers and site users and ecological receptors. Anthropogenic waste (steel, concrete, bricks, plastic, asphalt and ACM) observed in Waste Pit 1 to Waste Pit 3 and Stockpile 1 on the site will require removal/management due to aesthetics.

10.0 Discussion

10.1 Waste Pits

Three waste pits and one stockpile of waste were observed during test pitting on the site. A summary of the waste pits are provided below:

Location	Estimated Volume (m³)*	Description	Identified Contamination above HILs/HSLs/ESLs/EILs	Preliminary Waste Classification
Waste Pit 1 (TP01/ TP01A)	190	Fill: Gravelly Clay/Sandy Clay, brown to dark brown and grey/brown with some orange/brown. Anthropogenic materials included concrete, bricks, terracotta pipe, wood and asbestos containing material (ACM).	Soil sample results were reported below adopted criteria. Due to the volume of material observed, additional sampling of Waste Pit 1 is recommended. Anthropogenic material will require removal/management for aesthetic reasons.	GSW – Special Waste Asbestos
Waste Pit 2 (TP32)	90	Fill: Sandy Gravelly Clay, dark brown. Anthropogenic materials included steel, concrete, bricks, plastic and ACM.	ACM was detected above the adopted HIL criteria and will require remediation/management. Due to the volume of material observed, additional sampling of Waste Pit 2 is also recommended. Anthropogenic material will require removal/ management for aesthetic reasons.	GSW – Special Waste Asbestos
Waste pit 3 (TP50)	1170	Fill: Sandy Gravelly Clay, dark, grey/brown. Anthropogenic materials included steel, concrete, bricks, asphalt, plastic and ACM.	Concentrations of benzo(a)pyrene, benzo(a)pyrene TEQ and total PAHs were reported above the adopted EIL and/or HIL criteria and will require remediation/management.	Currently classifies as Hazardous Waste – Special Waste Asbestos. It is recommended that leachability and additional

Location	Estimated Volume (m ³)*	Description	Identified Contamination above HILs/HSLs/ESLs/EILs	Preliminary Waste Classification
			<p>ACM was detected above the adopted HIL Criteria.</p> <p>Due to the volume of material observed, additional sampling of Waste Pit 3 is also recommended.</p> <p>Anthropogenic material will require removal/ management for aesthetic reasons.</p>	<p>sampling carried out to try and reduce the classification to RSW</p>
stockpile 1 (SS7)	30	The waste material in Stockpile 1 was mostly concrete. No ACM was observed on the surface of the stockpile.	Anthropogenic material will require removal/ management for aesthetic reasons.	Preclassifies as GSW. Concrete may be able to go to recycler.

*It is noted that as a conservative measure volume is based on maximum depth of waste observed.

The waste pits and stockpiles in their current state represent complete exposure pathway for current and future site users, construction/maintenance workers and the environment. These waste pits will require further assessment and/or management followed by validation sampling and reporting.

10.2 Surface Asbestos Contamination

ACM was detected above the adopted human health criteria and zinc was reported in surface soils above the adopted ecological criteria in surface soils surrounding the barn located in the south eastern portion of the site (TP25, TP27 and TP28).

Given that there is a complete exposure pathways to current and future site users, construction/maintenance workers and the environment, surface soils surrounding the barn will require remediation and/or management.

10.3 Surface Water

Metal concentrations including chromium, copper, and zinc, slightly exceeded the aquatic ecosystem guidelines and concentrations of copper slightly exceeded the stock watering guidelines. Given the long history of farming in the region, these concentrations of metals in the surface water are considered to represent background conditions.

Should the dams be decommissioned it is considered appropriate to irrigate the dam water over the site prior to back filling.

11.0 Conclusions and Recommendations

The site history showed of the site has been vacant land (most likely livestock grazing) from the 1970's and remains vacant land (used for livestock grazing) to the present day. A barn has been present in the south eastern portion of the site since prior to the 1970's. Prior to the 1970s the site was likely used for agricultural use including stock grazing.

During the site walkover the barn located in the south eastern portion of the site was observed to have been constructed from brick and metal with concrete flooring and possible ACM roof sheeting. A stockpile with concrete stairs, bricks and concrete blocks was observed along the north boundary of the site and an area of buried fill was observed to the west of the stockpile. Areas of fill were observed along the central western boundary of the site and on the dam walls. The fill was observed to contain wood and anthropogenic materials, metal and concrete drainage pipes were also observed.

Two AEC's were identified for the site:

1. Current and former buildings on the site- Weathering of potentially hazardous materials (asbestos, lead paint, galvanised metals), Use of pesticides and weedicides around buildings, Storage of machinery, vehicles and oils; and
2. Agricultural use including imported fill/storage of waste in stockpiles/buried fill - Potential use of contaminated imported fill/storage and burying of farm waste (concrete, bricks, rock, tiles).

Soil sampling and analysis of surface and fill soils in the areas of the AECs above was carried out. The field investigations identified three waste pits on the site and concentrations of ACM, and/or PAHs above the adopted human health and/or ecological criteria.

Surface water sampling identified metal concentrations including chromium, copper, and zinc, exceeded the adopted guidelines. Given the long history of farming in the region, the concentrations of metals in the surface water are considered to represent background conditions. No elevated concentrations were identified in the dam sediments assessed.

The Conceptual Site Model (CSM) indicated that a complete exposure pathway exists for current and future site users, construction/maintenance workers and the environment, due to elevated concentrations of ACM, PAHs and/or anthropogenic materials in the waste pits and surface soils surrounding the onsite barn.

The identified soil contamination will require remediation and/or management as part of the proposed development. The following soil contamination will require remediation and/or management:

- ACM above human health criteria and zinc above ecological criteria in surface soils surrounding the barn in the south eastern portion of the site;
- ACM above the adopted human health criteria in Waste Pit 2 and ACM and PAHs above human health and ecological criteria in Waste Pit 3; and
- Anthropogenic materials observed in Waste Pit 1 to Waste Pit 3 and Stockpile 1 will also require removal/management for aesthetic reasons.

Based on the results of the Detailed Contamination Assessment it is considered the site can be made suitable for the proposed residential development, provided the following recommendations are implemented:

- Additional assessment including sampling and analysis of the waste pits due to the volume of material observed, and the low sampling density. This additional assessment can be included in the Remediation Action Plan (RAP) for the site (see bullet point below).

- Preparation of a Remediation Action Plan (RAP) by an experienced contaminated land consultant, to outline the remediation for the soil contamination identified.
- Preparation of a Contaminated Land Management Plan as part of a Construction Environmental Management Plan (CEMP) for use during earthworks and construction of the development, which will include:
 - Guidance to the workers on identifying potentially contaminating materials such as slag impacted soil, asbestos containing material and,
 - Unexpected Finds Procedure (UFP); and
 - Procedures for handling, management and disposal/re-use of contaminated soil and surface water, if encountered.

This report was prepared in general accordance with the relevant sections of the NSW EPA (2020) Guidelines for Consultants Reporting on Contaminated Land and the National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013), NEPC 2013, Canberra (referred to as ASC NEPM 2013).

12.0 Limitations

This report has been prepared by Qualtest Lochinvar Developments Pty Ltd (LD) C/- ADW Johnson based on the objectives and scope of work list in Sections 1.1 and 1.2. 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 its applicability and, where necessary, should seek expert advice in relation to their particular situation.

The opinions, conclusions and recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. Qualtest has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

In preparing this report Qualtest has relied on information contained in searches of government websites and has not independently verified or checked the data contained on these websites.

In preparing this report, current guidelines for assessment and management of contaminated land were followed. The conclusions reached in this report are dependent on the limitations inherent in all subsurface investigations where horizontal and vertical variation in contaminant concentrations can occur. No subsurface assessment can accurately predict the contaminant concentration at all points.

Site conditions may change after the date of this Report. Qualtest does not accept responsibility arising from, or in connection with, any change to the site conditions.

13.0 References

NSW Department of Primary Industries (Office of Water) Registered Groundwater Bore Map, accessed from <http://allwaterdata.water.nsw.gov.au/water.stm>, accessed on 25 November 2021.

NSW Land and Property Information, Spatial Information eXchange (SIX) Maps - Topographic Map, accessed from <https://maps.six.nsw.gov.au/>, accessed on 25 November 2021.

State of NSW and Department of Planning, Industry and Environment, 2021, Acid Sulfate Soil online database (<https://espade.environment.nsw.gov.au>)

NSW EPA (1995) Sampling Design Guidelines

NSW EPA (2020) Guidelines for Consultants Reporting on Contaminated Land.

NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013), Canberra (ASC NEPM 2013).

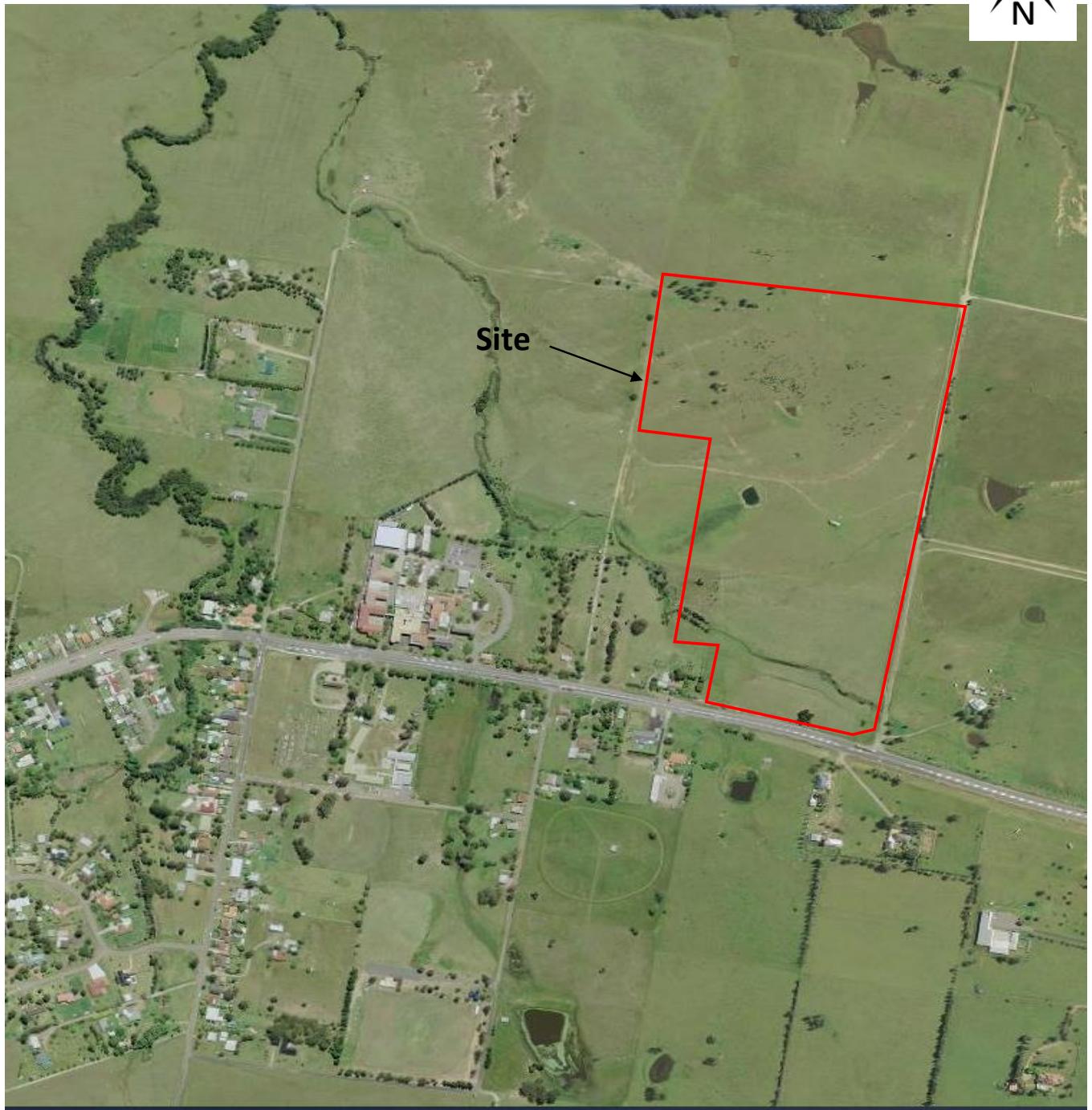
NSW ePlanning Spatial Viewer Portal (<https://www.planningportal.nsw.gov.au/spatialviewer/>), accessed on 16 November 2021

NSW Spatial Portal -Historical Imagery (<https://portal.spatial.nsw.gov.au/portal/apps/>), accessed on 16 November 2021

WA DoH (2009) Guidelines of the assessment and management of asbestos contaminated sites in Western Australia, WA Department of Health and Department of Environment and Conservation

APPENDIX A:

Figures

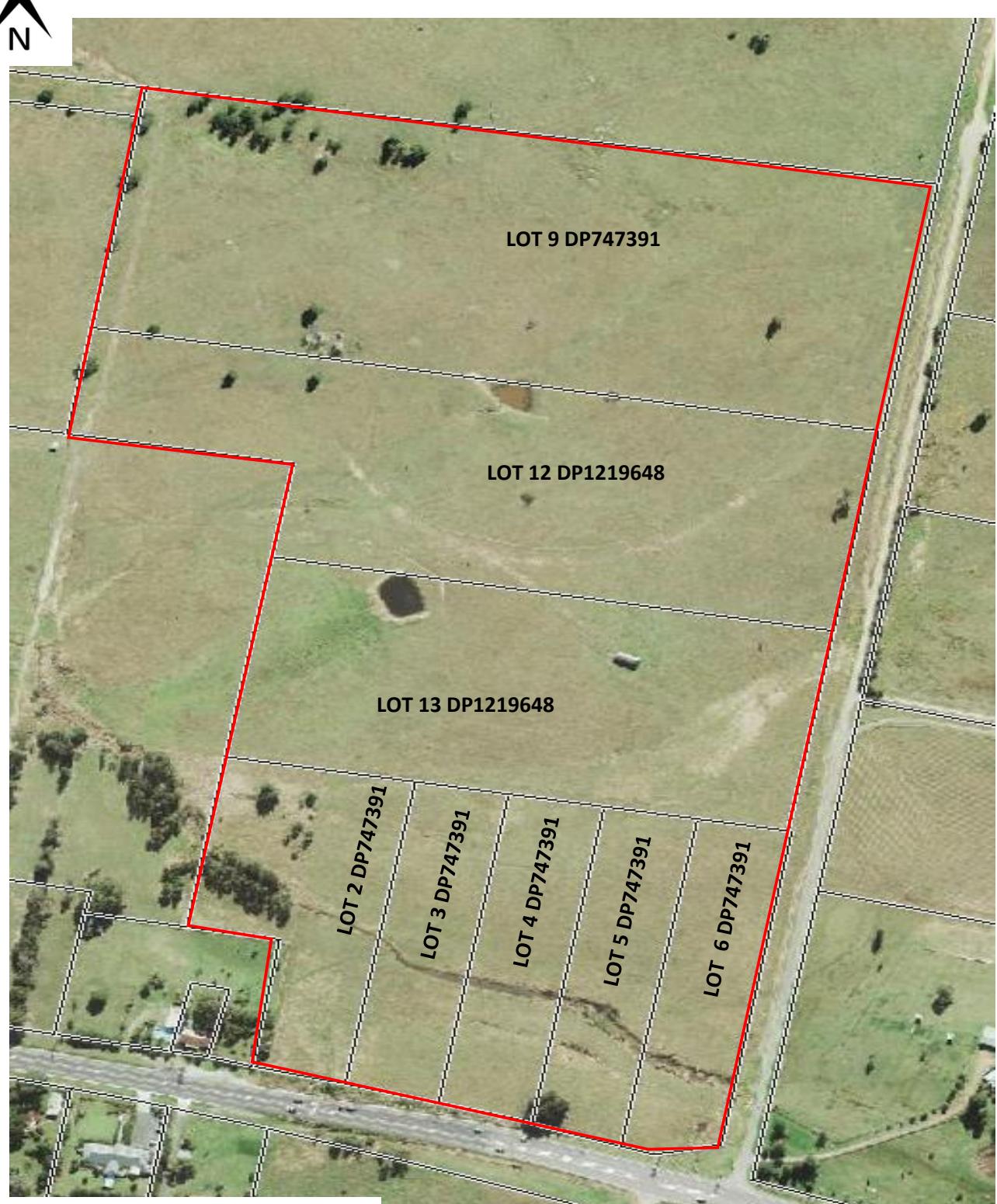


LEGEND:

 Approximate Site Boundary

Image Sixmaps, image date 2021, accessed 5 November 2021

Qualtest LABORATORY (NSW) PTY LTD	Client: LOCHINVAR DEVELOPMENTS PTY LTD	Drawing No: FIGURE 1A
Project:	CONTAMINATION ASSESSMENT	Project No: NEW22P-0012-AA
Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale: AS SHOWN
Title:	SITE LOCATION PLAN	Date: 18/02/2022



LEGEND:

Approximate Site Boundary

Approx. Scale Bar

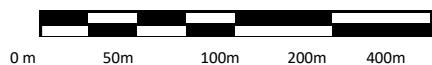


Image Sixmaps, image date 2021, accessed 5 November 2021

Qualtest LABORATORY (NSW) PTY LTD	Client: LOCHINVAR DEVELOPMENTS PTY LTD	Drawing No: FIGURE 1B
	Project: CONTAMINATION ASSESSMENT	Project No: NEW22P-0012-AA
	Location: 898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale: AS SHOWN
	Title: EXISITING LOT LAYOUT	Date: 18/02/2022

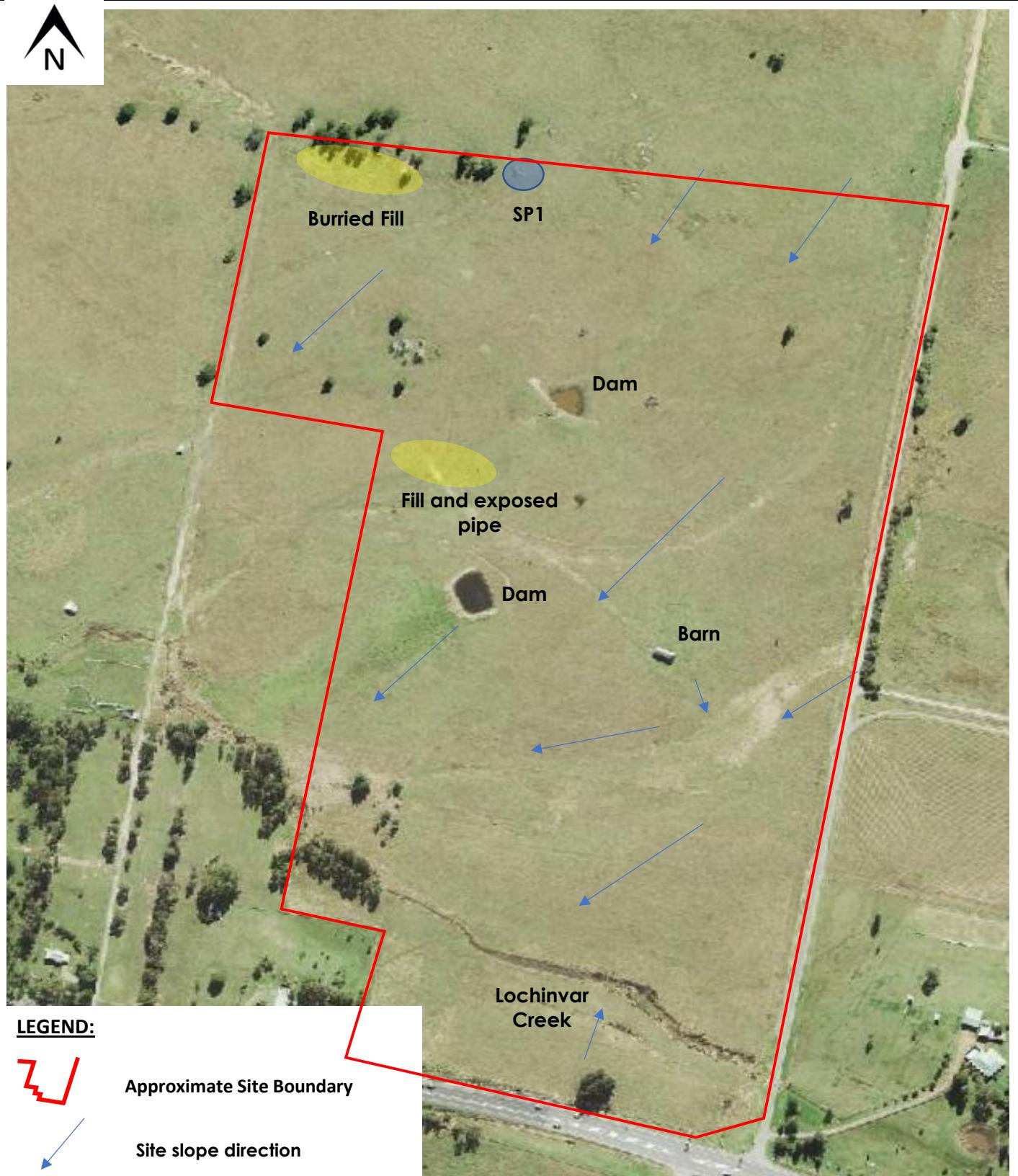
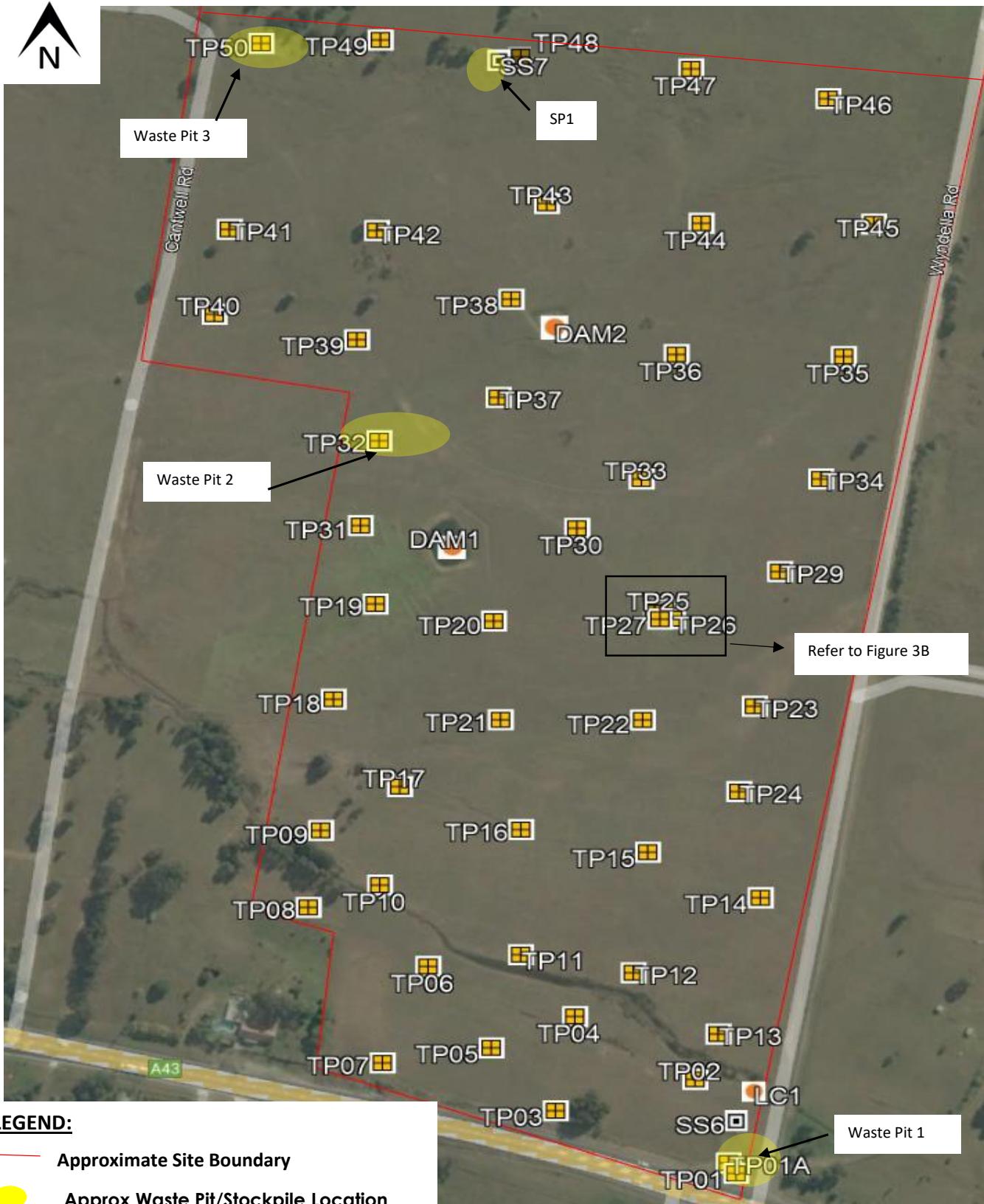


Image Sixmaps, image date 2021, accessed 5 November 2021

Qualtest LABORATORY (NSW) PTY LTD	Client: LINDSAY BENNELONG PTY LTD	Drawing No:	FIGURE 2
	Project: CONTAMINATION ASSESSMENT	Project No:	NEW22P-0012-AA
	Location: 898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale:	AS SHOWN
	Title: SITE FEATURES PLAN	Date:	18/02/2022

**LEGEND:**

— Approximate Site Boundary



Approx Waste Pit/Stockpile Location



Approx Test Pit Location



Approx Surface Soil Location

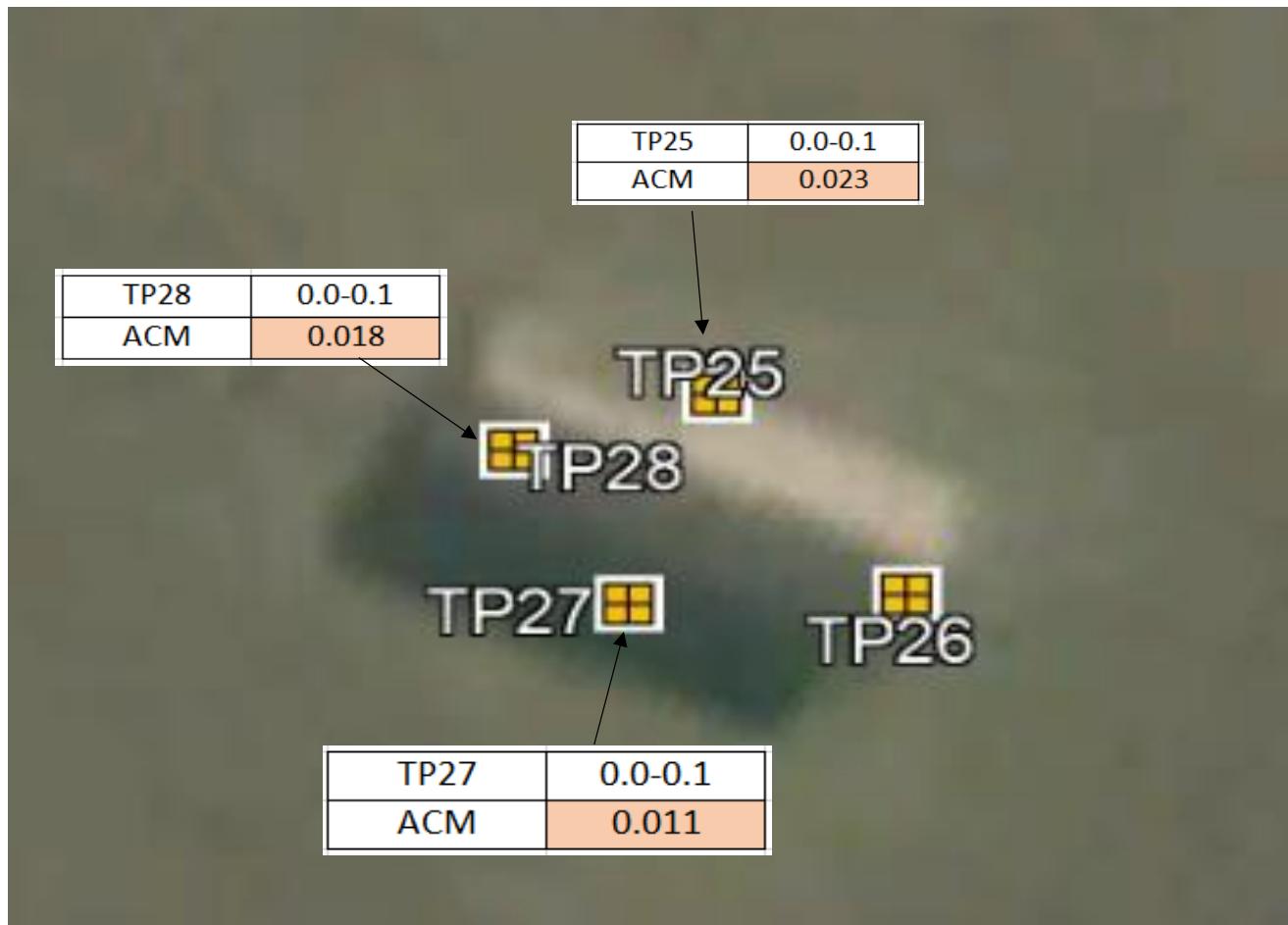


Approx Sed/Surface Water Location

Approx. Scale Bar

0 m 50m 100m

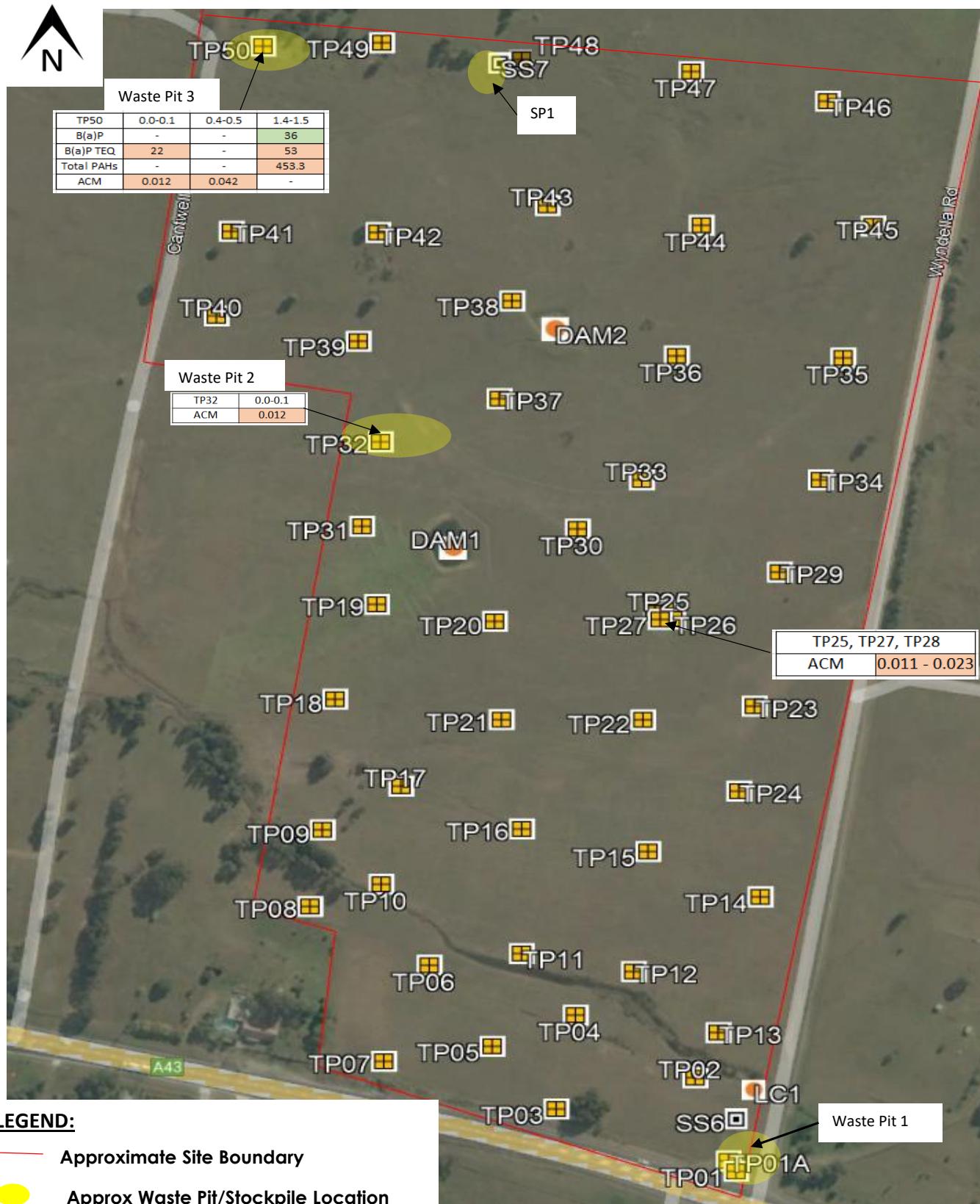
Client:	LOCHINVAR DEVELOPMENTS PTY LTD	Drawing No:	FIGURE 3A
Project:	CONTAMINATION ASSESSMENT	Project No:	NEW22P-0012-AA
Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale:	AS SHOWN
Title:	SAMPLING PLAN	Date:	22/02/2023



LEGEND:

Approx Test Pit Location

Location	Depth
Contaminant	mg/kg
Exceeds HIL/HSL	mg/kg
Exceeds EIL/ESL	mg/kg



Location	Depth
Contaminant	mg/kg
Exceeds HIL/HSL	mg/kg
Exceeds EIL/ESL	mg/kg

Qualtest LABORATORY (NSW) PTY LTD	Client: LOCHINVAR DEVELOPMENTS PTY LTD	Drawing No: FIGURE 3C
Project:	CONTAMINATION ASSESSMENT	Project No: NEW22P-0012-AA
Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale: AS SHOWN
Title:	SAMPLING EXCEEDANCE PLAN	Date: 22/02/2023

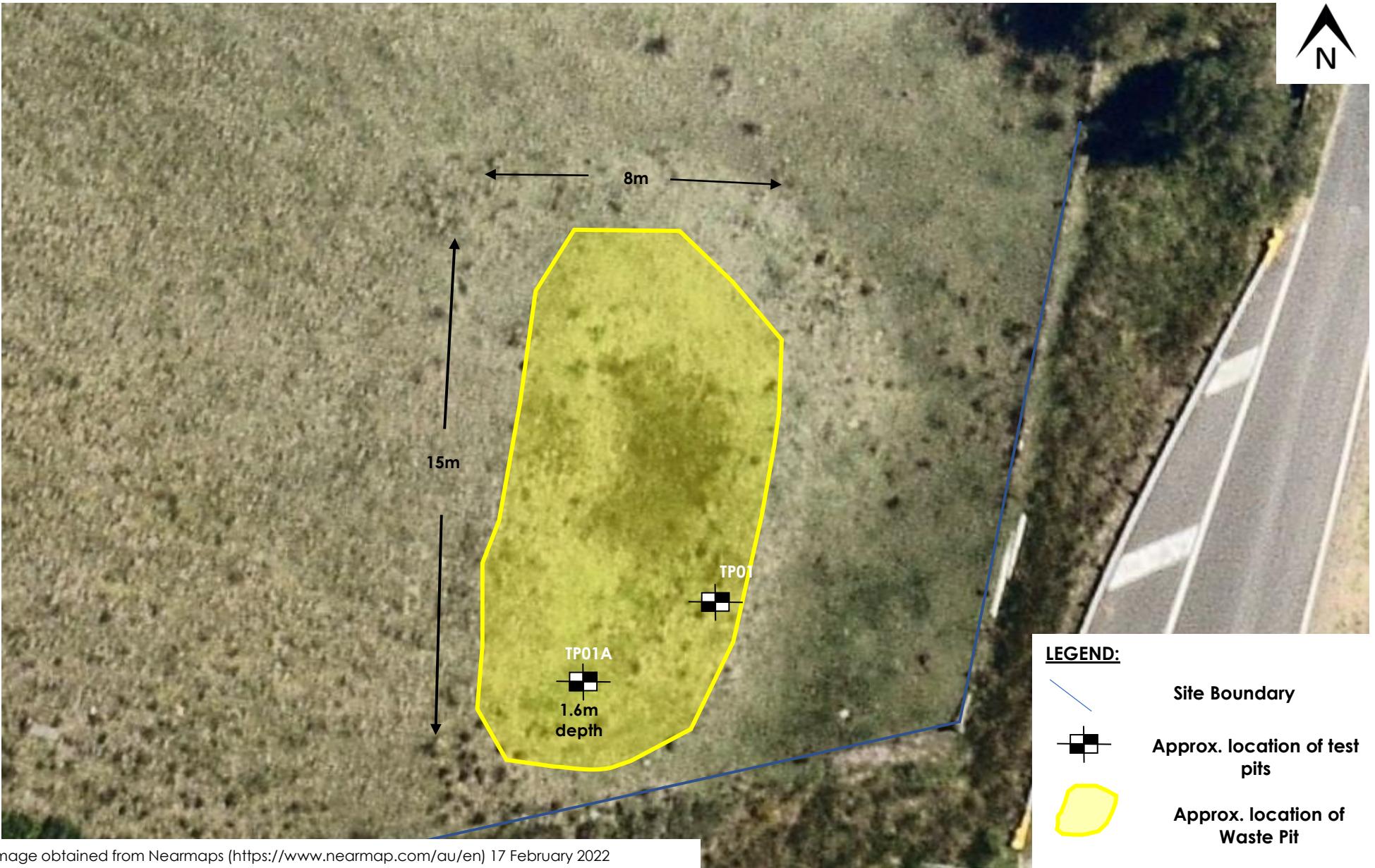
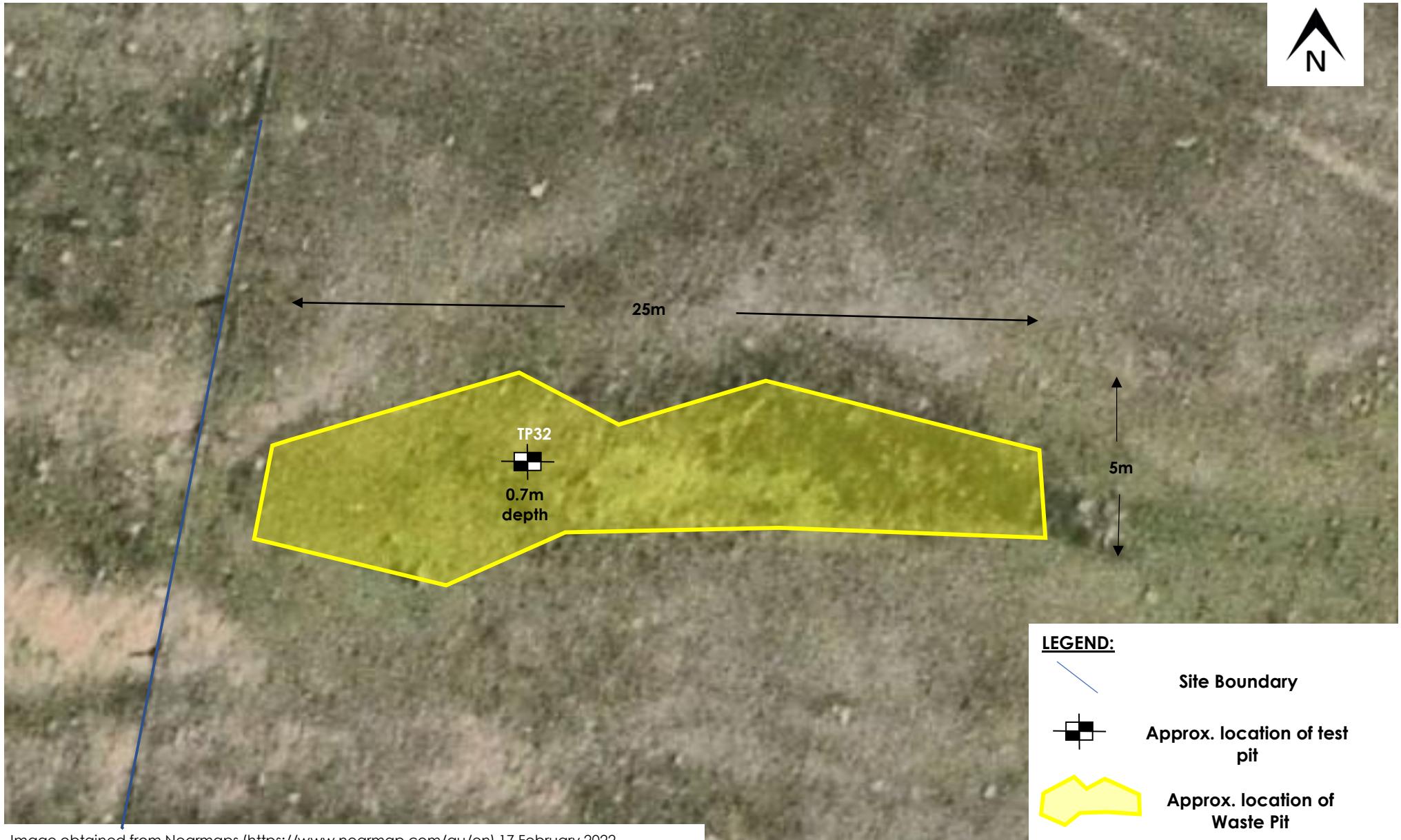


Image obtained from Nearmaps (<https://www.nearmap.com/au/en>) 17 February 2022

Client:	LOCHINVAR DEVELOPMENTS PTY LTD	Drawing No:	FIGURE 4A
Project:	DUE DILIGENCE ASSESSMENT	Project No:	NEW22P-0012-AA
Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale:	N.T.S.
Title:	WASTE PIT 1 - TP01/TP01A	Date:	17/02/2022



Client:	LOCHINVAR DEVELOPMENTS PTY LTD	Drawing No:	FIGURE 4B
Project:	DUE DILIGENCE ASSESSMENT	Project No:	NEW22P-0012-AA
Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale:	N.T.S.
Title:	WASTE PIT 2 - TP32	Date:	17/02/2022

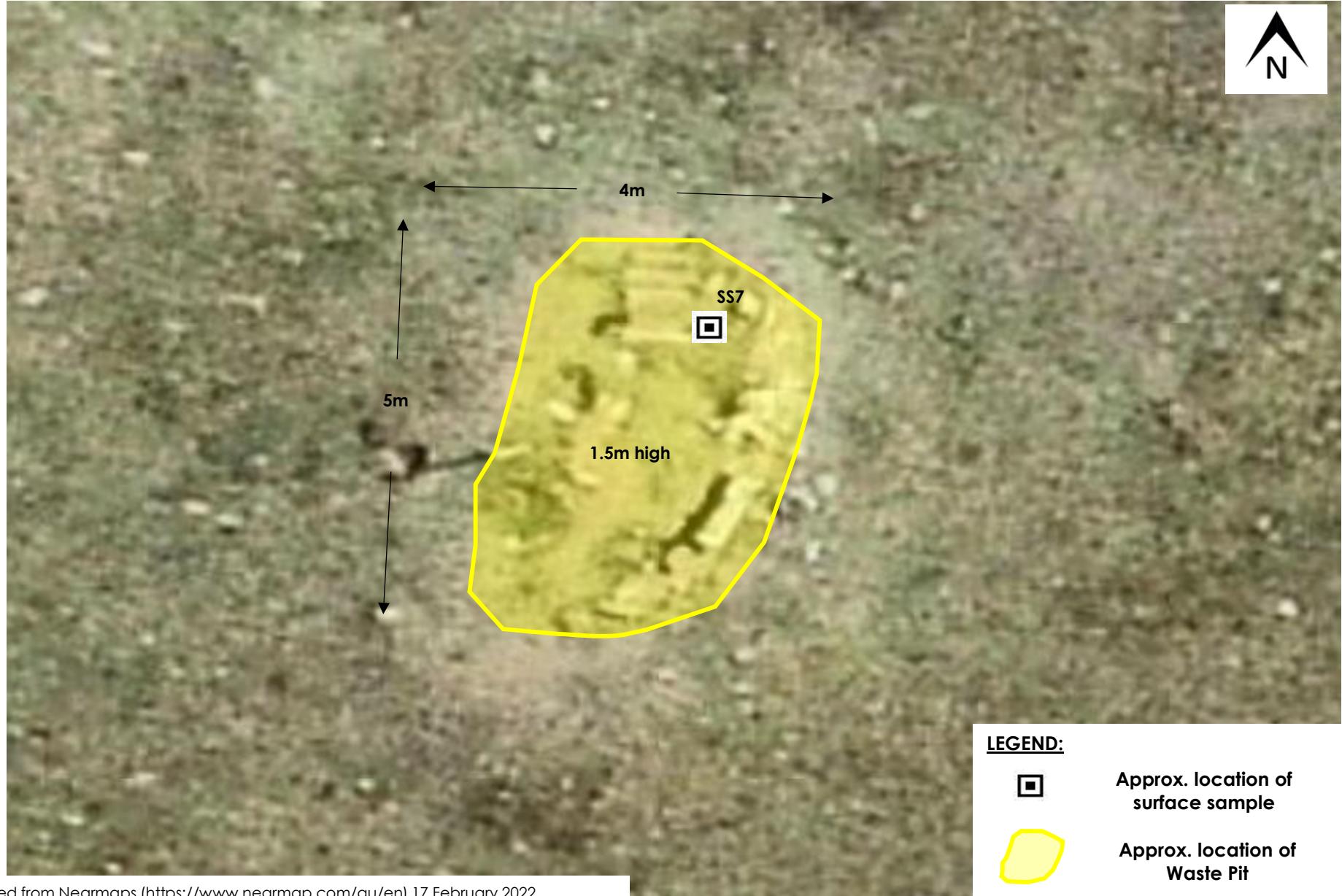


Image obtained from Nearmaps (<https://www.nearmap.com/au/en>) 17 February 2022

Client:	LOCHINVAR DEVELOPMENTS PTY LTD	Drawing No:	FIGURE 4C
Project:	DUE DILIGENCE ASSESSMENT	Project No:	NEW22P-0012-AA
Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale:	N.T.S.
Title:	STOCKPILE 1	Date:	17/02/2022

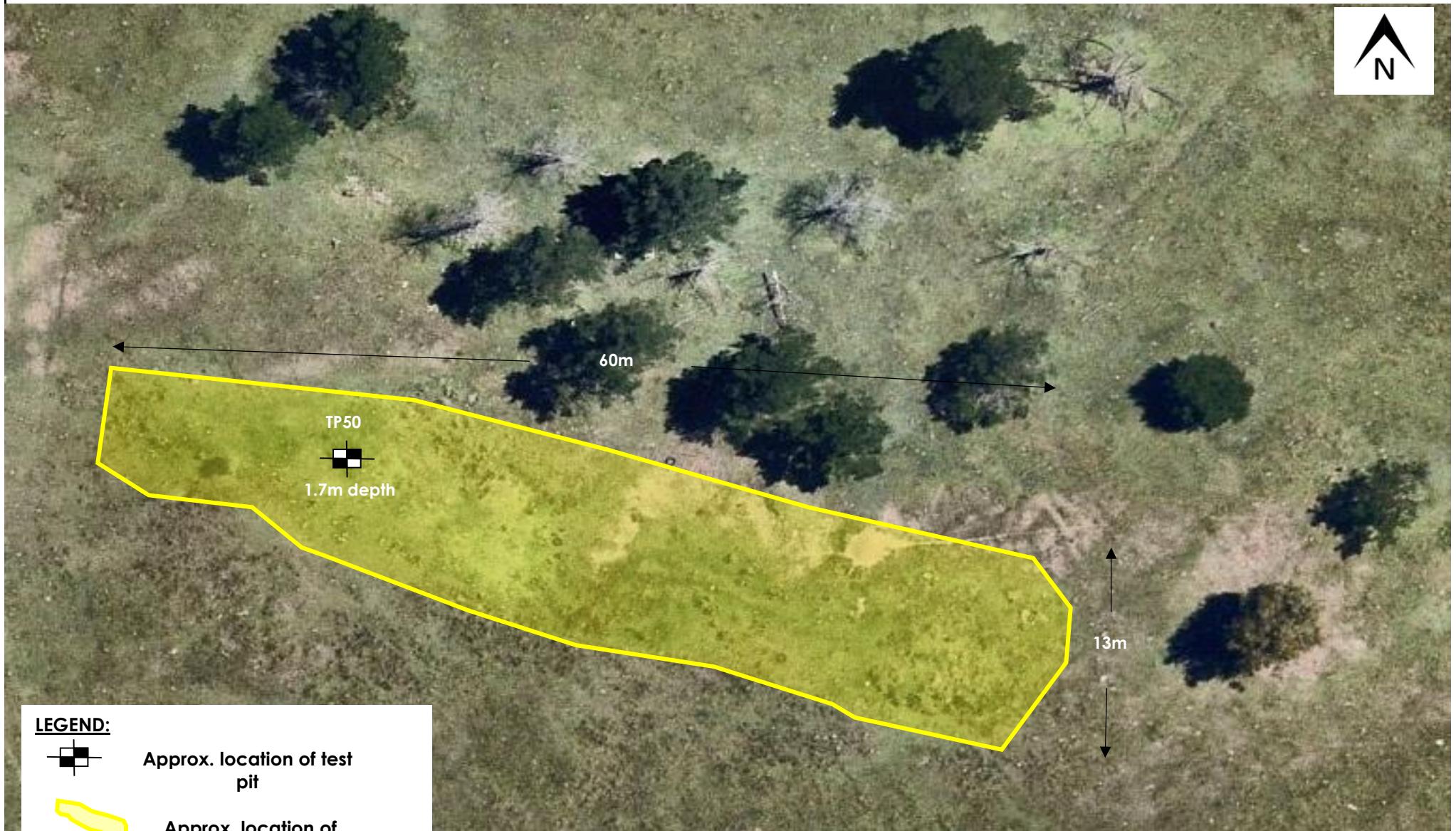
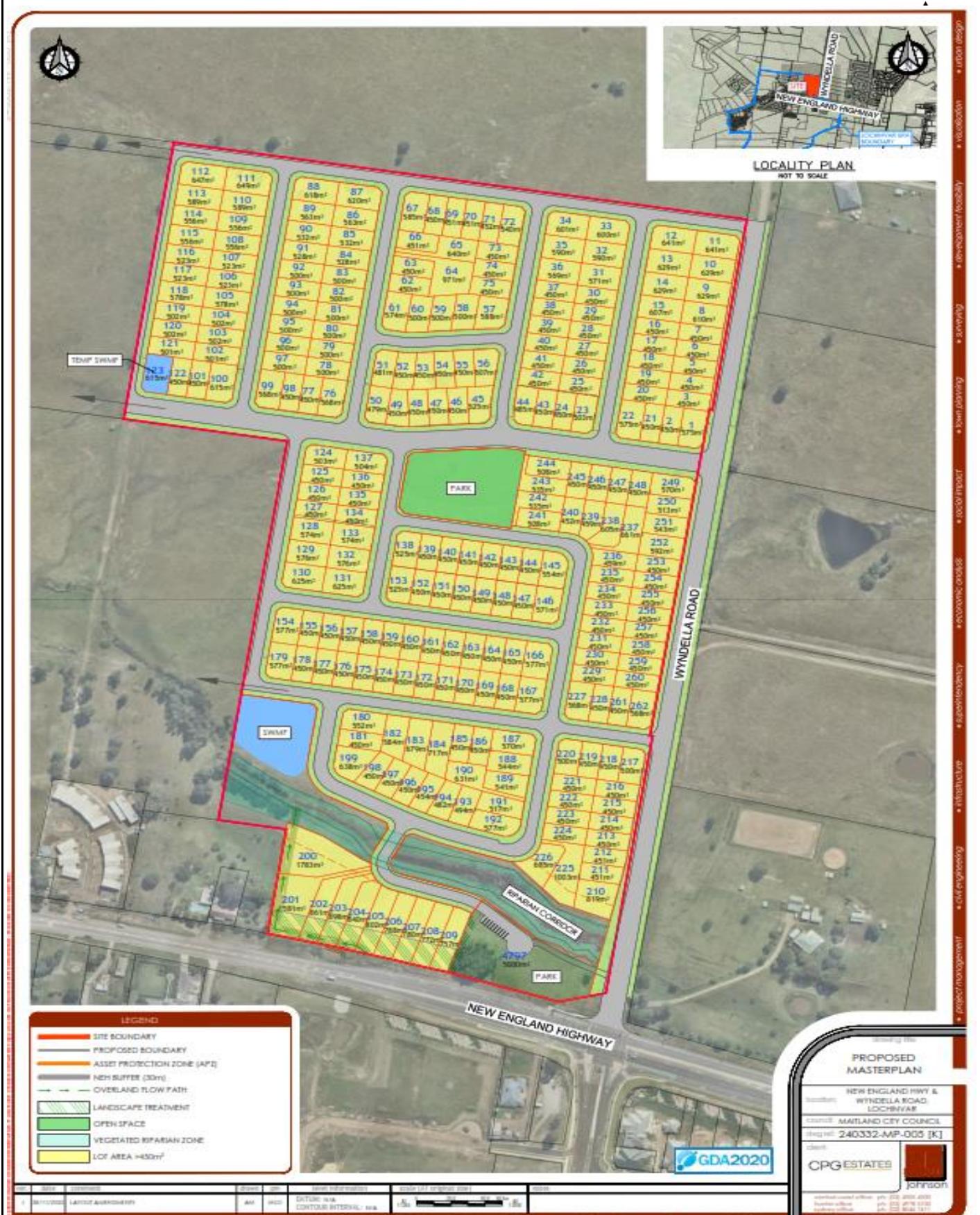


Image obtained from Nearmaps (<https://www.nearmap.com/au/en>) 17 February 2022

Client:	LOCHINVAR DEVELOPMENTS PTY LTD	Drawing No:	FIGURE 4D
Project:	DUE DILIGENCE ASSESSMENT	Project No:	NEW22P-0012-AA
Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale:	N.T.S.
Title:	WASTE PIT 3 - TP50	Date:	17/02/2022



Qualtest LABORATORY (NSW) PTY LTD	Client:	LOCHINVAR DEVELOPMENTS PTY LTD	Drawing No:	FIGURE 5
	Project:	CONTAMINATION ASSESSMENT	Project No:	NEW22P-0012-AA
	Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale:	AS SHOWN
	Title:	DRAFT PROPOSED SUBDIVISION LAYOUT	Date:	22/02/2023



N



N

LEGEND:



Former RMS Site Compound Location



Approx. Sampling Locations

Qualtest LABORATORY (NSW) PTY LTD	Client: LOCHINVAR DEVELOPMENTS PTY LTD	Drawing No: FIGURE 6	
Project:	CONTAMINATION ASSESSMENT	Project No:	NEW22P-0012-AA
Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR	Scale:	AS SHOWN
Title:	PREVIOUS ASSESSMENT SAMPLE LOCATION	Date:	25/11/2022

APPENDIX B:

Tables

			Field ID	TP01_0.0-0.1	TP01A_0.0-0.1	TP02_0.0-0.1	TP03_0.0-0.1	TP04_0.0-0.1	TP05_0.0-0.1	TP06_0.0-0.1	TP07_0.0-0.1	TP08_0.0-0.1	TP09_0.0-0.1	TP10_0.0-0.1	TP11_0.0-0.1	TP12_0.0-0.1	TP13_0.0-0.1	TP14_0.0-0.1	TP15_0.0-0.1
			Date	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	
Analytes		Units	LOR	HIL/HSL A ¹	EIL/ESL A ²														
pH & CEC	pH (1:5 Aqueous extract)	pH units	0.1			8	-	-	-	-	-	-	-	-	-	-	-	-	-
	Cation Exchange Capacity	meq/100g	0.05			28	-	-	-	-	-	-	-	-	-	-	-	-	-
Metals	Arsenic	mg/kg	2	100	100	5.6	6.3	2.3	5.5	< 2	5.9	2.5	3.7	2.1	2.6	2.7	4.2	4.5	3.1
	Cadmium	mg/kg	0.4	20		< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
	Chromium	mg/kg	5	100	730*	36	35	86	50	74	30	64	41	72	15	26	53	44	55
	Copper	mg/kg	5	6000	230*	15	18	33	7.7	25	5.5	24	13	26	< 5	8.2	12	7.6	13
	Lead	mg/kg	5	300	1100	35	120	14	22	11	29	18	26	11	13	15	16	18	23
	Mercury	mg/kg	5	40		< 0.1	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Nickel	mg/kg	5	400	230*	18	24	41	13	30	8.4	34	18	40	< 5	11	19	14	20
	Zinc	mg/kg	5	7400	690*	76	120	45	32	23	26	52	44	38	14	29	26	18	19
PAHs	Acenaphthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Acenaphthylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benz(a)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(a)pyrene	mg/kg	0.5		33**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(b&i)fluoranthene	mg/kg	0.5		3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(g.h.i)perylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Chrysene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dibenz(a,h)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Fluoranthene	mg/kg	0.5			< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Fluorene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Naphthalene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Phenanthrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Pyrene	mg/kg	0.5			< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Total PAH	mg/kg	0.5	300		< 0.5	1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BTEX	Benzene	mg/kg	0.1	0.5	65	< 0.1	< 0.1	-	-	-	-	-	-	-	-	< 0.1	-	-	< 0.1
	Toluene	mg/kg	0.1	160	105	< 0.1	< 0.1	-	-	-	-	-	-	-	-	< 0.1	-	-	< 0.1
	Ethylbenzene	mg/kg	0.1	55	125	< 0.1	< 0.1	-	-	-	-	-	-	-	-	< 0.1	-	-	< 0.1
	Xylenes - Total	mg/kg	0.3	40	45	< 0.3	< 0.3	-	-	-	-	-	-	-	-	< 0.3	-	-	< 0.3
TRH	Naphthalene	mg/kg	0.5	3	170	< 0.5	< 0.5	-	-	-	-	-	-	-	-	< 0.5	-	-	< 0.5
	TRH C6-C10	mg/kg	20		180	< 20	< 20	-	-	-	-	-	-	-	-	< 20	-	-	< 20
	TRH C6-C10 less BTEX (F1)	mg/kg	20	45		< 20	< 20	-	-	-	-	-	-	-	-	< 20	-	-	< 20
	TRH >C10-C16	mg/kg	50		120	< 50	< 50	-	-	-	-	-	-	-	-	< 50			

			Field ID	TP16_0.0-0.1	TP17_0.0-0.1	TP18_0.0-0.1	TP19_0.0-0.1	TP20_0.0-0.1	TP21_0.0-0.1	TP22_0.0-0.1	TP23_0.0-0.1	TP24_0.0-0.1	TP25_0.0-0.1	TP26_0.0-0.1	TP27_0.0-0.1	TP28_0.0-0.1	TP29_0.0-0.1	TP30_0.0-0.1	TP31_0.0-0.1		
			Date	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	3/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022			
Analytes		Units	LOR	HIL/HSL A ¹	EIL/ESL A ²																
pH & CEC	pH (1:5 Aqueous extract)	pH units	0.1			-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Cation Exchange Capacity	meq/100g	0.05			-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Metals	Arsenic	mg/kg	2	100	100	17	6.7	< 2	< 2	6.9	6.7	7.9	5.6	3.7	4.6	12	13	5.9	7.2	9.4	5.4
	Cadmium	mg/kg	0.4	20		< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	
	Chromium	mg/kg	5	100	730*	45	29	18	18	19	40	32	27	60	17	21	24	20	25	21	29
	Copper	mg/kg	5	6000	230*	< 5	6.6	< 5	12	< 5	13	8.2	23	35	21	22	20	6.4	< 5	6.2	
	Lead	mg/kg	5	300	1100	24	13	10	12	20	18	30	14	22	92	130	61	110	19	17	13
	Mercury	mg/kg	5	40		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.1	0.2	< 0.1	< 0.1	< 0.1
	Nickel	mg/kg	5	400	230*	7.3	8.7	5.2	5.7	< 5	8.1	8.1	9	43	16	6.5	43	8.8	7.5	5.7	10
	Zinc	mg/kg	5	7400	690*	29	31	14	33	20	26	44	37	75	1300	540	270	1100	25	22	25
PAHs	Acenaphthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Acenaphthylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Benz(a)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(a)pyrene	mg/kg	0.5		33**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(a)pyrene TEQ (medium bound)	mg/kg	0.6	3		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
	Benzo(b&i)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(g.h.i)perylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(k)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Chrysene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Dibenz(a,h)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Fluorene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Naphthalene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Phenanthrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Pyrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Total PAH	mg/kg	0.5	300		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
BTEX	Benzene	mg/kg	0.1	0.5	65	< 0.1	-	-	-	-	-	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-	
	Toluene	mg/kg	0.1	160	105	< 0.1	-	-	-	-	-	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-	
	Ethylbenzene	mg/kg	0.1	55	125	< 0.1	-	-	-	-	-	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-	
	Xylenes - Total	mg/kg	0.3	40	45	< 0.3	-	-	-	-	-	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	-</td	

Table 1 - Soil Analytical Results
898 New England Highway, Lochinvar, NSW

			Field ID	TP32_0.0-0.1	TP33_0.0-0.1	TP34_0.0-0.1	TP35_0.0-0.1	TP36_0.0-0.1	TP37_0.0-0.1	TP38_0.0-0.1	TP38_0.6-0.7	TP39_0.0-0.1	TP40_0.0-0.1	TP41_0.0-0.1	TP42_0.0-0.1	TP43_0.0-0.1	TP44_0.0-0.1	TP45_0.0-0.1	TP46_0.0-0.1		
			Date	4/02/2022	4/02/2022	4/02/2022	7/02/2022	7/02/2022	4/02/2022	7/02/2022	7/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	7/02/2022	7/02/2022	7/02/2022			
Analytes		Units	LOR	HIL/HSL A ¹	EIL/ESL A ²																
pH & CEC	pH (1:5 Aqueous extract)	pH units	0.1			-	-	-	-	-	-	-	-	-	5.6	-	-	-	-		
	Cation Exchange Capacity	meq/100g	0.05			-	-	-	-	-	-	-	-	-	3.9	-	-	-	-		
Metals	Arsenic	mg/kg	2	100	100	3.3	11	28	6	11	12	7.7	14	18	26	7.7	52	9	32	11	4.4
	Cadmium	mg/kg	0.4	20		< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	
	Chromium	mg/kg	5	100	730*	31	22	40	32	31	27	100	23	26	29	16	52	13	34	30	38
	Copper	mg/kg	5	6000	230*	25	6.8	6.2	8	< 5	< 5	11	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	7.4
	Lead	mg/kg	5	300	1100	96	16	24	11	16	15	14	16	21	15	9.7	19	8.5	24	16	16
	Mercury	mg/kg	5	40		0.4	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Nickel	mg/kg	5	400	230*	8.6	7.2	9.6	13	6.6	6	14	< 5	5.1	5.8	< 5	5.7	< 5	9.3	8.2	14
	Zinc	mg/kg	5	7400	690*	180	24	26	21	16	17	34	10	17	12	11	11	< 5	23	26	39
PAHs	Acenaphthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Acenaphthylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Benz(a)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(a)pyrene	mg/kg	0.5		33**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(a)pyrene TEQ (medium bound)	mg/kg	0.6	3		0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
	Benzo(b&i)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(g.h.i)perylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(k)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Chrysene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Dibenz(a,h)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Fluorene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Naphthalene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Phenanthrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Pyrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Total PAH	mg/kg	0.5	300		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
BTEX	Benzene	mg/kg	0.1	0.5	65	< 0.1	-	-	< 0.1	-	< 0.1	-	-	-	-	-	-	-	-	-	
	Toluene	mg/kg	0.1	160	105	< 0.1	-	-	< 0.1	-	< 0.1	-	-	-	-	-	-	-	-	-	
	Ethylbenzene	mg/kg	0.1	55	125	< 0.1	-	-	< 0.1	-	< 0.1	-	-	-	-	-	-	-	-	-	
	Xylenes - Total	mg/kg	0.3	40	45	< 0.3	-	-	< 0.3	-	< 0.3	-	-	-	-	-	-	-	-	-	
TRH	Naphthalene	mg/kg	0.5	3																	

			Field ID	TP47_0.0-0.1	TP48_0.0-0.1	TP49_0.0-0.1	TP50_0.0-0.1	TP50_0.4-0.5	TP50_0.9-1.0	TP50_1.4-1.5	SS7	SS8	SED1	SED2	SED3		
			Date	7/02/2022	7/02/2022	7/02/2022	7/02/2022	7/02/2022	7/02/2022	7/02/2022	7/02/2022	3/02/2022	3/02/2022	3/02/2022			
Analytes		Units	LOR	HIL/HSL A ¹	EIL/ESL A ²												
pH & CEC	pH (1:5 Aqueous extract)	pH units	0.1			-	-	-	-	-	-	-	-	-	-		
	Cation Exchange Capacity	meq/100g	0.05			-	-	-	-	-	-	-	-	-	-		
Metals	Arsenic	mg/kg	2	100	100	5.7	7.9	8.8	5.7	-	-	7.4	3.6	6.3	2.8	8.7	2.7
	Cadmium	mg/kg	0.4	20		< 0.4	< 0.4	< 0.4	< 0.4	-	-	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	
	Chromium	mg/kg	5	100	730*	14	13	13	39	-	-	39	32	14	25	29	66
	Copper	mg/kg	5	6000	230*	< 5	< 5	< 5	13	-	-	13	17	11	32	6.4	24
	Lead	mg/kg	5	300	1100	15	11	9.4	120	-	-	170	13	6	10	15	17
	Mercury	mg/kg	5	40		< 0.1	< 0.1	< 0.1	< 0.1	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
	Nickel	mg/kg	5	400	230*	5.4	< 5	< 5	18	-	-	20	31	12	15	6.9	40
	Zinc	mg/kg	5	7400	690*	18	14	13	110	-	-	130	47	36	86	30	60
PAHs	Acenaphthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	-	-	1	< 0.5	< 0.5	< 0.5	< 0.5	
	Acenaphthylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	2.6	-	-	6.3	< 0.5	< 0.5	< 0.5	< 0.5	
	Benz(a)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	11	-	-	28	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(a)pyrene	mg/kg	0.5		33**	< 0.5	< 0.5	< 0.5	15	-	-	36	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(a)pyrene TEQ (medium bound)	mg/kg	0.6	3		0.6	0.6	0.6	22	-	-	53	0.6	0.6	0.6	0.6	
	Benzo(b&i)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	11	-	-	28	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(g.h.i)perylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	9.7	-	-	23	< 0.5	< 0.5	< 0.5	< 0.5	
	Benzo(k)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	15	-	-	33	< 0.5	< 0.5	< 0.5	< 0.5	
	Chrysene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	13	-	-	32	< 0.5	< 0.5	< 0.5	< 0.5	
	Dibenz(a,h)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	2.2	-	-	5.6	< 0.5	< 0.5	< 0.5	< 0.5	
	Fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	39	-	-	99	< 0.5	< 0.5	< 0.5	< 0.5	
	Fluorene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	0.6	-	-	2.4	< 0.5	< 0.5	< 0.5	< 0.5	
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	9.9	-	-	24	< 0.5	< 0.5	< 0.5	< 0.5	
	Naphthalene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Phenanthrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	16	-	-	47	< 0.5	< 0.5	< 0.5	< 0.5	
	Pyrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	34	-	-	88	< 0.5	< 0.5	< 0.5	< 0.5	
	Total PAH	mg/kg	0.5	300		< 0.5	< 0.5	< 0.5	179	-	-	453.3	< 0.5	< 0.5	< 0.5	< 0.5	
BTEX	Benzene	mg/kg	0.1	0.5	65	-	-	-	< 0.1	-	-	-	-	< 0.1	-	< 0.1	
	Toluene	mg/kg	0.1	160	105	-	-	-	< 0.1	-	-	-	-	< 0.1	-	< 0.1	
	Ethylbenzene	mg/kg	0.1	55	125	-	-	-	< 0.1	-	-	-	-	< 0.1	-	< 0.1	
	Xylenes - Total	mg/kg	0.3	40	45	-	-	-	< 0.3	-	-	-	-	< 0.3	-	< 0.3	
TRH	Naphthalene	mg/kg	0.5	3	170	-	-	-	< 0.5	-	-	-	-	< 0.5	-	< 0.5	
	TRH C6-C10	mg/kg	20		180	-	-	-	< 20	-	-	-	-	< 20	-	< 20	
	TRH C6-C10 less BTEX (F1)	mg/kg	20	45		-	-	-	< 20	-	-	-	-	< 20	-	< 20	
	TRH >C10-C16	mg/kg	50		120	-	-	-	< 250	-	-	-	-	< 50	-	< 50	
	TRH >C10-C16 less Naphthalene (F2)	mg/kg	50	110		-	-	-	< 250	-	-	-	-	< 50	-	< 50	
	TRH >C16-C34	mg/kg	100		1300	-	-	-	730	-	-	-	-	< 100	-	< 100	
	TRH >C34-C40	mg/kg	100		5600	-	-	-	< 500	-	-	-	-	< 100	-	< 100	
Asbestos	Asbestos	-	-	Detect		-	-	ND	-	Detect^	Detect^	ND	ND	-	-	-	
OCP	DDT + DDE + DDD	mg/kg	0.05	240		-	-	-	-	-	-	-	-	-	-	-	
	Aldrin and Dieldrin (Total)*	mg/kg	0.05	6		-	-	-	-	-	-	-	-	-	-	-	
	Chlordane - Total	mg/kg	0.1	50		-	-	-	-	-	-	-	-	-	-	-	
	Endosulfan I	mg/kg	0.05	270		-	-	-	-	-	-	-	-	-	-	-	
	Endrin	mg/kg	0.05	10		-	-	-	-	-	-	-	-	-	-	-	
	Heptachlor	mg/kg	0.05	6		-	-	-	-	-	-	-	-	-	-	-	
	HCB	mg/kg	0.05	10		-	-	-	-	-	-	-	-	-	-	-	
	Methoxychlor	mg/kg	0.1	300		-	-	-	-	-	-	-	-	-	-	-	
	Total OCP	mg/kg	0.1			-	-										

Sample ID	Sample Date	ACM weight (g)	ACM weight (kg)	Soil density (kg/L)	Soil Volume (L)	Asbestos Content (%)	%w/w ACM in Soil	HSL-A - ACM	%w/w FA/AF in Soil	HSL-A - FA/AF
TP01A_0.0-0.1	3/02/2022	0	0	1.8	10	15	0.000	0.01	ND	0.001
TP25_0.0-0.1	4/02/2022	27	0.027	1.8	10	15	0.023	0.01	ND	0.001
TP26_0.0-0.1	4/02/2022	0	0	1.8	10	15	0.000	0.01	ND	0.001
TP27_0.0-0.1	4/02/2022	13	0.013	1.8	10	15	0.011	0.01	ND	0.001
TP28_0.0-0.1	4/02/2022	22	0.022	1.8	10	15	0.018	0.01	ND	0.001
TP32_0.0-0.1	4/02/2022	14	0.014	1.8	10	15	0.012	0.01	ND	0.001
TP50_0.0-0.1	4/02/2022	148	0.148	1.8	10	15	0.123	0.01	ND	0.001
TP50_0.4-0.5	4/02/2022	50	0.05	1.8	10	15	0.042	0.01	ND	0.001
TP50_0.9-1.0	4/02/2022	0	0	1.8	10	15	0.000	0.01	ND	0.001
TP50_1.4-1.5	4/02/2022	0	0	1.8	10	15	0.000	0.01	ND	0.001

Notes:

%w/w asbestos in soil calculated using: % asbestos content x bonded ACM (kg) / soil volume (L) x soil density (kg/L)

Result Exceeds adopted criteria

Criteria from ASC NEPM (2013) Table 7 - Health Screening Level (HSL) for Asbestos, Open Space Land Use

				Field ID	TP01_0.0-0.1	TP01A_0.0-0.1	TP02_0.0-0.1	TP03_0.0-0.1	TP04_0.0-0.1	TP05_0.0-0.1	TP06_0.0-0.1	TP07_0.0-0.1	TP08_0.0-0.1	TP09_0.0-0.1	TP10_0.0-0.1	TP11_0.0-0.1	TP12_0.0-0.1	TP13_0.0-0.1	TP14_0.0-0.1	
				Date	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022	3/02/2022		
Analytes		Units	LOR	General Solid Waste	Restricted Solid Waste	CT1	CT2													
Metals	Arsenic	mg/kg	2	100	400	5.6	6.3	2.3	5.5	< 2	5.9	2.5	3.7	2.1	2.6	2.7	4.2	4.5	3.1	2.3
	Cadmium	mg/kg	0.4	20	80	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
	Chromium	mg/kg	5	100	400	36	35	86	50	74	30	64	41	72	15	26	53	44	55	110
	Copper	mg/kg	5			15	18	33	7.7	25	5.5	24	13	26	< 5	8.2	12	7.6	13	15
	Lead	mg/kg	5	100	400	35	120	14	22	11	29	18	26	11	13	15	16	18	23	13
	Mercury	mg/kg	0.1	4	160	< 0.1	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Nickel	mg/kg	5	40		18	24	41	13	30	8.4	34	18	40	< 5	11	19	14	20	22
	Zinc	mg/kg	5			76	120	45	32	23	26	52	44	38	14	29	26	18	19	37
PAH	Acenaphthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Acenaphthylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benz(a)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	0.8	3.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(a)pyrene TEQ	mg/kg	0.6			0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	Benzo(b&j)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(g.h.i)perylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Chrysene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dibenz(a,h)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Fluoranthene	mg/kg	0.5			< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Fluorene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Naphthalene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Phenanthrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Pyrene	mg/kg	0.5			< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Total PAH*	mg/kg	0.5	200	800	< 0.5	1.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BTEX	Benzene	mg/kg	0.1	10	40	< 0.1	< 0.1	-	-	-	-	-	-	-	-	< 0.1	-	-	-	< 0.1
	Ethylbenzene	mg/kg	0.1	600	2400	< 0.1	< 0.1	-	-	-	-	-	-	-	-	< 0.1	-	-	-	< 0.1
	Toluene	mg/kg	0.1	288	1152	< 0.1	< 0.1	-	-	-	-	-	-	-	-	< 0.1	-	-	-	< 0.1
	Xylenes - Total	mg/kg	0.3	1000	4000	< 0.3	< 0.3	-	-	-	-	-	-	-	-	< 0.3	-	-	-	< 0.3
TRH	TRH C6-C9	mg/kg	20	650	2600	< 20	< 20	-	-	-	-	-	-	-	-	< 20	-	-	-	< 20
	TRH C10-C14	mg/kg	20			< 20	< 20	-	-	-	-	-	-	-	-	< 20	-	-	-	< 20
	TRH C15-C28	mg/kg	50			< 50	< 50	-	-	-	-	-	-	-	-	< 50	-	-	-	58
	TRH C29-C																			

			Field ID	TP15_0.0-0.1	TP16_0.0-0.1	TP17_0.0-0.1	TP18_0.0-0.1	TP19_0.0-0.1	TP20_0.0-0.1	TP21_0.0-0.1	TP22_0.0-0.1	TP23_0.0-0.1	TP24_0.0-0.1	TP25_0.0-0.1	TP26_0.0-0.1	TP27_0.0-0.1	TP28_0.0-0.1	TP29_0.0-0.1	TP30_0.0-0.1		
			Date	3/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022	3/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022			
Analytes		Units	LOR	General Solid Waste	Restricted Solid Waste	CT1	CT2														
Metals	Arsenic	mg/kg	2	100	400	4.9	17	6.7	< 2	< 2	6.9	6.7	7.9	5.6	3.7	4.6	12	13	5.9	7.2	9.4
	Cadmium	mg/kg	0.4	20	80	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	3.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
	Chromium	mg/kg	5	100	400	47	45	29	18	18	40	32	27	60	17	21	24	20	25	21	
	Copper	mg/kg	5	100	400	7.2	< 5	6.6	< 5	12	< 5	< 5	13	8.2	23	35	21	22	20	6.4	< 5
	Lead	mg/kg	5	100	400	19	24	13	10	12	20	18	30	14	22	92	130	61	110	19	17
	Mercury	mg/kg	0.1	4	160	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	0.1	0.2	< 0.1	< 0.1
	Nickel	mg/kg	5	40		16	7.3	8.7	5.2	5.7	< 5	8.1	8.1	9	43	16	6.5	43	8.8	7.5	5.7
	Zinc	mg/kg	5			15	29	31	14	33	20	26	44	37	75	1300	540	270	1100	25	22
PAH	Acenaphthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Acenaphthylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benz(a)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	0.8	3.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(a)pyrene TEQ	mg/kg	0.6			0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	Benzo(b&j)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(g.h.i)perylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Chrysene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dibenz(a,h)anthracene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Fluoranthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Fluorene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Naphthalene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Phenanthrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Pyrene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Total PAH*	mg/kg	0.5	200	800	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BTEX	Benzene	mg/kg	0.1	10	40	-	< 0.1	-	-	-	-	-	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	-	-
	Ethylbenzene	mg/kg	0.1	600	2400	-	< 0.1	-	-	-	-	-	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	-	-
	Toluene	mg/kg	0.1	288	1152	-	< 0.1	-	-	-	-	-	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	-	-
	Xylenes - Total	mg/kg	0.3	1000	4000	-	< 0.3	-	-	-	-	-	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	-	-
TRH	TRH C6-C9	mg/kg	20	650	2600	-	< 20	-	-	-	-										

Notes

Value	Result exceeds criteria for General Solid Waste without TCLP (CT1)
Value	Result exceeds criteria for Restricted Solid Waste without TCLP (CT2)
Value	Asbestos/Coal Tar Detected/Present

^a ACM visually observed and/or confirmed by laboratory testing

ND Not detected

Criteria from NSW EPA (2014) Waste Classification Guidelines, Table 1

Criteria from NSW EPA (2014) Waste Classification Guidelines, Table 1

				Field ID	TP48_0.0-0.1	TP49_0.0-0.1	TP50_0.0-0.1	TP50_0.4-0.5	TP50_0.9-1.0	TP50_1.4-1.5	SS6	SS7	SS8	SED1	SED2	SED3	
				Date	7/02/2022	7/02/2022	7/02/2022	7/02/2022	7/02/2022	7/02/2022	3/02/2022	7/02/2022	7/02/2022	3/02/2022	3/02/2022	3/02/2022	
Analytes		Units	LOR	General Solid Waste	Restricted Solid Waste	CT1	CT2										
Metals	Arsenic	mg/kg	2	100	400	7.9	8.8	5.7	-	-	7.4	5	3.6	6.3	2.8	8.7	2.7
	Cadmium	mg/kg	0.4	20	80	< 0.4	< 0.4	< 0.4	-	-	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
	Chromium	mg/kg	5	100	400	13	13	39	-	-	39	59	32	14	25	29	66
	Copper	mg/kg	5			< 5	< 5	13	-	-	13	17	17	11	32	6.4	24
	Lead	mg/kg	5	100	400	11	9.4	120	-	-	170	11	13	6	10	15	17
	Mercury	mg/kg	0.1	4	160	< 0.1	< 0.1	< 0.1	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Nickel	mg/kg	5	40		< 5	< 5	18	-	-	20	25	31	12	15	6.9	40
	Zinc	mg/kg	5			14	13	110	-	-	130	80	47	36	86	30	60
PAH	Acenaphthene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	-	-	1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Acenaphthylene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Anthracene	mg/kg	0.5			< 0.5	< 0.5	2.6	-	-	6.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benz(a)anthracene	mg/kg	0.5			< 0.5	< 0.5	11	-	-	28	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	0.8	3.2	< 0.5	< 0.5	15	-	-	36	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(a)pyrene TEQ	mg/kg	0.6			0.6	0.6	22	-	-	53	0.6	0.6	0.6	0.6	0.6	0.6
	Benzo(b&j)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	11	-	-	28	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(g.h.i)perylene	mg/kg	0.5			< 0.5	< 0.5	9.7	-	-	23	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(k)fluoranthene	mg/kg	0.5			< 0.5	< 0.5	15	-	-	33	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Chrysene	mg/kg	0.5			< 0.5	< 0.5	13	-	-	32	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dibenz(a.h)anthracene	mg/kg	0.5			< 0.5	< 0.5	2.2	-	-	5.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Fluoranthene	mg/kg	0.5			< 0.5	< 0.5	39	-	-	99	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Fluorene	mg/kg	0.5			< 0.5	< 0.5	0.6	-	-	2.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5			< 0.5	< 0.5	9.9	-	-	24	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Naphthalene	mg/kg	0.5			< 0.5	< 0.5	< 0.5	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Phenanthrene	mg/kg	0.5			< 0.5	< 0.5	16	-	-	47	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Pyrene	mg/kg	0.5			< 0.5	< 0.5	34	-	-	88	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Total PAH*	mg/kg	0.5	200	800	< 0.5	< 0.5	179	-	-	453.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BTEX	Benzene	mg/kg	0.1	10	40	-	-	< 0.1	-	-	-	-	-	< 0.1	-	< 0.1	
	Ethylbenzene	mg/kg	0.1	600	2400	-	-	< 0.1	-	-	-	-	-	< 0.1	-	< 0.1	
	Toluene	mg/kg	0.1	288	1152	-	-	< 0.1	-	-	-	-	-	< 0.1	-	< 0.1	
	Xylenes - Total	mg/kg	0.3	1000	4000	-	-	< 0.3	-	-	-	-	-	< 0.3	-	< 0.3	
TRH	TRH C6-C9	mg/kg	20	650	2600	-	-	< 20	-	-	-	-	-	< 20	-	< 20	
	TRH C10-C14	mg/kg	20			-	-	< 100	-	-	-	-	-	< 20	-	< 20	
	TRH C15-C28	mg/kg	50			-	-	510	-	-	-	-	-	< 50	-	< 50	
	TRH C29-C36	mg/kg	50			-	-	370	-	-	-	-	-	54	-	< 50	
	TRH C10-36 (Total)	mg/kg	50	10000	40000	-	-	880	-	-	-	-	-	54	-	< 50	
OCP	DDT + DDE + DDD	mg/kg	0.05			-	-	-	-	-	-	-	-	-	-	-	
	Aldrin and Dieldrin (Total)*	mg/kg	0.05			-	-	-	-	-	-	-	-	-	-	-	
	Chlordanes - Total	mg/kg	0.1			-	-	-	-	-	-	-	-	-	-	-	
	Endosulfan I	mg/kg	0.05	60	240	-	-	-	-	-	-	-	-	-	-	-	
	Endrin	mg/kg	0.05			-	-	-	-	-	-	-	-	-	-	-	
	Heptachlor	mg/kg	0.05			-	-	-	-	-	-	-	-	-	-	-	
	HCB	mg/kg	0.05			-	-	-	-	-	-	-	-	-	-	-	
	Methoxychlor	mg/kg	0.1			-	-	-	-	-	-	-	-	-	-	-	
	Total OCP	mg/kg	0.1	50	50	-	-	-	-	-	-	-	-	-	-	-	
Asbestos				Detect		ND	-	Detect^	Detect^	ND	ND	-	-	-	-	-	

Notes:

- Value Result exceeds criteria for General Solid Waste without TCLP (CT1)
- Value Result exceeds criteria for Restricted Solid Waste without TCLP (CT2)
- Value Asbestos/Coal Tar Detected/Present

[^] ACM visually observed and/or confirmed by laboratory testing

ND Not detected

<p

Analytes	Units	EQL	Aquatic Ecosystem ¹	Stockwatering ²	Irrigation ^{3##}	Field ID	DAM1	DAM2	LC1
						Date	3/02/2022	3/02/2022	3/02/2022
Metals	Arsenic	mg/L	5	0.013	0.5	20	0.003	0.004	0.002
	Cadmium	mg/L	0.1	0.0002	0.01	0.05	< 0.0002	< 0.0002	< 0.0002
	Chromium	mg/L	0.05	0.001	1	1	0.003	< 0.001	0.001
	Copper	mg/L	0.5	0.0014	0.0004	5	0.006	< 0.001	0.003
	Lead	mg/L	0.001	0.0034	0.1	5	0.002	0.001	< 0.001
	Mercury	mg/L	0.001	0.00006	0.002	0.002	< 0.0001	< 0.0001	< 0.0001
	Nickel	mg/L	0.001	0.011	1	2	0.003	0.004	0.004
	Zinc	mg/L	0.005	0.008	20	5	0.019	0.01	0.008
BTEX	Benzene	mg/L	0.001	0.95		< 0.001	< 0.001	< 0.001	
	Toluene	mg/L	0.001	0.180**		< 0.003	< 0.001	< 0.001	
	Ethylbenzene	mg/L	0.001	0.080**		< 0.001	< 0.001	< 0.001	
	Xylenes	mg/L	0.003	0.075**a		< 0.003	< 0.003	< 0.003	
	TRH C6-C9	mg/L	0.02			< 0.02	< 0.02	< 0.02	
TRH	TRH C10-C14	mg/L	0.05			0.11	0.07	< 0.05	
	TRH C15-C28	mg/L	0.1			0.5	0.4	< 0.1	
	TRH C29-C36	mg/L	0.1			0.2	0.1	< 0.1	
	TRH C10-36 (Total)	mg/L	0.1			0.81	0.57	< 0.1	
	Naphthalene	mg/L	0.01			< 0.01	< 0.01	< 0.01	
	TRH C6-C10	mg/L	0.02			< 0.02	< 0.02	< 0.02	
	TRH C6-C10 less BTEX (F1)	mg/L	0.02			< 0.02	< 0.02	< 0.02	
	TRH >C10-C16	mg/L	0.05			0.12	0.11	< 0.05	
PAHs	TRH >C10-C16 less Naphthalene (F2)	mg/L	0.05			0.12	0.11	< 0.05	
	TRH >C16-C34	mg/L	0.1			0.6	0.5	< 0.1	
	TRH >C34-C40	mg/L	0.1			< 0.1	< 0.1	< 0.1	
	Acenaphthene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Acenaphthylene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Anthracene	mg/L	0.001	0.00001**		< 0.001	< 0.001	< 0.001	
	Benz(a)anthracene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Benz(a)pyrene	mg/L	0.001	0.0001**		< 0.001	< 0.001	< 0.001	
	Benz(b)fluoranthene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Benz(g,h)perylene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Benz(k)fluoranthene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Chrysene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Dibenz(a,h)anthracene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Fluoranthene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Fluorene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Indeno(1,2,3-cd)pyrene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Naphthalene	mg/L	0.001	0.016		< 0.001	< 0.001	< 0.001	
	Phenanthrene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Pyrene	mg/L	0.001			< 0.001	< 0.001	< 0.001	
	Total PAH	mg/L	0.001			< 0.001	< 0.001	< 0.001	
OCP	4,4'-DDD	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	4,4'-DDDE	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	4,4'-DDT	mg/L	0.0001	0.006		< 0.0002	< 0.0002	< 0.0002	
	a-BHC	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	Aldrin	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	Dieldrin	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	b-BHC	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	Chlordane - Total	mg/L	0.001	0.03		< 0.002	< 0.002	< 0.002	
	d-BHC	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	Endosulfan I	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	Endosulfan II	mg/L	0.0001	0.03		< 0.0002	< 0.0002	< 0.0002	
	Endosulfan sulphate	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	Endrin	mg/L	0.0001	0.01		< 0.0002	< 0.0002	< 0.0002	
	Endrin aldehyde	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	Endrin ketone	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	g-BHC (Lindane)	mg/L	0.0001	0.2		< 0.0002	< 0.0002	< 0.0002	
	Heptachlor	mg/L	0.0001	0.01		< 0.0002	< 0.0002	< 0.0002	
	Heptachlor epoxide	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	Hexachlorobenzene	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	Methoxychlor	mg/L	0.0001			< 0.0002	< 0.0002	< 0.0002	
	Toxaphene	mg/L	0.01	0.1		< 0.005	< 0.005	< 0.005	

Notes:
 LOR exceeds adopted criteria
 ** Low reliability value - ANZECC (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality.
 a. Conservatively assumes xylene is p-xylene.
 ## Based on short-term trigger values (STV) - Short term use, up to 20 years
 1 ANZECC (2018) Australian and New Zealand Guidelines for Fresh and Marine Water Quality
 2 ANZECC (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Table 4.3.2
 3 ANZECC (2000) Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Tables 4.2.10 and 4.2.11

Analytes	Soil Units	LOR	Sample ID	TP01_0.0-0.1	D3.2.22	RPD %	TP01_0.0-0.1	T.3.2.22	RPD %	TP35_0.0-0.1	D.7.2.22	RPD %	TP35_0.0-0.1	T.7.2.22	RPD %	TP16_0.0-0.1	D.4.2.22	RPD %	TP16_0.0-0.1	T.4.2.22	RPD %	TP37_0.0-0.1	D1.4.2.22	RPD %	TP37_0.0-0.1	T.1.2.22	RPD %		
			Date	3/02/2022	3/02/2022		TP01_0.0-0.1	T.3.2.22 <th data-kind="ghost"></th> <th>TP35_0.0-0.1</th> <td>D.7.2.22<th data-kind="ghost"></th><th>TP35_0.0-0.1</th><td>T.7.2.22<th data-kind="ghost"></th><th>TP16_0.0-0.1</th><td>D.4.2.22<th data-kind="ghost"></th><th>TP16_0.0-0.1</th><td>T.4.2.22<th data-kind="ghost"></th><th>TP37_0.0-0.1</th><td>D1.4.2.22<th data-kind="ghost"></th><th>TP37_0.0-0.1</th><td>T.1.2.22<th data-kind="ghost"></th></td></td></td></td></td></td>		TP35_0.0-0.1	D.7.2.22 <th data-kind="ghost"></th> <th>TP35_0.0-0.1</th> <td>T.7.2.22<th data-kind="ghost"></th><th>TP16_0.0-0.1</th><td>D.4.2.22<th data-kind="ghost"></th><th>TP16_0.0-0.1</th><td>T.4.2.22<th data-kind="ghost"></th><th>TP37_0.0-0.1</th><td>D1.4.2.22<th data-kind="ghost"></th><th>TP37_0.0-0.1</th><td>T.1.2.22<th data-kind="ghost"></th></td></td></td></td></td>		TP35_0.0-0.1	T.7.2.22 <th data-kind="ghost"></th> <th>TP16_0.0-0.1</th> <td>D.4.2.22<th data-kind="ghost"></th><th>TP16_0.0-0.1</th><td>T.4.2.22<th data-kind="ghost"></th><th>TP37_0.0-0.1</th><td>D1.4.2.22<th data-kind="ghost"></th><th>TP37_0.0-0.1</th><td>T.1.2.22<th data-kind="ghost"></th></td></td></td></td>		TP16_0.0-0.1	D.4.2.22 <th data-kind="ghost"></th> <th>TP16_0.0-0.1</th> <td>T.4.2.22<th data-kind="ghost"></th><th>TP37_0.0-0.1</th><td>D1.4.2.22<th data-kind="ghost"></th><th>TP37_0.0-0.1</th><td>T.1.2.22<th data-kind="ghost"></th></td></td></td>		TP16_0.0-0.1	T.4.2.22 <th data-kind="ghost"></th> <th>TP37_0.0-0.1</th> <td>D1.4.2.22<th data-kind="ghost"></th><th>TP37_0.0-0.1</th><td>T.1.2.22<th data-kind="ghost"></th></td></td>		TP37_0.0-0.1	D1.4.2.22 <th data-kind="ghost"></th> <th>TP37_0.0-0.1</th> <td>T.1.2.22<th data-kind="ghost"></th></td>		TP37_0.0-0.1	T.1.2.22 <th data-kind="ghost"></th>			
			Type	Primary	Duplicate		7/02/2022	7/02/2022	Primary	Duplicate	7/02/2022	7/02/2022	Primary	Duplicate	4/02/2022	4/02/2022 <th data-kind="ghost"></th> <th>Primary</th> <th>Duplicate</th> <th data-kind="ghost"></th> <th>4/02/2022</th> <td>4/02/2022<th data-kind="ghost"></th><th>Primary</th><th>Duplicate</th><th data-kind="ghost"></th></td>		Primary	Duplicate		4/02/2022	4/02/2022 <th data-kind="ghost"></th> <th>Primary</th> <th>Duplicate</th> <th data-kind="ghost"></th>		Primary	Duplicate				
Metals	Arsenic	mg/kg	2	5.6	4.4	24	5.6	5	11	6	8.4	33	6	8	29	17	8.8	64	17	14	19	12	6	67	12	9	29		
	Cadmium	mg/kg	0.4	<0.4	<0.4	0	<0.4	<1	0	<0.4	<0.4	0	<0.4	<1	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<0.4	0	<0.4	<1	0		
	Chromium	mg/kg	5	36	40	11	36	34	6	32	30	6	32	31	3	45	29	43	45	39	14	27	23	16	27	19	35		
	Copper	mg/kg	5	15	12	22	15	14	7	8	0	8	11	32	<5	<5	0	<5	<5	0	<5	<5	0	<5	<5	0	<5	<5	0
	Lead	mg/kg	5	35	39	11	35	43	21	11	13	17	11	0	24	17	34	24	14	53	15	12	22	15	13	14			
	Mercury	mg/kg	5	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0	<0.1	<0.1	0		
	Nickel	mg/kg	5	18	17	6	18	18	0	13	12	8	13	14	7	5.5	28	7.3	6	20	6	5.2	14	6	4	40			
	Zinc	mg/kg	5	76	60	24	76	67	13	21	20	5	21	18	15	29	16	58	29	10	97	17	14	19	17	10	52		
PAHs	Acenaphthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Acenaphthylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Benz(a)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Benz(a)pyrene TEQ (medium bound)	mg/kg	0.6	0.6	0	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0	0.6	0.6	0		
	Benz(b&i)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Benz(g.h.i)perylene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Benz(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Chrysene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Dibenz(a.h)anthracene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Naphthalene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Phenanthrene	mg/kg	0.5	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0	<0.5	<0.5	0		
	Pyrene	mg/kg	0.5	<0.5	<0.5	0	&																						

Analytes	Water Units	Water LOR	DAM1			WD.3.2.22		RPD %	DAM1			TD.3.2.22		RPD %	WB.3.2.22		WB.4.2.22		WB.7.2.22		TB.3.2.22		TB.4.2.22		TB.7.2.22					
			4/02/2022		4/02/2022	4/02/2022			4/02/2022		4/02/2022	Primary			Triplicate		3/02/2022		4/02/2022		7/02/2022		3/02/2022		4/02/2022		7/02/2022			
			Primary		Duplicate																									
Metals	Arsenic	mg/L	0.001	0.003	0.002	40	0.003	0.002	40	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Cadmium	mg/L	0.0002	< 0.0002	< 0.0002	0	< 0.0002	< 0.0001	0	< 0.0002	< 0.0002	< 0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Chromium	mg/L	0.001	0.003	0.002	40	0.003	< 0.001	100	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Copper	mg/L	0.001	0.006	0.008	29	0.006	0.003	67	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Lead	mg/L	0.001	0.002	0.002	0	0.002	< 0.001	67	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Mercury	mg/L	0.0001	< 0.0001	< 0.0001	0	< 0.0001	< 0.0001	0	< 0.0001	< 0.0001	< 0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Nickel	mg/L	0.001	0.003	0.005	50	0.003	0.002	40	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PAHs	Zinc	mg/L	0.005	0.019	0.023	19	0.019	0.12	145	< 0.005	< 0.005	< 0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Acenaphthene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Acenaphthylene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Anthracene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Benz(a)anthracene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Benzo(a)pyrene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Benzo(a)pyrene TEQ (medium bound)	-	-	-	-	0	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Benzo(b&i;j)fluoranthene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Benzo(g.h.i)perylene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Benzo(k)fluoranthene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Chrysene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Dibenz(a.h)anthracene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fluoranthene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Fluorene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Indeno(1,2,3-cd)pyrene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Naphthalene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Phenanthrene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Pyrene	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	Total PAH	mg/L	0.001	< 0.001	< 0.001	0	< 0.001	< 0.001	0	< 0.001																				

APPENDIX C:

Groundwater Bore Search

ALL GROUNDWATER MAP

[bookmark this page](#)

All data times are Eastern Standard Time

Map Info

Info

Groundwater Bores

- Groundwater works
 - ◆ Telemetered bores
 - ▲ Logged bores
 - Manual bores

Monitoring Bore Types

- Aluvium*
 - Coastal Sands*
 - Fractured Rock*
 - Porous Rock*
 - Great Artesian Basin*
 - Discontinued*

Lochinvar, Newcastle-Maitland, Maitland City Council, New South Wales, 2321, Australia

Roadmap
Terrain
Satellite
Hybrid

- [Groundwater Works](#)
- [Monitoring Bores](#)
- [Telemetered Bores](#)
- [Coal Basin Bores](#)
- [Discontinued Bores](#)

三

There is 1 site within 500 metres of the selected point

GW06090

Cantwell
 Holy Trinity Anglican
Church, Lochinvar

St Joseph's Colleg

St Nicholas Early
Education Lochinv

St Patrick's
Primary School

100 m
200 ft

Scale = 1 : 3385

166021, 0, 3

Map data ©2021 Terms of Use Report a map error

APPENDIX D:

Historical Titles

ADVANCE LEGAL SEARCHERS PTY LTD

(ACN 147 943 842)

ABN 82 147 943 842

18/36 Osborne Road,
Manly NSW 2095

Mobile: 0412 169 809
Email: _search@alsearchers.com.au

18th February, 2021

QUALTEST PTY LTD
2 Murray Dwyer Circuit,
MAYFIELD WEST, NSW 2304

Attention: Libby Betz,

RE:

**Wyndella Road,
Lochinvar
Purchase Order NEW22P-0012**

Lot 13

DP 1219648

(page 4)

Current Search

Folio Identifier 13/1219648 (title attached)

DP 1219648 (plan attached)

Dated 18th February, 2022

Registered Proprietor:

THE TRUSTEES OF THE SISTERS OF ST. JOSEPH, MAITLAND

Title Tree Lot 13 DP 1219648

Folio Identifier 13/1219648

Folio Identifier 1/747391

PA 60097

Conveyance Book 2235 No 910

Conveyance Book 1680 No 380

Index

CN – Change of Name

T – Transfer

TA – Transmission Application

NM – Notice of Marriage

Conv - Conveyance

Summary of proprietor(s) Lot 13 DP 1219648

Year

Proprietor(s)

	(Lot 13 DP 1219648)	
16 Dec 2021– todate	The Trustees of the Sisters of St. Joseph, Maitland	CN
21 Sep 2016	The Trustees of the Sisters of St Joseph, Maitland	CN
08 Jun 2016	The Trustees of the Sisters of St. Joseph	
	(Lot 1 DP 747391)	
22 Aug 1988	The Trustees of the Sisters of St. Joseph	

	(Portions 24 to 29 Wyndella Estate & Part Portion 68 Parish Gosforth – Area 41 Acres 2 Roods 18 perches – Conv Bk 2235 No 910)	
01 Dec 1952	The Trustees of the Sisters of St. Joseph, Maitland	Conv
31 Mar 1947	Douglas Stewart Corner, business manager / executor Ian Macdonald Corner, grazier / executor Stewart Corner, estate	
	(Portions 24 to 29 Wyndella Estate & Part Portion 68 Parish Gosforth – Area 41 Acres 2 Roods 18 perches – Conv Bk 1680 No 380)	
17 Jan 1934	Stewart Corner, grazier	Conv
04 Aug 1912	Matilda Agnes White, the wife of William Burgess White, engineer / executrix Alfred Edward Brown, estate	

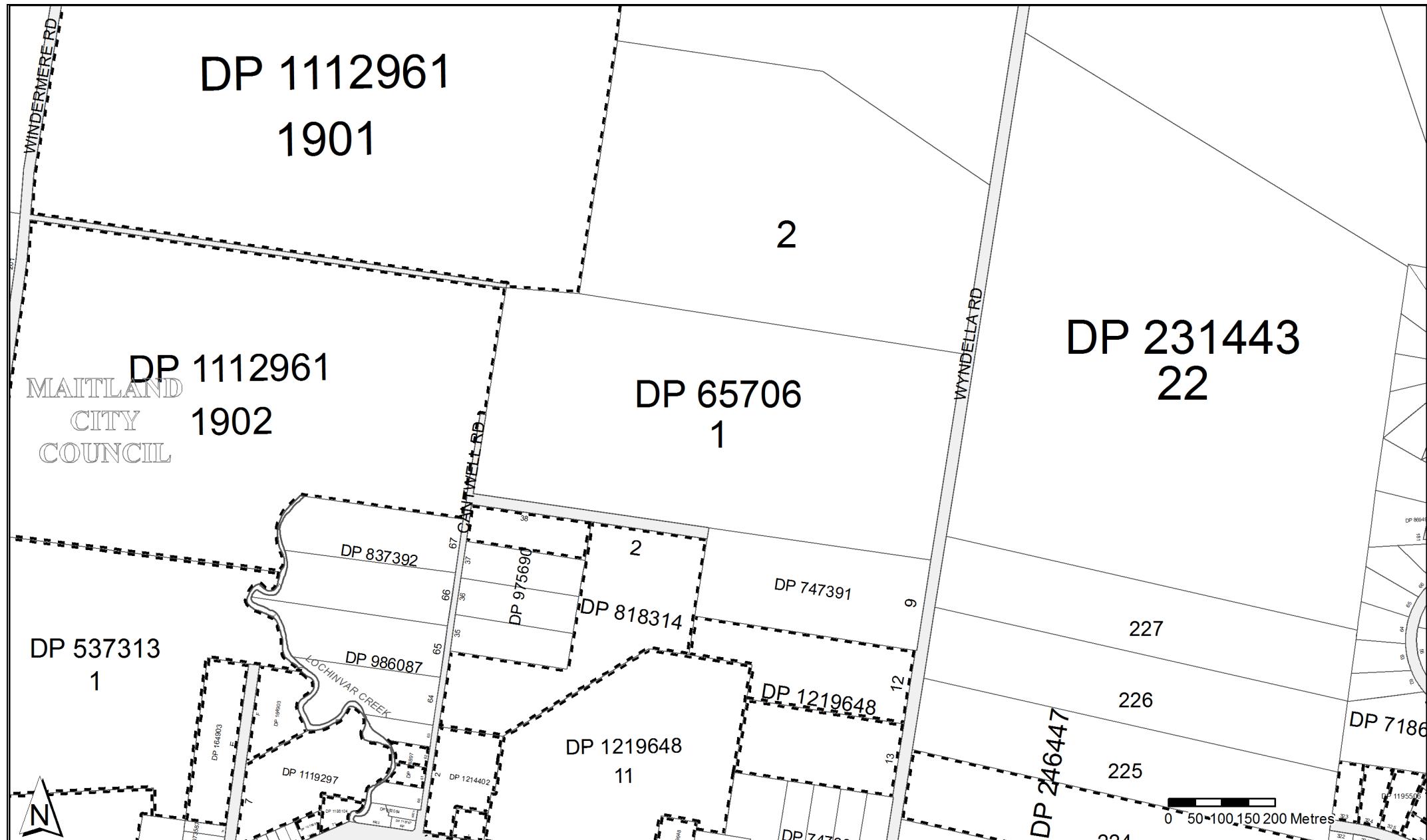


Locality : LOCHINVAR

LGA : MAITLAND

Parish : GOSFORTH

County : NORTHUMBERLAND



Locality : LOCHINVAR
Parish : GOSFORTH
LGA : MAITLAND
County : NORTHUMBERLAND

	Status	Surv/Comp	Purpose
DP164903 Lot(s): F  DP1271709	REGISTERED	SURVEY	EASEMENT
Lot(s): E, F  CA100660 - LOTS E AND F DP164903 AND LOT 7 DP1119297			
DP246447 Lot(s): 224  DP1137872	REGISTERED	SURVEY	EASEMENT
DP537313 Lot(s): 1  DP1271709	REGISTERED	SURVEY	EASEMENT
DP778897 Lot(s): 61, 62  DP1137872	REGISTERED	SURVEY	EASEMENT
DP818314 Lot(s): 2  DP1137872  DP1238395	REGISTERED REGISTERED	SURVEY SURVEY	EASEMENT EASEMENT
DP975690 Lot(s): 38  CA101910 - LOTS 35-38 DP975690			
DP1078888 Lot(s): 1000  DP38223	HISTORICAL	SURVEY	UNRESEARCHED
DP1112961 Lot(s): 1901, 1902  CA100805 - LOTS 1901-1902 DP1112961			
DP1119297 Lot(s): 7  DP1137872  DP1231521  DP1238396  DP1271709  CA100660 - LOTS E AND F DP164903 AND LOT 7 DP1119297	REGISTERED REGISTERED REGISTERED REGISTERED	SURVEY SURVEY SURVEY SURVEY	EASEMENT EASEMENT EASEMENT EASEMENT
DP1127416 Lot(s): 21  CA101455 - LOT 21 DP1127416			
DP1178548 Lot(s): 2021, 2022  DP621434  DP879391	HISTORICAL HISTORICAL	SURVEY SURVEY	SUBDIVISION SUBDIVISION
DP1186104 Lot(s): 71  DP1231521  NSW GAZ. 05-02-2016 ACQUIRED FOR THE PURPOSES OF THE HUNTER WATER ACT 1991 - LOT 71 DP1186104	REGISTERED	SURVEY	EASEMENT Folio : 145
DP1195506 Lot(s): 323, 324, 325, 326, 327, 328  DP136187  DP550026  DP1127197  DP1159523  DP1178574	HISTORICAL HISTORICAL HISTORICAL HISTORICAL HISTORICAL	COMPIRATION SURVEY SURVEY SURVEY SURVEY	DEPARTMENTAL SUBDIVISION CROWN FOLIO CREATION SUBDIVISION SUBDIVISION
DP1214402 Lot(s): 1, 2  DP1102770  CA101843 - LOT 1 DP1102770	HISTORICAL	COMPIRATION	LIMITED FOLIO CREATION

Caution: This information is provided as a searching aid only. Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For **ALL ACTIVITY PRIOR TO SEPTEMBER 2002** you must refer to the RGs Charting and Reference Maps.

Locality : LOCHINVAR
Parish : GOSFORTH
LGA : MAITLAND
County : NORTHUMBERLAND

	Status	Surv/Comp	Purpose
DP1219648			
Lot(s): 11			
 DP1229692	REGISTERED	SURVEY	EASEMENT
 DP1238395	REGISTERED	SURVEY	EASEMENT
 DP1240754	REGISTERED	SURVEY	EASEMENT
 CA101842 - LOT 2 DP1102770			
Lot(s): 11, 14			
 DP818314	HISTORICAL	SURVEY	SUBDIVISION
Lot(s): 11, 12, 13			
 DP747391	HISTORICAL	SURVEY	OLD SYSTEM CONVERSION
Road			
Polygon Id(s): 176789716			
 DP1257525	REGISTERED	SURVEY	SURVEY INFORMATION ONLY

Caution: This information is provided as a searching aid only. Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For **ALL ACTIVITY PRIOR TO SEPTEMBER 2002** you must refer to the RGs Charting and Reference Maps.

Plan	Surv/Comp	Purpose
DP38223	SURVEY	UNRESEARCHED
DP65706	SURVEY	UNRESEARCHED
DP164903	SURVEY	UNRESEARCHED
DP231443	SURVEY	SUBDIVISION
DP246447	SURVEY	SUBDIVISION
DP263829	SURVEY	SUBDIVISION
DP379508	SURVEY	UNRESEARCHED
DP537313	SURVEY	SUBDIVISION
DP718650	SURVEY	SUBDIVISION
DP718652	SURVEY	SUBDIVISION
DP718767	SURVEY	SUBDIVISION
DP741140	COMPILATION	DEPARTMENTAL
DP741330	COMPILATION	DEPARTMENTAL
DP747391	SURVEY	OLD SYSTEM CONVERSION
DP778897	COMPILATION	DEPARTMENTAL
DP785359	SURVEY	SUBDIVISION
DP818314	SURVEY	SUBDIVISION
DP837392	SURVEY	SUBDIVISION
DP869490	SURVEY	SUBDIVISION
DP879391	SURVEY	SUBDIVISION
DP882084	SURVEY	SUBDIVISION
DP975690	COMPILATION	UNRESEARCHED
DP986087	COMPILATION	DEPARTMENTAL
DP996026	COMPILATION	DEPARTMENTAL
DP1073587	COMPILATION	LIMITED FOLIO CREATION
DP1078888	COMPILATION	CONSOLIDATION
DP1112961	COMPILATION	LIMITED FOLIO CREATION
DP1119297	COMPILATION	LIMITED FOLIO CREATION
DP1127416	COMPILATION	LIMITED FOLIO CREATION
DP1178548	SURVEY	SUBDIVISION
DP1178548	SURVEY	SUBDIVISION
DP1186104	SURVEY	DELIMITATION
DP1195506	SURVEY	SUBDIVISION
DP1214402	COMPILATION	SUBDIVISION
DP1219648	SURVEY	SUBDIVISION

Caution: This information is provided as a searching aid only. Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For **ALL ACTIVITY PRIOR TO SEPTEMBER 2002** you must refer to the RGs Charting and Reference Maps.

Form: iOCN
 Licence: 01-05-069
 Licensee: LEAP Legal Software Pty Limited
 Firm name: Hulin Chadwick Lawyers

CHANGE OF NAME

New South Wales
 Real Property Act 1900



AK770740G

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the disclosure of information required by this form for the establishment and maintenance of the Real Property Register. This information is required to be made available to any person for search upon payment of a fee, if any.

(A) TORRENS TITLE	11/1219648, 12/1219648, 13/1219648 & 14/1219648		
(B) REGISTERED DEALING	Number	Torrens Title	
(C) LODGED BY	Document Collection Box BOX 582W	Name, Address or DX, Telephone and Customer Account Number if any SERVICE FIRST REGISTRATION DX 189 SYDNEY LLNP123426A Reference (optional): HULIN - MAITLAND	CODE CN
(D) REGISTERED PROPRIETOR	Whose name is to be changed; show the name as it currently appears on the Torrens Title The Trustees of the Sisters of St. Joseph		
(E) NEW NAME	Of the above registered proprietor in full The Trustees of St Joseph Maitland		

(F) The registered proprietor of the above land applies to have new name recorded in the Register in respect of that land and hereby consents to the Registrar General contacting the relevant issuing authorities to validate any supporting evidence lodged with this application.

(G) STATUTORY DECLARATION BY THE APPLICANT *

I SEE ANNEXURE A HERETO

solemnly and sincerely declare that -

1. I am identical with the registered proprietor referred to above;

2. on _____ at _____ in the _____
I married _____

3.

I make this solemn declaration conscientiously believing the same to be true and by virtue of the Oaths Act 1900, and I certify this application to be correct for the purposes of the Real Property Act 1900.

Made and subscribed at Maitland

in the State of New South Wales on

in the presence of

of

Justice of the Peace (J.P. Number:) Practising Solicitor

Other qualified witness [specify]

** who certifies that the following matters concerning the making of this statutory declaration by the person who made it:

1. I saw the face of the person OR I did not see the face of the person because the person was wearing a face covering, but I am satisfied that the person had a special justification for not removing the covering; and
2. I have known the person for at least 12 months OR I have confirmed the person's identity using an identification document and the document I relied on was _____ (omit ID No.)

Signature of witness:

Signature of applicant:

* As the services of a qualified witness cannot be provided at lodgement, the declaration should be signed and witnessed prior to lodgement. ** If made outside of NSW, cross out the witness certification. If made in NSW, cross out the text which does not apply.

(H) This section is to be completed where a notice of sale is required and the relevant data has been forwarded through eNOS.

The applicant's agent certifies that the eNOS data relevant to this dealing has been submitted and stored under

eNOS ID No. Full name: Earl Hulin Signature:

STATUTORY DECLARATION

We, **MEGAN PATRICIA BROCK** and **MARIE THERESE HUGHES** both of St Joseph's Convent, 50 New England Highway, Lochinvar in the State of New South Wales, Religious Sisters do solemnly and sincerely declare as follows:

1. We are authorised to make this declaration on behalf of **The Trustees of the Sisters of St Joseph Maitland ("The Sisters")** in accordance with our appointment as Trustee members pursuant to the Deed of Appointment, copy annexed hereto and marked "1".
2. Annexed hereto and marked "2" is a copy of Schedule 2 to the Roman Catholic Church Communities Land Act 1942 which sets out the correct name of our Religious Order, namely *The Trustees of the Sisters of St Joseph Maitland*.
3. The title to Lots 11, 12, 13 & 14 In DP1219648 is in the incorrect name and should correctly bear the proper description of our Order "*The Trustees of the Sisters of St Joseph Maitland*".

And we make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1900.

SUBSCRIBED AND DECLARED on)
the 20th day of September 2016 at)
Maitland)

Megan Patricia Brock

Megan Patricia Brock
Marie Therese Hughes

Marie Therese Hughes

in the presence of an authorised witness, who states:

I, **Earl Hulin** of Suite 2, 15-17 Church Street, Maitland in the State of New South Wales, Solicitor do certify the following matters concerning the making of this statutory declaration by the person who made it:

1. I saw the faces of the people.
2. I have known the people for at least 12 months.

E. Hulin

Signature of authorised witness

Phone (02) 4930 9650
Fax (02) 4930 7173
Email: office@ssjl.org.au



CONGREGATIONAL OFFICES
St Joseph's Convent
New England Highway
LOCHINVAR NSW 2321

THE TRUSTEES OF THE SISTERS OF ST. JOSEPH MAITLAND

a Body Corporate by virtue of Section 4 of the
Roman Catholic Church Communities Lands Act, 1942

HEREBY AUTHORISE

Sister Megan Brock, Congregational Leader, Trustee, Member

Sister Mary Jeannine French, Trustee, Member

Sister Carmel Hanson, Trustee, Member

Sister Marie Hughes, Trustee, Member

Sister Dorothy Woodward, Trustee, Member

both jointly and severally as its servants or agents and each of them as its servant or agent for the purpose of exercising the powers contained and referred to in Section 10 (i)(a), (ii) and (iii) of the said Act.

Dated this sixth day of January, 2014.

The Common Seal of THE TRUSTEES
OF THE SISTERS OF ST JOSEPH,
MAITLAND is hereunto affixed to this
instrument on the date abovementioned
and signed by the Congregational Leader
and four other members of the Body Corporate.

Specimen Signature

Sr Megan Brock

M. Brock

I CERTIFY THIS IS A TRUE AND
CORRECT COPY OF THE ORIGINAL

Sr Mary Jeannine French

M. French

JOHN WHITTLE
JUSTICE OF THE PEACE
Registration No 122859

Sr Carmel Hanson

C. Hanson

Sr Marie Hughes

M. Hughes

Sr Dorothy Woodward

D. Woodward



New South Wales Consolidated Acts

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ROMAN CATHOLIC CHURCH COMMUNITIES' LANDS ACT 1942 - SCHEDULE 2

SCHEDULE 2

(Sections 2, 4 and 8)

Column 1	Column 2
(Canonical Name)	(Corporate Name)
The Franciscan Missionaries of Mary.	Trustees of the Franciscan Missionaries of Mary.
The Society of the Sacred Heart of Jesus.	Trustees of the Society of the Sacred Heart of Jesus.
The Congregation of Our Lady of Charity of the Good Shepherd.	Trustees of the Sisters of the Good Shepherd.
The Missionary Oblates of Mary Immaculate.	Trustees of the Missionary Oblates of Mary Immaculate.
The Congregation of the Brothers of St. Patrick.	Trustees of the Patrician Brothers.
The Society of Jesus.	The Trustees of the Jesuit Fathers.
The Sisters of Saint Joseph of California (Greenwich).	Trustees of the Sisters of Saint Joseph of California (Greenwich).
The Congregation of the Little Sisters of the Poor.	Trustees of the Little Sisters of the Poor.
The Ursuline Nuns of the Roman Union of Ursuline.	Trustees of the Ursuline Nuns of the Roman Union of Ursuline.
Poor Clares.	Trustees of the Poor Clares.
The Congregation of the Presentation Sisters of Lismore.	The Trustees of the Presentation Sisters, Diocese of Lismore.
The Fathers of the Congregation of the Most Holy Redeemer.	Trustees of the Redemptorist Fathers.
The Daughters of Our Lady of Compassion (Broken Hill).	The Mother Aubert Home of Compassion Trust Board.
The Order of Capuchin Friars Minor.	Trustees of the Order of Capuchin Friars Minor.
The Superior Council of Australia of the Society of St. Vincent de Paul.	Society of St. Vincent de Paul, National Council of Australia.
The Amalgamated Sisters of Mercy, Diocese of Wilcannia-Forbes.	Trustees of the Amalgamated Sisters of Mercy, Diocese of Wilcannia-Forbes.
The Sisters of Mercy, Broken Hill.	Trustees of the Sisters of Mercy, Broken Hill.

The Sisters of Mercy, Gunnedah.	Trustees of the Sisters of Mercy, Gunnedah.
The Sisters of Mercy, Goulburn and Amalgamated Houses.	The Sisters of Mercy, Goulburn and Amalgamated Houses.
The Sisters of Mercy, Singleton.	The Trustees of the Sisters of Mercy (Singleton).
The Congregation of the Presentation Sisters, Wagga.	The Trustees of the Presentation Sisters, Wagga.
Hospitaller Brothers of St. John of God.	The Trustees of the Hospitaller Brothers of St. John of God.
The Blessed Sacrament Fathers.	The Trustees of the Blessed Sacrament Fathers.
The Sisters of Saint Joseph of Goulburn.	The Trustees of the Sisters of Saint Joseph of Goulburn.
The Sisters of St. Joseph of Maitland.	The Trustees of the Sisters of St. Joseph, Maitland.
The Order of the Hermits of St Augustine in Australasia.	The Trustees of the Order of Hermits of St. Augustine in Australasia.
The Franciscan Order of Friars Minor.	The Trustees of the Franciscan Fathers.
Society of the Divine Word.	Trustees of the Society of the Divine Word.
Society of St. Paul.	Society of St. Paul.
The Society of the Catholic Apostolate.	The Trustees of the Society of the Catholic Apostolate.
Sylvestrine Congregation of the Order of Saint Benedict.	The Trustees of the Sylvestrine Benedictine Monks.
The Congregation of the Adorers of the Most Sacred Heart of Jesus of Montmartre.	Trustees of the Benedictine Adorers of the Sacred Heart (Australia).
Sisters of the Holy Family of Nazareth.	Trustees of the Sisters of the Holy Family of Nazareth.
Daughters of Charity of Saint Vincent de Paul.	Trustees of the Daughters of Charity of Saint Vincent de Paul.
Congregation of the Marist Sisters.	Trustees of the Congregation of the Marist Sisters.
Carmelite Fathers.	Trustees of the Carmelite Fathers.
The Sisters of St. John of God.	The Sisters of St. John of God.
Missionary Sisters of the Society of Mary.	The Trustees of the Missionary Sisters of the Society of Mary.
The Daughters of Saint Paul.	Trustees of the Daughters of Saint Paul.
Pious Society of St. Charles.	Trustees of the Pious Society of St. Charles.
The Marist Brothers of the Schools, Southern Province.	The Trustees of the Marist Brothers, Southern Province.
Franciscan Order of Friars Minor Conventual.	Trustees of the Order of Friars Minor Conventual.
Secular Institute of the Schoenstatt Sisters of Mary.	The Trustees of the Secular Institute of the Schoenstatt Sisters of Mary.

Society of St. Francis of Sales.	The Salesian Society Incorporated.
Franciscan Sisters of Mercy of Luxembourg.	The Trustees of the Franciscan Sisters of Mercy of Luxembourg.
Congregation of the Sisters of Nazareth.	The Trustees of the Sisters of Nazareth.
Sisters Pious Disciples of the Divine Master.	The Trustees of the Sisters Pious Disciples of the Divine Master.
Eparchy of St Peter and Paul of Melbourne for Ukrainian Catholics in Australia, New Zealand and Oceania.	Trustees of the Ukrainian Catholic Church in Australia, Eparchy of St Peter and Paul of Melbourne.
The Institute of the Blessed Virgin Mary.	Trustees of the Loreto Property Association.
Society of Christ.	Trustees of the Society of Christ.
Hungarian Catholic Community of New South Wales.	Trustees of the Hungarian Catholic Community of New South Wales.
The Discalced Nuns of the Order of Our Blessed Lady of Mount Carmel, Lismore.	Trustees of the Discalced Carmelite Nuns, Lismore.
The Discalced Carmelite Fathers.	The Trustees of the Discalced Carmelite Fathers.
Order of the Most Holy Redeemer.	Trustees of the Redemptoristine Nuns.
The Poor Clare Colletines.	Trustees of the Poor Clare Colletines.
Catholic Secondary Schools' Association of New South Wales and Australian Capital Territory.	Catholic Secondary Schools' Association of New South Wales and Australian Capital Territory.
The Daughters of Mary Help of Christians.	The Trustees of the Daughters of Mary Help of Christians.
Schoenstatt Fathers.	The Secular Institute of Schoenstatt Fathers.
The Order of the Congregation of the Sisters of Perpetual Adoration of the Most Blessed Sacrament.	The Trustees of the Sisters of Perpetual Adoration of the Most Blessed Sacrament.
The Society of Christian Doctrine.	The Trustees of the Society of Christian Doctrine.
The Maronite Sisters of the Holy Family.	The Trustees of the Maronite Sisters of the Holy Family.
The Nuns of the Order of St. Benedict.	The Trustees of the Benedictine Abbey Jamberoo.
The Franciscan Sisters of the Heart of Jesus.	The Trustees of the Franciscan Sisters of the Heart of Jesus.
The Sisters of the Dominican Third Order Regular of Malta.	The Sisters of the Dominican Third Order Regular of Malta.
Metropolitan Central Council of the Society of St. Vincent de Paul.	The Trustees of the Society of St. Vincent de Paul (NSW).
Congregation of the Sisters of the Blessed Virgin Mary under title of Help of Christians of Sydney.	The Trustees of the Sisters of Our Lady Help of Christians (Sydney).
Board of Management, Clergy Remuneration and Retirement, Archdiocese of Sydney.	

	The Trustees of the Board of Management, Clergy Remuneration and Retirement, Archdiocese of Sydney.
The Lebanese Maronite Order.	Trustees of the Lebanese Maronite Order.
The Legion of Mary Senatus of Sydney.	Trustees of the Legion of Mary Senatus of Sydney.
The Missionary Sisters of the Blessed Virgin Mary, Queen of the World.	Trustees of the Missionary Sisters of the Blessed Virgin Mary, Queen of the World.
The Maronite Church of Australia.	The Trustees of the Maronite Church of Australia.
Institute of Sisters of Mercy of Australia.	Trustees of the Institute of Sisters of Mercy of Australia.
The Order of Saint Paul the First Hermit.	The Trustees of the Pauline Fathers and Brothers.
The Sisters of St. Paul de Chartres.	Trustees of the Sisters of St. Paul de Chartres.
The Congregation of Sisters Adorers of the Blood of Christ.	The Trustees of the Sisters Adorers of the Blood of Christ.
The Sisters of Our Lady of China.	Trustees of the Sisters of Our Lady of China.
The Missionary Sisters Oblates of the Holy Family.	Trustees of The Missionary Sisters Oblates of the Holy Family.
Board of Management, Clergy Remuneration and Retirement, Diocese of Broken Bay.	The Trustees of the Board of Management, Clergy Remuneration and Retirement, Diocese of Broken Bay.
Board of Management, Clergy Remuneration and Retirement, Diocese of Parramatta.	The Trustees of the Board of Management, Clergy Remuneration and Retirement, Diocese of Parramatta.
Roman Catholic Province of Sydney and Archdiocese of Canberra and Goulburn.	The Trustees of the Province of Sydney and Archdiocese of Canberra and Goulburn.
Manly Union.	The Trustees of the Manly Union.
Society of the Missionaries of the Sacred Heart.	Trustees of the Missionaries of the Sacred Heart.
Tabgha Centre.	Trustees of the Tabgha Centre.
Chinese Sisters of the Immaculate Conception.	Trustees of the Chinese Sisters of the Immaculate Conception.
The Servants of the Blessed Sacrament.	Trustees of the Servants of the Blessed Sacrament.
Vietnamese Catholic Community.	The Trustees of the Vietnamese Catholic Community.
Australian Catholic Chinese Community.	Trustees of the Australian Catholic Chinese Community.
The Salesians of Don Bosco, Boys' Town, Engadine NSW.	The Trustees of Boys' Town, Engadine NSW.
Society of the Missionaries of Charity.	Trustees of the Society of the Missionaries of Charity.

Missionary Sisters of Christ the King.	Trustees of the Missionary Sisters of Christ the King.
Sons of Divine Providence.	Trustees of the Sons of Divine Providence.
Congregation of the Lebanese Maronite Missionary.	The Trustees of the Lebanese Maronite Missionary.
Catholic Healthcare.	Trustees of Catholic Healthcare.
The Sisters of St Therese of Lisieux.	Trustees of the Sisters of St Therese of Lisieux.
Sisters of the Order of St. Basil the Great.	The Trustees of the Sisters of the Order of St. Basil the Great.
Conference of Leaders of Religious Institutes in New South Wales.	Trustees of the Conference of Leaders of Religious Institutes in New South Wales.
Catholic Religious Australia.	Catholic Religious Australia.
Sisters of St Joseph NSW.	Trustees of the Sisters of St Joseph NSW.
Catholic Cemeteries Board.	Catholic Cemeteries Board.
The Council of Catholic School Parents [NSW & ACT].	The Council of Catholic School Parents [NSW & ACT].
Catholic Women's League Archdiocese of Sydney.	Trustees of the Catholic Women's League Archdiocese of Sydney.
The Missionary Society of St. Paul.	The Trustees of the Missionary Society of St. Paul.
The Catholic Women's League, Diocese of Broken Bay.	The Trustees of the Catholic Women's League, Diocese of Broken Bay.
Aid to the Church in Need.	The Trustees of Aid to the Church in Need.
Congregation of St. Michael the Archangel.	The Trustees of the Congregation of St. Michael the Archangel.
Community Animation Service, Movement for a Better World.	Trustees for the Community Animation Service, Movement for a Better World.
Pontifical Mission Societies, otherwise known as Catholic Mission.	Catholic Mission.
Passionist Sisters of St Paul of the Cross.	Trustees of The Passionist Sisters of St Paul of the Cross.
Daughters of St Anne.	Trustees of The Daughters of St Anne.
Carmelite Missionaries.	Trustees of the Carmelite Missionaries.
Missionaries of St Francis de Sales, Pune Province.	Trustees of the Missionaries of St Francis de Sales, Pune Province.
Catholic Women's League, Diocese of Armidale.	Trustees of the Catholic Women's League, Diocese of Armidale.
Maitland Clergy Central Fund.	Trustees of the Maitland Clergy Central Fund.
The Mission Congregation of the Servants of the Holy Spirit.	Trustees of the Mission Congregation of the Servants of the Holy Spirit.
John Paul II Institute for Marriage and Family, Melbourne.	John Paul II Institute for Marriage and Family, Melbourne.

Catholic Aged Care Sydney.	Trustees of Catholic Aged Care Sydney.
The Congregation of the Dominican Sisters of Malta in New South Wales.	The Congregation of the Dominican Sisters of Malta in New South Wales.
The Australian Association of the Sovereign Military Hospitaller Order of St. John of Jerusalem, of Rhodes, and of Malta.	Order of Malta.
Missionaries of St Francis de Sales, Visakhapatnam Province.	The Trustees of the Missionaries of St Francis de Sales, Visakhapatnam Province.
Ministers of the Infirm.	The Trustees of the Ministers of the Infirm.
Religious Sisters of Mercy of Alma.	The Trustees of the Religious Sisters of Mercy of Alma.
Dominican Sisters of St. Cecilia Congregation.	Trustees of the Dominican Sisters of St. Cecilia Congregation.
Mary Aikenhead Ministries.	Trustees of Mary Aikenhead Ministries.
The Discalced Carmelite Nuns, Varroville.	The Trustees of the Discalced Carmelite Nuns, Varroville.
Good Samaritan Education.	Good Samaritan Education.
The Congregation of the Marist Sisters-Region of Asia Pacific.	Trustees of the Congregation of the Marist Sisters-Region of Asia Pacific.
The Personal Ordinariate of Our Lady of the Southern Cross.	Trustees of the Personal Ordinariate of Our Lady of the Southern Cross.
Edmund Rice Education Australia.	Trustees of Edmund Rice Education Australia.
Kildare Ministries.	Trustees of Kildare Ministries.

Proclamations pursuant to section 26 omitting the following bodies corporate from this Schedule have been published as follows:

The Trustees of the Society of St. Gerard Majella (Gazette No 148 of 2.12.2005, p 9861)

The Trustees of the Carmelite Nuns, Parkes (LW 26.2.2010).

Trustees of the Discalced Carmelite Nuns, Dulwich Hill (LW 26.2.2010).

D.P. 65706

(5)
(6)

Land included in Application No 15706 edged red

SHIRE OF CESSNOCK

Pw Gosforth

C° Northumberland

Scale 6 Chains to an Inch

73

Appⁿ

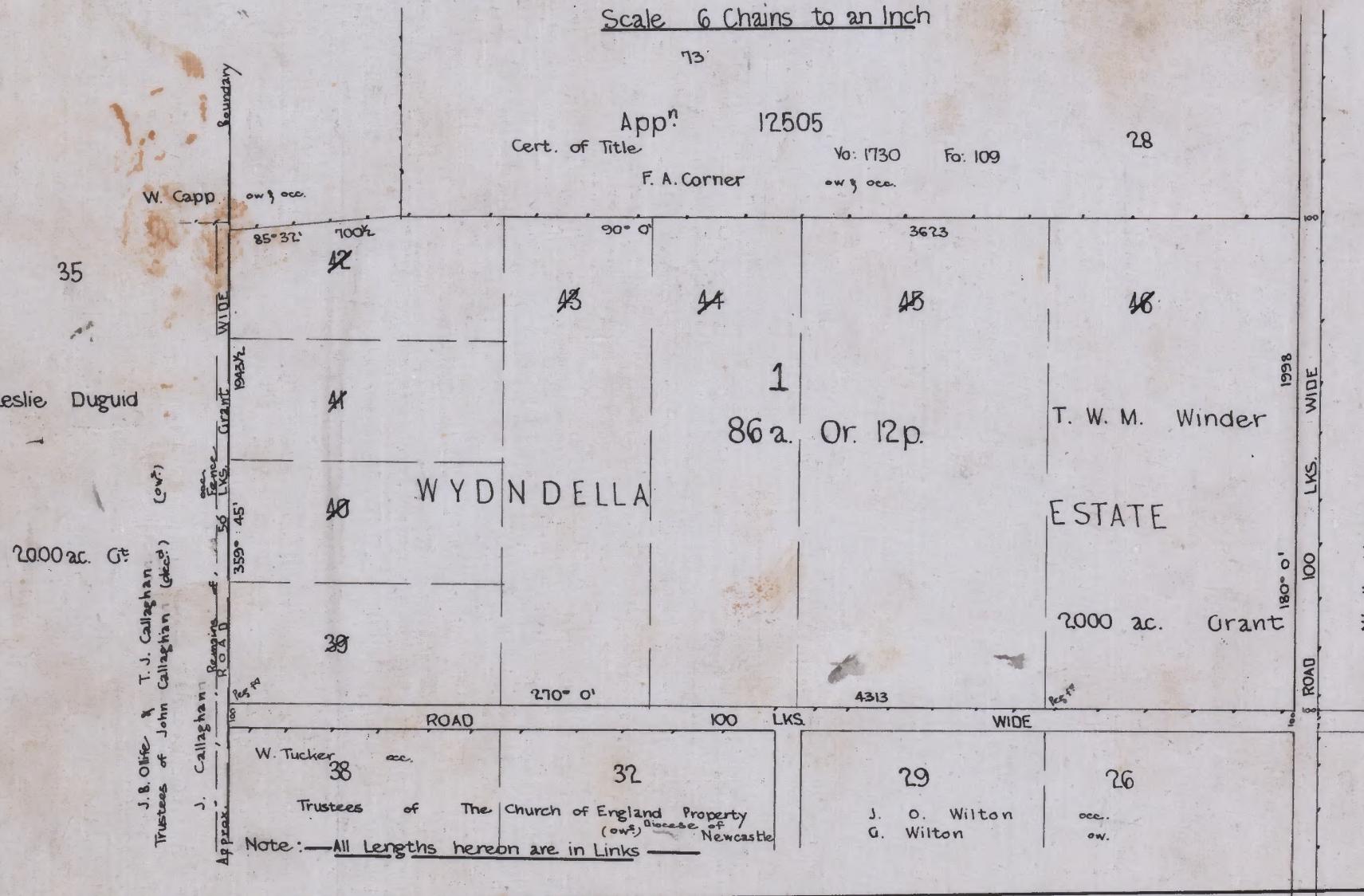
12505

Cert. of Title

F. A. Corner

No: 1730 Fo: 109

28



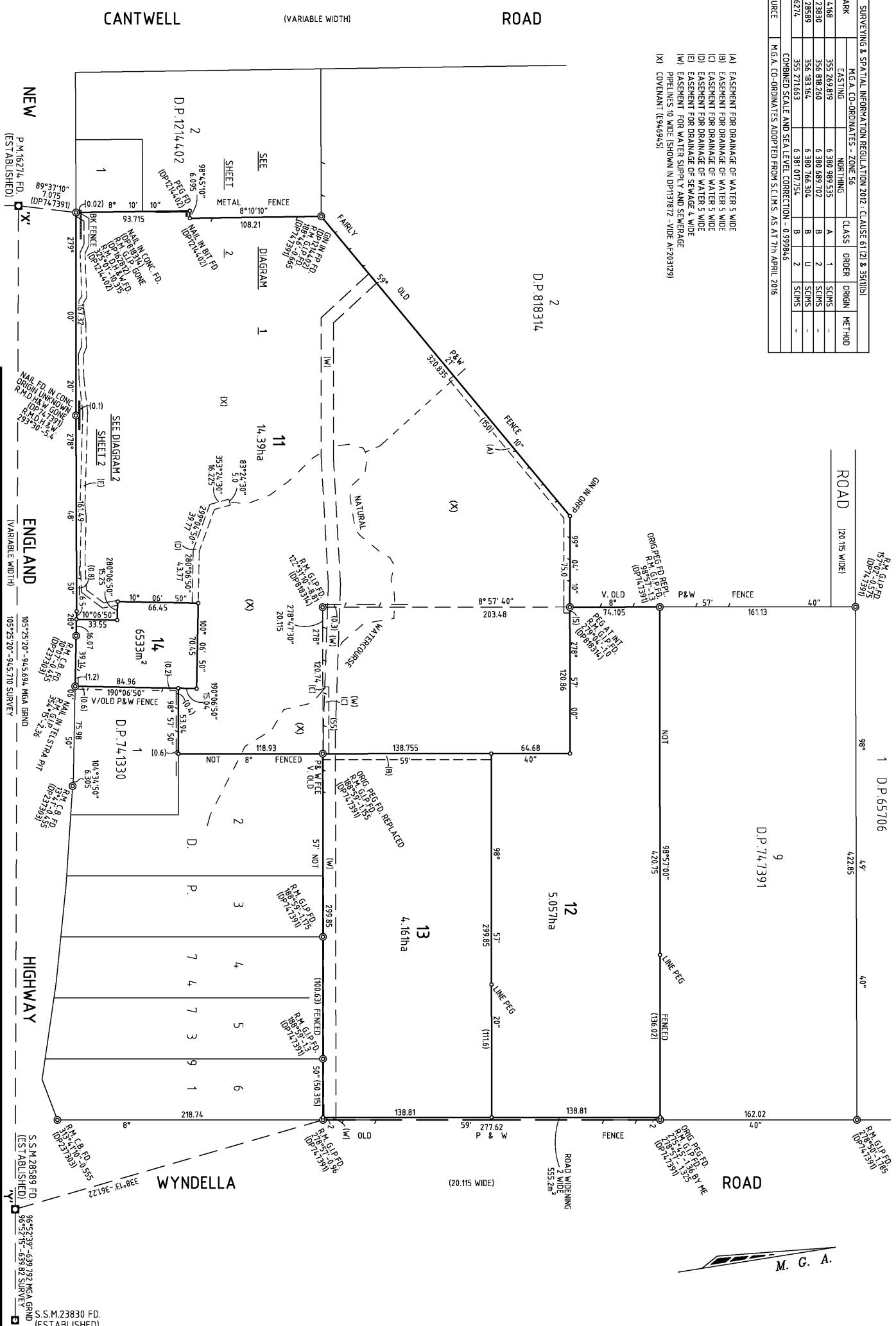
CONVERSION TABLE ADDED IN REGISTRAR GENERAL'S DEPARTMENT	
DP 65706	
LINKS	METRES
100	20.117
700.5	140.918
1943.5	390.970
1998	401.934
3623	728.832
4313	867.638
AC RD P	HA
86 - 12	34.83
2000 - -	809.4

WARNING: CREATING OR FOLDING WILL LEAD TO REJECTION

SHEET 1 OF 2 SHEETS

SURVEYING & SPATIAL INFORMATION REGULATION 2012: CLAUSE 61(2) & 351(1)(b)						
MARK	M.G.A. CO-ORDINATES - ZONE 56		CLASS	ORDER	ORIGIN	METHOD
	FASTING	NORTHING				
SSM 1618	355.489189	6 380 989.355	A	1	S CMS	-
SSM 1630	355.489189	6 380 689.102	B	2	S CMS	-
SSM 1659	356.831164	6 380 765.304	B	U	S CMS	-
PM 16274	355.211663	6 381 017.154	B	2	S CMS	-
COMBINED SCALE AND LEVEL CORRECTION: -0.998965						
SOURCE	M.G.A. CO-ORDINATES ADOPTED FROM CSRS AS AT THIR APRIL 2016					

- (A) EASEMENT FOR DRAINAGE OF WATER 5' WIDE
(B) EASEMENT FOR DRAINAGE OF WATER 7' WIDE
(C) EASEMENT FOR DRAINAGE OF WATER 9' WIDE
(D) EASEMENT FOR DRAINAGE OF WATER 11' WIDE
(E) EASEMENT FOR DRAINAGE OF SEWER 4' WIDE
(M) EASEMENT FOR WATER SUPPLY AND SEWERAGE
PIPELINES 10' WIDE (SHOWN IN DP-1170872 - VIDE AF-2023-129)
(X) COVENANT (ENR49545)



PLAN FORM 6 (2012)

WARNING : Creasing or folding will lead to rejection

ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 1 of 2 sheet(s)

Registered:  8.6.2016	Office Use Only	Office Use Only
Title System: TORRENS	DP1219648	
Purpose: SUBDIVISION		
PLAN OF SUBDIVISION OF LOT 1 D.P.818314 AND LOTS 7 & 8 D.P.747391	LGA: MAITLAND Locality: LOCHINVAR Parish: GOSFORTH County: NORTHUMBERLAND	
Crown Lands NSW/Western Lands Office Approval I, (Authorised Officer) in approving this plan certify that all necessary approvals in regard to the allocation of the land shown herein have been given. Signature: Date: File Number: Office:	Survey Certificate JOHN JOSEPH WILSON I, of de Witt Consulting, P.O. Box 850 CHARLESTOWN 2290 a surveyor registered under the Surveying and Spatial Information Act 2002, certify that: *(a) The land shown in the plan was surveyed in accordance with the Surveying and Spatial Information Regulation 2012, is accurate and the survey was completed on 24TH NOVEMBER 2015. *(b) The part of the land shown in the plan (*being *excluding ^) was surveyed in accordance with the Surveying and Spatial Information Regulation 2012, is accurate and the survey was completed on , the part not surveyed was compiled in accordance with that Regulation. *(c) The land shown in this plan was compiled in accordance with the Surveying and Spatial Information Regulation 2012.	
Subdivision Certificate Jeanne Harris I, *Authorised Person/*General Manager/*Accredited Certifier, certify that the provisions of s.109J of the Environmental Planning and Assessment Act 1979 have been satisfied in relation to the proposed subdivision, new road or reserve set out herein. Signature: Accreditation number: Consent Authority: Maitland City Council Date of endorsement: 23.10 Subdivision Certificate number: 150293 File number: DA15 0293 *Strike through if inapplicable.	Signature: Dated: 7/2/16 Surveyor ID: 8609 Datum Line: 'X' - 'Y' Type: *Urban/*Rural The terrain is *Level - Undulating / *Steep - Mountainous - * Strike through if inapplicable ^ Specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey.	
Statements of intention to dedicate public roads, public reserves and drainage reserves. IT IS INTENDED TO DEDICATE ROAD WIDENING 2 WIDE TO THE PUBLIC AS PUBLIC ROAD SUBJECT TO EASEMENT FOR WATER SUPPLY AND SEWERAGE PIPELINES 10 WIDE (SHOWN IN D.P.1137872 - VIDE AF 2032129)	Plans used in the preparation of survey/compilation D.P.818314 D.P.747391 D.P.237303 D.P.162312 D.P. 1214402 D.P. 1137872 If space is insufficient continue on PLAN FORM 6A	
Signatures seals and Section 88B Statements should appear on PLAN FORM 6A	Surveyor's Reference: 5617_A	

PLAN FORM 6A (2012)

WARNING : Creasing or folding will lead to rejection

ePlan

DEPOSITED PLAN ADMINISTRATION SHEET

Sheet 2 of 2 sheet(s)

 Registered 8.6.2016	Office Use Only DP1219648
PLAN OF SUBDIVISION OF LOT 1 D.P.818314 AND LOTS 7 & 8 D.P.747391	
Subdivision Certificate number : 150293 Date of Endorsement : 2.3.16	
<p>This sheet is for the provision of the following information as required:</p> <ul style="list-style-type: none"> • A schedule of lots and addresses - See 60(c) SSI Regulation 2012 • <i>Statements of intention to create and release affecting interests in accordance with section 88B Conveyancing Act 1919</i> • <i>Signatures and seals see 195D Conveyancing Act 1919</i> • <i>Any information which cannot fit in the appropriate panel of sheet 1 of the administration sheets.</i> 	

LOT	STREET No.	STREET NAME	STREET TYPE	LOCALITY
11	898	NEW ENGLAND	HIGHWAY	LOCHINVAR
12	39	WYNDELLA	ROAD	LOCHINVAR
13	25	WYNDELLA	ROAD	LOCHINVAR
14	892	NEW ENGLAND	HIGHWAY	LOCHINVAR

PURSUANT TO SECTION 88B OF THE CONVEYANCING ACT, 1919, AS AMENDED, IT IS INTENDED TO CREATE:-

1. EASEMENT FOR DRAINAGE OF WATER 5 WIDE (A)
2. EASEMENT FOR DRAINAGE OF WATER 5 WIDE (B)
3. EASEMENT FOR DRAINAGE OF WATER 5 WIDE (C)
4. EASEMENT FOR DRAINAGE OF WATER 5 WIDE (D)
5. EASEMENT FOR DRAINAGE OF SEWAGE 4 WIDE (E)
6. RESTRICTION ON USE

EXECUTED BY THE TRUSTEES OF THE SISTERS OF ST JOSEPH
ABN - 84 401 413 754



SISTER MEGAN BROCK RSJ
CONGREGATIONAL LEADER/TRUSTEE



SISTER MARIE HUGHES RSJ
CONGREGATIONAL BURSAR/TRUSTEE

If space is insufficient use additional annexure sheet

Surveyor's Reference: 5617_A



LAND
REGISTRY
SERVICES



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

18/2/2022 11:10AM

FOLIO: 1/65706

First Title(s): OLD SYSTEM
Prior Title(s): VOL 2248 FOL 236

Recorded	Number	Type of Instrument	C.T. Issue
21/8/1988		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
23/3/2006	AC195046	DEPARTMENTAL DEALING	FOLIO CREATED CT NOT ISSUED
16/12/2021	AR724057	CHANGE OF NAME	EDITION 1

*** END OF SEARCH ***

advlegs

PRINTED ON 18/2/2022



LAND
REGISTRY
SERVICES



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

18/2/2022 11:10AM

FOLIO: 1/747391

First Title(s): OLD SYSTEM
Prior Title(s): PA60096 PA60097
PA60098

Recorded	Number	Type of Instrument	C.T. Issue
22/8/1988	PA60096	PRIMARY APPLICATION	FOLIO CREATED EDITION 1
21/9/1992	DP818314	DEPOSITED PLAN	FOLIO CANCELLED

*** END OF SEARCH ***

advlegs

PRINTED ON 18/2/2022



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

18/2/2022 11:10AM

FOLIO: 13/1219648

First Title(s): OLD SYSTEM
Prior Title(s): 7/747391

Recorded	Number	Type of Instrument	C.T. Issue
8/6/2016	DP1219648	DEPOSITED PLAN	FOLIO CREATED EDITION 1
21/9/2016	AK770740	CHANGE OF NAME	EDITION 2
16/12/2021	AR724051	CHANGE OF NAME	EDITION 3

*** END OF SEARCH ***

advlegs

PRINTED ON 18/2/2022



NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 1/65706

SEARCH DATE	TIME	EDITION NO	DATE
18/2/2022	11:10 AM	1	16/12/2021

LAND

LOT 1 IN DEPOSITED PLAN 65706
AT LOCHINVAR
LOCAL GOVERNMENT AREA MAITLAND
PARISH OF GOSFORTH COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP65706

FIRST SCHEDULE

THE TRUSTEES OF THE SISTERS OF ST. JOSEPH, MAITLAND (CN AR724057)

SECOND SCHEDULE (1 NOTIFICATION)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs

PRINTED ON 18/2/2022

Obtained from NSW LRS on 18 February 2022 10:10 AM AEST

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LAND
REGISTRY
SERVICES



NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 13/1219648

SEARCH DATE	TIME	EDITION NO	DATE
----- 18/2/2022	----- 11:10 AM	----- 3	----- 16/12/2021

LAND

LOT 13 IN DEPOSITED PLAN 1219648
AT LOCHINVAR
LOCAL GOVERNMENT AREA MAITLAND
PARISH OF GOSFORTH COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP1219648

FIRST SCHEDULE

THE TRUSTEES OF THE SISTERS OF ST. JOSEPH, MAITLAND (CN AR724051)

SECOND SCHEDULE (4 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 AF203129 EASEMENT FOR WATER SUPPLY AND SEWERAGE PIPELINES 10 METRE(S) WIDE AFFECTING THE SITE DESIGNATED (W) IN THE TITLE DIAGRAM
- 3 DP1219648 EASEMENT FOR DRAINAGE OF WATER 5 METRE(S) WIDE REFERRED TO AND NUMBERED (2) IN THE S.88B INSTRUMENT AFFECTING THE SITE DESIGNATED (B) IN THE TITLE DIAGRAM
- 4 DP1219648 EASEMENT FOR DRAINAGE OF WATER 5 METRE(S) WIDE REFERRED TO AND NUMBERED (3) IN THE S.88B INSTRUMENT APPURtenant TO THE LAND ABOVE DESCRIBED

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs

PRINTED ON 18/2/2022

Obtained from NSW LRS on 18 February 2022 10:10 AM AEST

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APPENDIX E:

Aerial Photographs

Aerial Photograph

1971



1976



1987



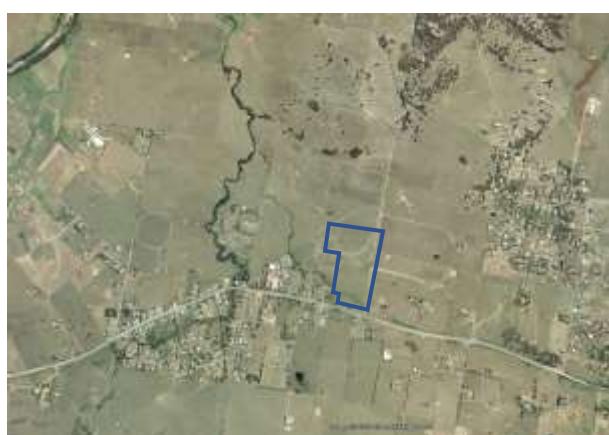
1993



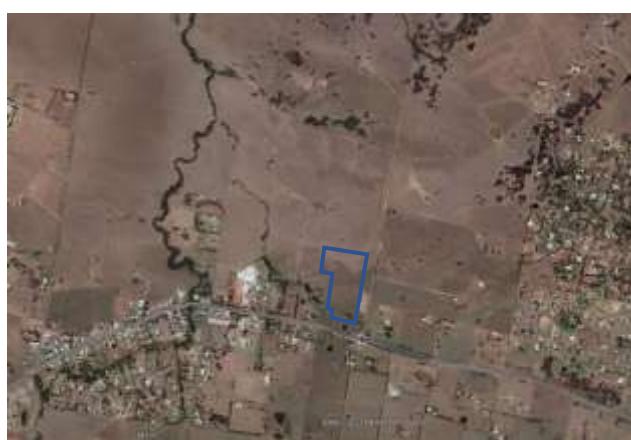
2004



2010



2020



APPENDIX F:

NSW EPA Records

LISMORE HEIGHTS	Coles Express Lismore Heights	426 Ballina ROAD	Service Station	Contamination currently regulated under CLM Act	-28.81068067	153.3053065
LISMORE HEIGHTS	Impacted land, below Beardow Street landslide	22 New Ballina ROAD	Unclassified	Regulation under CLM Act not required	-28.80410458	153.2939349
LISMORE HEIGHTS	Roadside Embankment (Beardow Street)	Between Beardow and 22 New Ballina ROAD	Unclassified	Regulation under CLM Act not required	-28.80374297	153.2942495
LITHGOW	Lithgow Thales	4 Martini PARADE	Metal Industry	Contamination formerly regulated under the CLM Act	-33.48988084	150.141366
LITHGOW	Former Shell CVRO and Depot	77 Bridge Street and 6 Gas Works LANE	Other Petroleum	Regulation under CLM Act not required	-33.47995091	150.162216
LITHGOW	Former Mobil Depot	353 Main STREET	Other Petroleum	Regulation under CLM Act not required	-33.48235166	150.1383012
LITHGOW	Former Gasworks	Mort STREET	Gasworks	Regulation under CLM Act not required	-33.47995167	150.1635401
LITHGOW	Jasbe BP-branded Service Station (Former Reliance Petroleum)	1106 Great Western HIGHWAY	Service Station	Regulation under CLM Act not required	-33.48426647	150.134992
LITHGOW	Caltex Lithgow (Quota Park)	Adjacent to 1131 Great Western HIGHWAY	Unclassified	Regulation under CLM Act not required	-33.47927554	150.1366238
LIVERPOOL	AC McGrath (Wholesale) Pty Ltd	20 Shepherd Street and 6A & 6B Atkinson STREET	Other Industry	Regulation under CLM Act not required	-33.9320192	150.9236862
LIVERPOOL	Former Car Park	4 - 6 Rose STREET	Unclassified	Regulation under CLM Act not required	-33.93258955	150.9157936
LIVERPOOL	Woolworths Service Station	59-67 Orange Grove ROAD	Service Station	Regulation under CLM Act not required	-33.90711248	150.9178855
LIVERPOOL	68 Speed Street (former gasworks)	2A Mill ROAD	Gasworks	Regulation under CLM Act not required	-33.92992649	150.9224472
LIVERPOOL	Woodward Park	84 Memorial AVENUE	Other Industry	Regulation under CLM Act not required	-33.92477836	150.9169229
LOFTUS	BP Freedom Fuel Service Station Loftus	127 Loftus AVENUE	Service Station	Regulation under CLM Act not required	-34.04570765	151.0508004
LONG JETTY	Westside Petroleum Service Station	290-294 The Entrance ROAD	Service Station	Contamination currently regulated under CLM Act	-33.35686757	151.4861479

Search results

Your search for: **Notices** with the following criteria

Suburb - lochinvar

returned 0 result

[Search Again](#)

Search results

Your search for: **Notices** with the following criteria

Notice type - Penalty Notice

Suburb - lochinvar

returned 0 result

[Search Again](#)

+ POEO Public Register- Contaminated land record of noticesAbout the record of noticesList of notified sitesTips for searchingDisclaimerDangerous goods licencesPesticide licencesRadiation licences

Search results

Your search for: Suburb: LOCHINVAR

did not find any records in our database.

Search AgainRefine Search

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the [planning process](#).

Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

[... more search tips](#)

More information about particular sites may be available from:

- The [POEO public register](#)
- The appropriate planning authority: for example, on a planning certificate issued by the local council under [section 149 of the Environmental Planning and Assessment Act](#).

See [What's in the record](#) and [What's not in the record](#).

If you want to know whether a specific site has been the subject of notices issued by the EPA under the CLM Act, we suggest that you search by Local Government Area only and carefully review the sites that are listed.

This public record provides information about sites regulated by the EPA under the Contaminated Land Management Act 1997, including sites currently and previously regulated under the Environmentally Hazardous Chemicals Act 1985. Your inquiry using the above search criteria has not matched any record of current or former regulation. You should consider searching again using different criteria. The fact that a site does not appear on the record does not necessarily mean that it is not affected by contamination. The site may have been notified to the EPA but not yet assessed, or contamination may be present but the site is not yet being regulated by the EPA. Further information about particular sites may be available from the appropriate planning authority, for example, on a planning certificate issued by the local council under section 149 of the Environmental Planning and Assessment Act. In addition the EPA may be regulating contamination at the site through a licence under the Protection of the Environment Operations Act 1997. You may wish to search the POEO public register. [POEO public register](#)

Map view

List view

Filter by

No filter set

Showing 1 of 49 sites

[Reset map](#)



Google

PFAS investigation site

Multiple sites

Keyboard shortcuts Map data ©2021 Google Terms of Use Report a map error

Search results

Your search for: POEO Licences with the following criteria

Suburb - lochinvar

returned 0 results

[Search Again](#)

APPENDIX G:

Site Photographs



Photograph 1 - Showing general site conditions, facing south, from the northern portion of the site.



Photograph 2 - Showing Lochinvar Creek, located in the south-eastern corner of the site.

Qualtest LABORATORY (NSW) PTY LTD	Client:	LOCHINVAR DEVELOPMENTS PTY LTD	Project No:	NEW22P-0012-AA
	Project:	DUE DILIGENCE ASSESSMENT	Date:	17/02/2022
	Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR NSW	No:	1 and 2
	Title:	SITE PHOTOGRAPHS		



Photograph 3 - Showing Lochinvar Creek in southern portion of site.



Photograph 4 - Showing Dam located in the central northern portion of the site

Qualtest LABORATORY (NSW) PTY LTD	Client:	LOCHINVAR DEVELOPMENTS PTY LTD	Project No:	NEW22P-0012-AA
	Project:	DUE DILIGENCE ASSESSMENT	Date:	17/02/2022
	Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR NSW	No:	3 and 4
	Title:	SITE PHOTOGRAPHS		



Photograph 5 - Showing Stockpile (SP1) of house rubble in central portion of site.



Photograph 6 - Showing exposed pipe in fill.

Qualtest LABORATORY (NSW) PTY LTD	Client:	LOCHINVAR DEVELOPMENTS PTY LTD	Project No:	NEW22P-0012-AA
	Project:	DUE DILIGENCE ASSESSMENT	Date:	17/02/2022
	Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR NSW	No:	5 and 6
	Title:	SITE PHOTOGRAPHS		



Photograph 7 - Showing outside of brick and metal clad barn.



Photograph 8 - Showing possible asbestos containing roof sheeting.

Qualtest LABORATORY (NSW) PTY LTD	Client:	LOCHINVAR DEVELOPMENTS PTY LTD	Project No:	NEW22P-0012-AA
	Project:	DUE DILIGENCE ASSESSMENT	Date:	17/02/2022
	Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR NSW	No:	7 and 8
	Title:	SITE PHOTOGRAPHS		



Photograph 9 - Showing tractor on concrete flooring and overgrown weeds.



Photograph 10 - Showing wood and waste materials in barn.

Qualtest LABORATORY (NSW) PTY LTD	Client:	LINDSAY BENNELONG PTY LTD	Project No:	NEW22P-0012-AA
	Project:	DUE DILIGENCE ASSESSMENT	Date:	17/02/2022
	Location:	898 NEW ENGLAND HIGHWAY, LOCHINVAR NSW	No:	9 and 10
	Title:	SITE PHOTOGRAPHS		

APPENDIX H:
Section 10.7 Certificate

Certificate No.: PC/2022/465

Certificate Date: 17/02/2022

Fee Paid: \$133.00

Receipt No.:

Your Reference: NEW22P-0012

SECTION 10.7 PLANNING CERTIFICATE

Environmental Planning and Assessment Act, 1979 as amended

APPLICANT: Qualtest Laboratory

libbybetz@qualtest.com.au

PROPERTY DESCRIPTION: 25 Wyndella Road LOCHINVAR NSW 2321

PARCEL NUMBER: 89249

LEGAL DESCRIPTION: Lot 13 DP 1219648

IMPORTANT: Please read this Certificate carefully.

This Certificate contains important information about the land described above.

Please check for any item, which could be inconsistent with the proposed use or development of the land. If there is anything you do not understand, please contact Council by phoning (02) 4934 9700, or personally at Council's Administration Building at 285-287 High Street, Maitland.

The information provided in this Certificate relates only to the land described above. If you require information about adjoining or nearby land, or about the Council's development policies or codes for the general area, contact Council's Planning & Environment Department.

All information provided is correct as at the date of issue of this Certificate, however it is possible for changes to occur at any time after the issue of this Certificate. We recommend that you only rely upon a very recent Certificate.

The following responses are based on the Council's records and/or information from sources outside the Council. The responses are provided with all due care and in good faith, however the Council cannot accept responsibility for any omission or inaccuracy arising from information outside the control of the Council.

Furthermore, while this Certificate indicates the general effect of the zoning of the abovementioned land, it is suggested that the applicable planning instruments be further investigated to determine any additional requirements.

Copies of Maitland City Council's Local Environmental Planning Instrument, Development Control Plans and Policies are available from Council's [website](#).

PART 1: MATTERS PROVIDED PURSUANT TO SECTION 10.7 (2)

1. Local Environmental Plan (LEP)

Maitland LEP 2011, published 16 December 2011, applies to the land.

Exhibited draft Local Environmental Plans

No draft local Environmental Plans that have been on public exhibition under the Act are applicable to the land.

Development Control Plan prepared by Council

Maitland Development Control Plan 2011 applies to the land.

Development Control Plan prepared by the Director General

The Council has not been notified of any Development Control Plan applying to the land that has been prepared by the Director-General under section 51A of the Act.

State Environmental Planning Policies

The Minister for Planning has notified that the following State Environmental Planning Policies (SEPPs) shall be specified on Certificates under Section 10.7 of the Environmental Planning and Assessment Act, 1979.

The land is affected by the following State Environmental Planning Policies:

- SEPP21 Caravan Parks
- SEPP (Mining, Petroleum Production and Extractive Industries) 2007
- SEPP (State and Regional Development) 2011
- SEPP33 Hazardous and Offensive Development
- SEPP36 Manufactured Home Estates
- SEPP (Koala Habitat Protection) 2019
- SEPP50 Canal Estate Development
- SEPP (Housing for Seniors or People with a Disability) 2004
- SEPP55 Remediation of Land
- SEPP Affordable Rental Housing 2009
- SEPP Building Sustainability Index: BASIX 2004
- SEPP (Exempt and Complying Development Codes) 2008
- SEPP (Infrastructure) 2007
- SEPP64 Advertising and Signage
- SEPP Primary Production and Rural Development 2019
- SEPP65 Design Quality of Residential Apartment Development
- SEPP70 Affordable Housing (Revised Schemes)
- SEPP (Concurrences and Consents) 2018
- SEPP Vegetation in Non Rural Areas 2017
- SEPP (Educational Establishments and Child Care Facilities) 2017

Draft State Environmental Planning Policies

The following draft State Environmental Planning Policy(s) applying to the land is, or has been, the subject of community consultation or on public exhibition under the Act:

Housekeeping Amendment to the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

The proposed amendments to this SEPP are housekeeping amendment to the Codes SEPP to simplify and improve the policy, clarify definitions and standards, and address other minor technical matters raised. The proposed housekeeping amendment to the Codes SEPP will simplify and improve the policy, clarify definitions and standards, and address other minor technical matters.

2. Zoning and land use under relevant LEPs

Maitland LEP 2011, published 16 December 2011, identifies the zone applying to the land as:

R1 General Residential

The following development information gives the objectives of the zone, the description of the zone and identifies development allowed or prohibited in each zone. Development consent where required, must be obtained from the Council.

R1 General Residential

a) Purpose/Objective

- To provide for the housing needs of the community
- To provide for a variety of housing types and densities
- To enable other land uses that provide facilities or services to meet the day to day needs of residents

b) Permitted with Consent

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Centre-based child care facilities; Community facilities; Dwelling houses; Group homes; Home-based child care; Home industries; Hostels; Hotel or motel accommodation; Multi dwelling housing; Neighbourhood shops; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Serviced apartments; Shop top housing; Tank-based aquaculture; Any other development not specified in item 2 or 4

c) Permitted without Consent

Home occupations

d) Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Car parks;

Caravan parks; Cemeteries; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Entertainment facilities; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Information and education facilities; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Passenger transport facilities; Public administration buildings; Recreation facilities (indoor); Recreation facilities (major); Registered clubs; Research stations; Restricted premises; Rural industries; Rural workers' dwellings; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Wharf or boating facilities; Wholesale supplies.

e) Land dimensions to permit the erection of a dwelling house on the land

For the land zoned R1 General Residential the Maitland LEP 2011 does not contain a development standard specifying the land dimensions required to permit the erection of a dwelling house on the land.

f) Critical Habitat

No Local Environmental Plan or draft Local Environmental Plan identifies the land as including or comprising critical habitat.

g) Conservation Area

The land IS NOT in a Heritage Conservation Area.

h) Item of Environmental Heritage

The land does NOT contain an item of Environmental Heritage.

3. Complying Development

Complying development under the **Housing Code** may be carried out on the land.

Complying development under the **Low Rise Medium Density Housing Code** may be carried out on the land. Complying development under the **Greenfield Housing Code** may be carried out on the land, but only if the land is identified on the *Greenfield Housing Code Area Map* issued by the NSW Department of Planning and Environment.

Complying development under the **Rural Housing Code** may not be carried out on the land as it is not within an applicable zone.

Complying development under the **Housing Alterations Code** may be carried out on the land.

Complying development under the **General Development Code** may be carried out on the land.

Complying development under the **Commercial and Industrial Alterations Code** may be carried out on the land.

Complying development under the **Commercial and Industrial (New Buildings**

and Additions) Code may not be carried out on the land as it is not within an applicable zone.

Complying development under the **Subdivisions Code** may be carried out on the land.

Complying development under the **Demolition Code** may be carried out on the land.

Complying development under the **Fire Safety Code** may be carried out on the land.

Complying development under the **Container Recycling Facilities Code** may not be carried out on the land.

Note: Despite the above provisions, if only part of a lot is subject to an exclusion or exemption under Clause 1.17A or Clause 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) Amendment (Commercial and Industrial Development and Other Matters) 2013, complying development may be carried out on that part of the lot that is not affected by the exclusion or exemption.

4B. Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works

The owner (or any previous owner) of the land has NOT consented in writing to the land being subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

5. Coal Mine Subsidence Compensation Act 2017

The land has NOT been proclaimed to be within a Mine Subsidence District under the meaning of section 20 of the Coal Mine Subsidence Compensation Act 2017.

6. Road widening and road realignment

- a) The land is NOT affected by road widening under Division 2 of Part 3 of the Roads Act 1993.
- b) The land is NOT affected by any environmental planning instrument
- c) The land is NOT affected by any road-widening or realignment under any resolution of the Council

The information above relates to Council's road proposals only. Other authorities, including Roads and Maritime Services, may have proposals, which have not been set out.

7. Council and other public authority policies on hazard risk restrictions

All land within the Maitland Local Government Area has the potential to contain acid sulfate soils. Clause 7.1 of the Maitland Local Environmental Plan 2011 generally applies. Development consent is required where works described in the Table to this clause are proposed on land shown on the Maitland LEP 2011 Acid Sulfate Soils Map as being of the class specified for those works.

The Council has adopted by resolution a policy on contaminated land which may restrict the development of the land to which this certificate relates. This policy is implemented when zoning or land use changes are proposed on lands which:

- are considered to be contaminated; or
- which have previously been used for certain purposes; or
- which have previously been used for certain purposes but Council's records do not have sufficient information about previous use of the land to determine whether the land is contaminated; or
- have been remediated for a specific use.

Consideration of Council's adopted policy and the application of provisions under relevant State legislation is warranted.

7A. Flood Related Development Controls

The land or part of the land IS within the flood planning area and subject to flood related development controls.

The land or part of the land IS between the flood planning area and the probable maximum flood and subject to flood related development controls.

The Maitland LEP 2011 identifies the flood planning level (FPL) as the level of a 1:100 ARI flood event plus 0.5m freeboard. The probable maximum flood has the same meaning as the Floodplain Development Manual.

8. Land Reserved for Acquisition

No environmental planning instrument, deemed environmental planning instrument or draft environmental planning instrument applying to the land provides for the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

9. Contribution Plans

The following contribution plan(s) apply to the land:

- Maitland S94A Levy Contributions Plan 2006
- Lochinvar S94 Contribution Plan 2013
- Maitland City Wide Section 94 Contributions Plan 2016
- Maitland S94 Contributions Plan (City Wide) 2006

Contributions Plans may be viewed on Council's website or inspected and purchased at Council's Customer Service Centre.

9A. Biodiversity Certified Land

The land is not biodiversity certified land under Part 8 of the Biodiversity Conservation Act 2016.

10. Biodiversity Stewardship Sites

The Council is not aware if the land is a biodiversity stewardship site under a biodiversity stewardship agreement under part 5 of the *Biodiversity Conservation Act 2016*.

10A. Native Vegetation clearing set asides

The Council is not aware if the land contains a set aside area under 60ZC of the *Local Land Services Act 2013*.

11. Bushfire Prone Land

The land is mapped as bushfire prone land and as such restrictions may apply to

new development on this land.

12. Property vegetation plans

The Council has not received any notification from Hunter Local Land Services that this land is affected by a property vegetation plan under Part 4 of the Native Vegetation Act 2003 (and that continues in force).

13. Order under Trees (Disputes between Neighbours) Act 2006

Council has NOT received notification from the Land and Environment Court of NSW that the land is affected by an Order under Trees – (Disputes Between Neighbours) Act 2006.

14. Directions under Part 3A

There is NO direction by the Minister under Section 75P(2)(c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 (other than a project of a class prescribed by the regulations) of the Act does not have effect.

15. Site Compatibility Certificate and Conditions for Seniors Housing

a) Site Compatibility Certificate

Council is unaware of whether a current Site Compatibility Certificate issued under Clause 25 of the State Environmental Planning Policy (Housing for Seniors and People with a Disability) 2004 has been issued for the land.

b) Conditions of Development Consent since 11 October 2007

No development consent has been granted for the development permitted under State Environmental Planning Policy (Housing for Seniors and People with a Disability) 2004 after 11 October 2007.

16. Site compatibility certificates for infrastructure, schools or TAFE establishments

Council is unaware of whether a valid Site Compatibility Certificate has been issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007 for the land.

17. Site compatibility certificates and conditions for affordable rental housing

Council is unaware if a Site Compatibility Certificate (Affordable Rental Housing) has been issued in accordance with State Environmental Planning Policy (Affordable Rental Housing) 2009.

18. Paper subdivision information

There is no development plan that applies to the:

- 1) Land or that is proposed to be subject to a consent ballot
- 2) There is no subdivision order that applies to the land.

19. Site verification certificates

Council is not aware of any current site verification certificate in respect of the land.

20. Loose-fill asbestos insulation

There are no premises on the subject land listed on the register.

21. Affected building notices and building product rectification orders

The Council is NOT aware of any affected building notice which is in force in respect of the land.

The Council is NOT aware of any building product rectification order which is in force in respect of the land and that has not been fully complied with.

The Council is NOT aware of any notice of intention to make a building product rectification order being given in respect of the land and that is outstanding.

Note. The following matters are prescribed by section 59(2) of the Contaminated Land Management Act 1997 as additional matters to be specified in a planning certificate.

Contaminated Land

- a) The land to which this certificate relates is NOT significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.
- b) The land to which this certificate relates is NOT subject to a management order within the meaning of the Contaminated Land Management Act 1997.
- c) The land to which this certificate relates is NOT the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.
- d) The land to which this certificate relates is NOT the subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.
- e) Council has NOT been provided with a site audit statement, within the meaning of the Contaminated Land Management Act 1997, for the land to which this Certificate relates.

PART 2: ADDITIONAL MATTERS PROVIDED PURSUANT TO SECTION 10.7 (5)

The following information is provided in accordance with section 10.7(5) of the Environmental Planning and Assessment Act 1979. Section 10.7(6) of the Act states that a Council shall not incur any liability in respect of advice provided in good faith pursuant to sub-section 10.7(5). If this information is to be relied upon, it should be independently checked.

1. Development Consent

Council's records indicate that the land has not had any development consent granted within the five (5) years preceding the date of this certificate.

2. Draft Development Control Plan

No draft Development Control Plans apply to the land.

3. Suspension of Covenants

Clause 1.9A in the Maitland LEP 2011 applies to all land within the Maitland Local Government Area. This clause suspends any agreement, covenant or other instrument that restricts the development of land that is permissible under the provisions of the Maitland Local Environmental Plan 2011 to the extent necessary

to serve that purpose.

4. Filling of Land

Earthworks (excavation and filling of land) require development consent. Clause 7.2 in the Maitland LEP 2011 applies to all land within the Maitland Local Government Area. Earthworks (defined as both excavation and filling of land) require development consent of Council unless the works are exempt development, ancillary to other development for which development consent is required or granted, or considered by Council to be of a minor nature.

5. Development in the Vicinity of Heritage Items

Clause 5.10 in the Maitland LEP 2011 generally applies to all land in the Maitland Local Government Area, where the land is located in the vicinity of a heritage item or heritage conservation area. This Clause requires a consent authority to consider the effect of the proposed development on the heritage significance of the item or area concerned, before granting development consent.

6. Other Matters

There are no other specific matters.

**David Evans
General Manager**

APPENDIX I:

Data Validation Report

QA/QC DATA VALIDATION REPORT

QA/QC DATA VALIDATION REPORT

Job No: NEW22P-0012-AA

Eurofins report: 861538-S, 861538-AID, 861538-W

ALS reports: ES2204817_0_COA,

1. SAMPLE HANDLING

Item	Yes/No	Comments
Were the sample holding times met?	No	Holding times were within acceptable limits with the exception of water triplicate sample WT.3.2.22. This however, is not expected to impact the usability of the results as the holding times for the primary and duplicate sample were within the acceptable limits.
Were the samples in proper custody between collection in the field and reaching the laboratory?	Yes	
Were the samples properly and adequately preserved?	Yes	
Were the samples received by the laboratory in good condition?	Yes	

Sampling Handling was:

Satisfactory :	✓	Partially Satisfactory:	Unsatisfactory:
----------------	---	-------------------------	-----------------

2. PRECISION AND ACCURACY ASSESSMENT

Item	Yes/No	Comment
Was a NATA registered laboratory used?	Yes	-
Did the laboratory perform the requested tests?	Yes	-
Were the laboratory methods adopted NATA endorsed?	Yes	-
Were the appropriate test procedures followed?	Yes	-
Were the reporting limits satisfactory?	Yes	-
Was the NATA seal on the reports?	Yes	-
Were the reports signed by an authorised person?	Yes	-

QA/QC DATA VALIDATION REPORT

Laboratory Precision and Accuracy was:

Satisfactory :	✓	Partially Satisfactory:	Unsatisfactory:
----------------	---	-------------------------	-----------------

3. FIELD QA/QC

Soil, Sediment and Water Samples

	Soil
No. Samples Analysed	71
No. of Duplicates	4
No. of Triplicates	4
No. of Wash Blanks	3
No. of Trip Blanks	3
No. of Trip Spikes	0

No. Days Sampling

Item	Soil
Number of Days Sampling	3
Number of Sampling Events	3

Field Duplicates

Item	Yes/No	Comments
Were an adequate number of field duplicates collected?	Yes	Duplicates collected at a rate of 1 per 18 samples.
Were RPDs within control limits? No Limit for 5-10 x EQL and 30% for >10 x EQL	Yes	

Trip Blanks/Trip Spikes

Item	Yes/No	Comments
Were an adequate number of trip blanks and trip spikes collected?	Yes	Trip blanks collected at a rate of 1 per sampling event. Trip spikes were not collected. Taking into account field observations (no odours, no staining), the lack of trip spike samples is not considered to affect the outcome of the assessment.
Were the trip blanks free of contaminants? (If no, comment whether the contaminants present are also detected in the samples and whether they are common laboratory chemicals).	Yes	-

Were the trip spikes within recovery limits (between 80% and 120%)	N/A	
--	-----	--

Rinsate Samples

Item	Yes/No	Comments
Were an adequate number of rinsate samples used? (1 per day of using reusable sampling equipment – trowel, hand auger etc)	No	No reusable sampling equipment was used. Therefore, a rinsate sample was not required.
Were the rinsate samples free of contaminants? (If no, comment whether the contaminants present are also detected in the samples and whether they are common laboratory chemicals).	N/A	

4. LABORATORY INTERNAL QUALITY CONTROL PROCEDURES

A) Type of QA/QC Sample	Yes/No	Comments
Laboratory Blanks/Reagent Blanks (at least 1 per batch)	Yes	
Laboratory Duplicates (at least 1 per batch or 1 per 10 samples)	Yes	
Matrix Spikes, Matrix Spike Duplicates (1 for each soil type)	Yes	
Laboratory Control Spike	Yes	
Surrogate (where appropriate)	Yes	

Item	Yes/No	Comments
B) Were the laboratory blanks and/or reagent blanks free of contamination?	Yes	
C) Were the spike recoveries within control limits? I: Organics/inorganics/metals (50% to 150%) II: Phenols (20% to 130%)	Yes	
D) Were the RPDs of the laboratory duplicates within control limits?	Yes	Laboratory duplicates for numerous heavy metals and TRH >C16-C34 were outside the control limits from batch 861538-S. In each case the lab quoted lab code Q15, which states: "The RPD reported passes Eurofins mgt's QC – Acceptance Criteria as defined in the internal Quality Control Review and Glossary page of this report". Based on this, the duplicate RPD is not considered to affect the usability of the results.

QA/QC DATA VALIDATION REPORT

Item	Yes/No	Comments
E) Were the surrogate recoveries within control limits?	Yes	

Laboratory Internal QA/QC was:

Satisfactory :	✓	Partially Satisfactory:	Unsatisfactory:
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5. DATA USABILITY

Item	Yes/No	Comments
Was the data directly usable?	Yes	
Was the data usable with the following corrections/modifications? (see comments)	NA	
Was the data not usable?	NA	

APPENDIX J:

Laboratory Reports

	A	B	C	D	E	F	G	H	I	J	K	L
58												GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs
59												GROS may not be used when kstar of detected data is small such as < 0.1
60												For such situations, GROS method tends to yield inflated values of UCLs and BTVs
61												For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates
62					Minimum	0.01				Mean	89.14	
63					Maximum	1300				Median	26	
64					SD	243.8				CV	2.735	
65					k hat (MLE)	0.533			k star (bias corrected MLE)		0.514	
66					Theta hat (MLE)	167.3			Theta star (bias corrected MLE)		173.3	
67					nu hat (MLE)	53.29			nu star (bias corrected)		51.42	
68					MLE Mean (bias corrected)	89.14			MLE Sd (bias corrected)		124.3	
69									Adjusted Level of Significance (β)		0.0452	
70					Approximate Chi Square Value (51.42, α)	35.96			Adjusted Chi Square Value (51.42, β)		35.57	
71					95% Gamma Approximate UCL (use when n>=50)	127.5			95% Gamma Adjusted UCL (use when n<50)		128.9	
72												
73												Lognormal GOF Test on Detected Observations Only
74					Shapiro Wilk Test Statistic	0.746			Shapiro Wilk GOF Test			
75					5% Shapiro Wilk Critical Value	0.947			Detected Data Not Lognormal at 5% Significance Level			
76					Lilliefors Test Statistic	0.231			Lilliefors GOF Test			
77					5% Lilliefors Critical Value	0.127			Detected Data Not Lognormal at 5% Significance Level			
78									Detected Data Not Lognormal at 5% Significance Level			
79												
80												Lognormal ROS Statistics Using Imputed Non-Detects
81					Mean in Original Scale	89.2			Mean in Log Scale		3.424	
82					SD in Original Scale	243.7			SD in Log Scale		1.088	
83					95% t UCL (assumes normality of ROS data)	147			95% Percentile Bootstrap UCL		148.9	
84					95% BCA Bootstrap UCL	169.2			95% Bootstrap t UCL		263.4	
85					95% H-UCL (Log ROS)	81.01						
86												
87												DL/2 Statistics
88					DL/2 Normal				DL/2 Log-Transformed			
89					Mean in Original Scale	89.19			Mean in Log Scale		3.42	
90					SD in Original Scale	243.7			SD in Log Scale		1.096	
91					95% t UCL (Assumes normality)	147			95% H-Stat UCL		81.81	
92									DL/2 is not a recommended method, provided for comparisons and historical reasons			
93												
94												Nonparametric Distribution Free UCL Statistics
95									Data do not follow a Discernible Distribution at 5% Significance Level			
96												
97												Suggested UCL to Use
98					95% KM (Chebyshev) UCL	239.5						
99												
100									Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.			
101									Recommendations are based upon data size, data distribution, and skewness.			
102									These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).			
103									However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.			
104												
105												
106					Chromium							
107												
108									General Statistics			
109					Total Number of Observations	50			Number of Distinct Observations		38	
110									Number of Missing Observations		0	
111					Minimum	13			Mean		36.76	
112					Maximum	110			Median		29.5	
113					SD	22.48			Std. Error of Mean		3.18	
114					Coefficient of Variation	0.612			Skewness		1.467	

	A	B	C	D	E	F	G	H	I	J	K	L
115												
116												
117												
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134												
135												
136												
137												
138												
139												
140												
141												
142												
143												
144	95% Approximate Gamma UCL (use when n>=50)	42.14				95% Adjusted Gamma UCL (use when n<50)	42.31					
145												
146												
147												
148												
149												
150												
151												
152												
153												
154	Minimum of Logged Data	2.565				Mean of logged Data	3.446					
155	Maximum of Logged Data	4.7				SD of logged Data	0.558					
156												
157												
158												
159	95% H-UCL	42.78				90% Chebyshev (MVUE) UCL	45.73					
160	95% Chebyshev (MVUE) UCL	49.9				97.5% Chebyshev (MVUE) UCL	55.68					
161												
162												
163												
164												
165												
166												
167	95% CLT UCL	41.99				95% Jackknife UCL	42.09					
168	95% Standard Bootstrap UCL	41.97				95% Bootstrap-t UCL	42.85					
169	95% Hall's Bootstrap UCL	42.8				95% Percentile Bootstrap UCL	42.22					
170	95% BCA Bootstrap UCL	42.26										
171	90% Chebyshev(Mean, Sd) UCL	46.3				95% Chebyshev(Mean, Sd) UCL	50.62					
	97.5% Chebyshev(Mean, Sd) UCL	56.62				99% Chebyshev(Mean, Sd) UCL	68.4					

CHAIN OF CUSTODY RECORD



Eurolabs | Environment Testing ABN 50 005 085 621

Sydney Laboratory

Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 8900 8400 EnviroSampleNSW@eurolabs.com

Brisbane Laboratory

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07 3902 6000 EnviroSampleQLD@eurolabs.com

Melbourne Laboratory

6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVIC@eurolabs.com

Company		Project Name		Project Manager		Libby Betz		Samplers(s)		B. Snow		
Address	Contact Name	LBD	EDD Format	ESat, EOUS etc	Excel							
Qualitest	2 Murray Dryer Circuit Mayfield West NSW 2304	NEW22P-0012										
Qualitest	Libby Betz											
Special Directions	Purchase Order											
Quote ID No.	180622QUAN-3											
Analyses		Asbestos (GWW)		Matrix		Solid (S) Water (W)		Sample Comments / Dangerous Goods Hazard Warning				
Where metals are requested, please specify "Total" or "Extractable". SUITE code must be used to affect SUITE pricing.		OCPs		Sampled Date/Time dd/mm/yy hh:mm								
Suite B1 - TRH, BTEX		PH and CEC		3/02/22		Soil						
Suite B7 - TRH, BTEX, PAHs, Metals		OCPs		3/02/22		Soil						
Suite S26 - TRH, BTEX, PAHs, Metals		OCPs		3/02/22		Soil						
Asbestos		PAHs Metals		3/02/22		Soil						
Asbestos (GWW)		PH and CEC		3/02/22		Soil						
No	Client Sample ID											
1	TP01_0.0-0.1											
2	TP01_0.4-0.5											
3	TP01_0.5-0.6											
4	TP01A_0.0-0.1											
5	TP01A_0.4-0.5											
6	TP01A_0.9-1.0											
7	TP01A_1.4-1.5											
8	TP01A_1.7-1.8											
9	D.3.222											
10	T.3.222											
Method of Shipment		Counter #)		<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal		Name		Signature		
Laboratory Use Only		Received By		STD BNE MEL PER ADL NTL DRW		Signature		Date		Time		
Received By		STD BNE MEL PER ADL NTL DRW		Signature		Date		Time		Temperature		
												Report No

CHAIN OF CUSTODY RECORD

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Melbourne Laboratory
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03 8554 5000 EnviroSamplesVIC@envirofins.com

Brisbane Laboratory
Unit 2/21 Leicht Highway Kewdale WA 6105
08 9251 9800 EnviroSamplesWA@envirofins.com

Company	QuaTest	Project Name	LBD	Project Manager	Libby Betz	EDD Format	Excel	Sampler(s)	B.Snow
Address	2 Murray Dwyer Circuit Mayfield West NSW 2304								
Contact Name	Libby Betz								
Phone No									
Special Directions									
Purchase Order									
Quote ID #	180622QUA143								
No	Client Sample ID	Sampled Date/Time (dd/mm/yyyy hh:mm)	Matrix Solid (S) Water (W)	Asbestos	PAHs MeHg's	Suite B1 TRH, BTEX	OCPs	pH and EC	Suite B7 - TRH, BTEX, PAHs, MeHg's
1	TP07_0.0-0.1	3/02/22	Soil	X					Suite S26 - TRH, BTEX, PAHs, MeHg's
2	TP07-0.2-0.3	3/02/22	Soil	X					
3	TP08_0.0-0.1	3/02/22	Soil	X					
4	TP08-0.3-0.4	3/02/22	Soil						
5	TP08_0.0-0.1	3/02/22	Soil	X					
6	TP09-0.3-0.4	3/02/22	Soil						
7	TP10_0.0-0.1	3/02/22	Soil	X	X	X			
8	TP10-0.2-0.3	3/02/22	Soil						
9	TP10-0.5-0.6	3/02/22	Soil						
10	TP11_0.0-0.1	3/02/22	Soil	X					
		Total Counts		1	4	1	1		10 7
Method of Shipment	<input type="checkbox"/> Courier # <i>✓</i>	<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal	Name <i>✓</i>		Date <i>9.2.22</i>	Time <i>8.30am</i>	Temperature <i>861538</i>
Laboratory Use Only	Received By <i>✓</i>	Received By <i>✓</i>			Name <i>✓</i>		Date <i>9.2.22</i>	Time <i>8.30am</i>	Report No
Submission of samples to the laboratory will be deemed as acceptance of Envirofins' Environment Testing Standard Terms and Conditions unless agreed otherwise. A copy is available on request.									



CHAIN OF CUSTODY RECORD

Sydney Laboratory

Perth Laboratory

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Project Details										Sampling & Transport Information						Sample Details								
Company	Qualitest			Address	2 Murray Dwyer Circuit Mayfield West NSW 2304			Project No	NEW22P-0012			Project Manager	Libby Betz			EDD Format	Excel		Sampler(s)	B.Snow				
Contact Name	Libby Betz			Phone No				Email for Results	accounts@qualitest.com.au			Email for Invoice	libbybetz@qualitest.com.au billysnow@qualitest.com.au emmacoleman@qualitest.com.au			Required Turnaround Time (TAT)	Default will be 5 days / not ticked.							
Special Directions										Containers	Change container type & size if necessary.													
Purchase Order										Other (Absestos AS9861, WA Guidelines)	✓ Sampling will apply Overnight (reporting by 9am) <input type="checkbox"/> Same day <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> 2 days <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other ()													
Quote ID No	180622QUAN-3									Jar (Glass or HDPE)	500ML PFA'S Bottles													
No.	Client Sample ID			Sampled Date/Time			Matrix			Sample Comments / Dangerous Goods Hazard Warning														
				dummity humm			Solid (S) Water (W)																	
1	TP02_0-0-1			3/02/22			Soil			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>														
2	TP02-0-0-5			3/02/22			Soil			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>														
3	TP03-0-0-1			3/02/22			Soil			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>														
4	TP03-0-3-0-4			3/02/22			Soil			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>														
5	TP04-0-0-1			3/02/22			Soil			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>														
6	TP04-0-3-0-4			3/02/22			Soil			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>														
7	TP05-0-0-0-1			3/02/22			Soil			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>														
8	TP05-0-3-0-4			3/02/22			Soil			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>														
9	TP06-0-0-0-1			3/02/22			Soil			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>														
10	TP06-0-3-0-4			3/02/22			Soil			<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>														
Total Counts										3			5			10			5					
Method of Shipment										<input type="checkbox"/> Courier (#)			<input type="checkbox"/> Hand Delivered			<input type="checkbox"/> Postal			Name			Signature		
Laboratory Use Only				Received By			Signature			Date			Time			Date			Time					
							SYD BNE MEL PER ADL NTL DRW						SYD BNE MEL PER ADL NTL DRW						Temperature					
							Signature			Date			Time			Date			Time					
																						Report No		
Submission of samples to the laboratory will be deemed as acceptance of Eurofins Environment Testing Standard Terms and Conditions unless otherwise agreed otherwise. A sample may be rejected if it is not received in accordance with these terms and conditions.																				861538				

Q53009_R10 Modified by: Dr. R Symons Approved by: G. Jackson Approved on: 8 August 2019

Submission of examples to the laboratory will be deemed as acceptance of Eurofins Environment Testing Standard Terms and Conditions unless otherwise agreed.

CHAIN OF CUSTODY RECORD

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Sydney Laboratory
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Brisbane Laboratory
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Perth Laboratory
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08 9251 9600 EnviroSamplesWA@envirofins.com

Company		Quastest	Project Name		Project Manager		Libby Batz		Sampler(s)		B. Show						
Address	2 Murray Dryer Circuit Mayfield West NSW 2304	Contact Name	Libby Betz	LBD	EDD Format	Excel											
Phone No		Special Directions															
Purchase Order		Quote ID #	180822QUAR-A3	Client Sample ID		Sampled Date/Time (dd/mm/yyyy hh:mm)		Matrix Solid (S) Water (W)			<th></th>						
No			<td></td> <td></td> <td></td> <td></td> <td></td> <th></th> <th></th> <th></th> <th></th>														
1		TP16_02-0.3		4/02/22		Soil											
2		D.4.2.22															
3		T.4.2.22															
4		TP17_00-0.1															
5		TP17_02-0.3															
6		TP18_00-0.1															
7		TP18_02-0.3															
8		TP19_00-0.1															
9		TP19_02-0.3															
10		TP20_00-0.1															
Total Counts													4	1	1	10	6
Method of Shipment		<input type="checkbox"/> Courier # 1		<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal		Name		Signature		Date		Time		Temperature	
Laboratory Use Only		Received By OJ						SYD BNE MEL PER ADL NTL DRW		Signature		SYD BNE MEL PER ADL NTL DRW		Signature		Report No	
																861538	

CHAIN OF CUSTODY RECORD



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Sydney Laboratory
Unit F3 Bld.F 16 Mars Rd

West NSW 2066

Perth Laboratory

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CHAIN OF CUSTODY RECORD

Eurofins Environment Testing ANL 50/005/065/521

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Melbourne Laboratory
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03 8554 6600 EnviroSamplesVIC@eurofins.com

8 | 15

Company		Project Name		Project Manager		Libby Betz		Sample(s)		B.Snow	
Address	Phone No.	LBD	EDD Format	ESat, EQUS etc	Excel						
Qualtest	2 Murray Dwyer Circuit Mayfield West NSW 2304	Libby Betz									
Contact Name	Libby Betz										
Special Directions											
Purchase Order	180822QHAN-3										
No.	Client Sample ID										
1	TP31_02-0-3	4/02/22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
2	TP32_04-0-1	4/02/22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
3	TP32_04-0-5	4/02/22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
4	TP33_04-0-1	4/02/22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
5	TP33_02-0-3	4/02/22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
6	TP34_04-0-1	4/02/22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
7	TP34_02-0-3	4/02/22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
8	TP35_04-0-1	4/02/22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
9	TP35_02-0-3	4/02/22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
10	D.7.22	7.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
			Total Counts	1	1	2		3		10	5
Method of Shipment	<input type="checkbox"/> Courier #)	<input type="checkbox"/> Hand Delivered	□ Postal	Name					Signature		
Laboratory Use Only	Received By	Received By	SYD BNE MEL PER ADL NTL DRW	Signature	SYD BNE MEL PER ADL NTL DRW	Signature	Date	Time	Date	Time	Temperature

861838



CHAIN OF CUSTODY RECORD

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urofing | Environment Testing ABN 50 005 085 621

Sydney Laboratory

Perth Laboratory

Welkomstlinker

CHAIN OF CUSTODY RECORD



Envirofins | Environment Testing A.N.R. 50 005 089 521

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Brisbane Laboratory
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Melbourne Laboratory
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03 8554 5000 EnviroSamplesVIC@envirofins.com

Perth Laboratory
Unit 231 Leach Highway Kewdale WA 6105
08 9251 9800 EnviroSamplesWA@envirofins.com

Company		QuaTest	Project Name		Project #	LBD	Project Manager	EDD Format ESat, EQUS etc	Extr	Libby Betz	Sample(s)	B. Snow
Address	2 Murray Dryer Circuit Mayfield West NSW 2304	Contact Name	Libby Betz									
Phone No.		Special Directions										
Purchase Order		Quote ID #	100622QUAR43									
No.	Client Sample ID	Sampled Date/Time dd/mm/yyyy hh:mm	Matrix Solid (S) Water (W)	Asbestos	Asbestos (%w/w)		PCPs		pH and CEC		Suite BT - TRH, BTEX, PAHs, Metals	
1	TP39_0.0-0.1	7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Suite B1 - TRH, BTEX	
2	TP39_0.2-0.3	7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Suite BT - TRH, BTEX, PAHs, Metals	
3	TP40_0.0-0.1	7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Suite B26 - TRH, BTEX, PAHs, Metals	
4	TP40_0.2-0.3	7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Suite B26 - TRH, BTEX, PAHs, Metals	
5	TP41_0.0-0.1	4.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Suite B26 - TRH, BTEX, PAHs, Metals	
6	TP41_0.2-0.3	4.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Suite B26 - TRH, BTEX, PAHs, Metals	
7	TP42_0.0-0.1	7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Suite B26 - TRH, BTEX, PAHs, Metals	
8	TP42_0.2-0.3	7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Suite B26 - TRH, BTEX, PAHs, Metals	
9	TP43_0.0-0.1	7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Suite B26 - TRH, BTEX, PAHs, Metals	
10	TP43_0.2-0.3	7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Suite B26 - TRH, BTEX, PAHs, Metals	
				Total Counts		2	5	1	1			
Method of Shipment		<input type="checkbox"/> Courier (#)	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Postal	Name					Date	Time	Temperature
Laboratory Use Only		Received By	Signature		Received By	Signature		Received By	Signature		Report No	861538
Submission of samples to the laboratory will be deemed in acceptance of Envirofins Environment Testing Standard Terms and Conditions unless agreed otherwise. A copy is available on request.												



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Eurofins | Environmental Testing ABN 50 005 085 521

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111

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 Brisbane Laboratory
Unit 1/21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EmProSampleQld@emprosample.com

THE JOURNAL OF CLIMATE

Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175

03 8564 5000 EnviroSampleVic@envirofit.s.oz.au

Envio de e-mail para o seu fornecedor

CHAIN OF CUSTODY RECORD

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Eurofins Environment Testing ANV 50/005 0385 521
Eurofins Environment Testing Approved by G. Jackson Approved on 8 August 2019

Company	Qualtest	Project Name		Project Manager		Libby Betz		Sampler(s)		B.Snow			
		Address	LBD	EDD Format Excel Estat, ECOSIS etc	Excel	Handed over by							
Contact Name	Libby Betz												
Phone No													
Special Directions													
Purchase Order													
Quote ID No	180622QUAR-3												
No	Client Sample ID	Sampled Date/Time dd/mm/yyyy hh:mm	Matrix Solid (S) Water (W)										
1	TP49_0.0-0.1	7.2.22	Soil										
2	TP49_0.2-0.3	7.2.22	Soil										
3	TP50_0.0-0.1	7.2.22	Soil										
4	TP50_0.4-0.5	7.2.22	Soil										
5	TP50_0.8-1.0	4.2.22	Soil										
6	TP50_1.4-1.5	4.2.22	Soil										
7	TP50_1.6-1.7	7.2.22	Soil										
8	TP51_0.0-0.1	7.2.22	Soil										
9	TP51_0.4-0.5	7.2.22	Soil										
10	TP52_0.0-0.1	7.2.22	Soil										
				Total Counts		6	1	3	2				
Method of Shipment		<input type="checkbox"/> Courier # <input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal		Name	Signature		Date	Time			
Laboratory Use Only		Received By <i>AK</i>		SYD BNE MEL PER ADL NTL DRW		Signature	<i>John</i>		Date	Time			
Received By				SYD BNE MEL PER ADL NTL DRW		Signature			Date	Time			
Submission of samples to the laboratory will be deemed as acceptance of Eurofins Environment Testing Standard Terms and Conditions unless agreed otherwise. A copy is available on request.													

CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 60 005 008 621

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07 3902 4600 EnviroSampleQLD@eurofins.com

Melbourne Laboratory
6 Monitory Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVIC@eurofins.com

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Company		Project Name	Project Manager		EDD Format		Sample(s)		B.Snow	
Address	Contact Name	LBD	Libby Betz	Excel	ESTat, ECOS etc		Email for Invoice		Email for Results	accounts@qualitest.com.au
2 Murray Dryer Circuit Mayfield West NSW 2304	Libby Betz									
Special Directions	Purchase Order	NEW22P-0012								
Quote ID №	180522QUAN-3									
No	Client Sample ID		Sampled Date/Time (dd/mm/yyyy hh:mm)	Matrix Solid (S) Water (W)						
1	TP52_02-0-3		7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
2	TP53_0-0-1		7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
3	TP53_0-1-0-2		7.2.22	Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
4	TP53_0-4-0-5		7.2.22	Soil						
5	TP53_0-8-0-9		4.2.22	Soil						
6	SS4		7.2.22	Soil	<input checked="" type="checkbox"/>					
7	DAM1		3.2.22	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
8	DAM2		3.2.22	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
9	DAM3		3.2.22	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
10	WD.3.2.22		3.2.22	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Method of Shipment		Total Counts		2	3	4	4	4	4	4
<input type="checkbox"/> Courier (#)		<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal	Name	Signature	Date	Date	Date	Date
Laboratory Use Only		Received By	Received By	SYD BNE MEL PER ADL NTL DRW	Signature	Signature	8.30am	Time	Temperature	Report №
		John Smith	John Smith	SYD BNE MEL PER ADL NTL DRW	Signature	Signature	8.30am	Time	Temperature	Report №

15/15

CHAIN OF CUSTODY RECORD

Eurofins | Environment Testing ABN 50 005 085 521

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08 9251 9800 EnviroSamplesWA@eurofins.com

Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSamplesVIC@eurofins.com

Company		Project Name		Project Manager		Libby Betz		Sample(s)		B>Show	
Address		LBD		EDD Format		Excel		Handed over by		Email for Invoice	
Contact Name		Libby Betz								accounts@qualitest.com.au	
Phone No										libbybetz@qualitest.com.au emmadelman@qualitest.com.au	
Special Directions										Required Turnaround Time (TAT)	
Purchase Order										Default will be 5 days if not ticked.	
Quote ID No		180622QUAN-3								<input type="checkbox"/> Overnight (reporting by 9am)* <input type="checkbox"/> Same day <input checked="" type="checkbox"/> 1 day <input type="checkbox"/> <input type="checkbox"/> 2 days <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 5 days (Standard) <input type="checkbox"/> Other()	
Analyses		Asbestos (%WW)		Matrix		Solid (S) Water (W)		Dangerous Goods Hazard Warning		Sample Comments	
Where metals are requested, please specify Type of Filled/empty.		OCPs		Soil		X X					
SULTE code must be used to attract SULTE pricing.		SULTE B1 TRH, BTEX		Water		X X X					
SULTE B7 - TRH, BTEX, PAHs, Metals		PAHs Metals		Water		X X X					
SULTE S26 - TRH, BTEX, PAHs, Metals		Asbestos		Soil		X X					
PH and CEO		OCPs		Water		X X X					
SULTE B7 - TRH, BTEX, PAHs, Metals		OCPs		Water		X X X					
SULTE B1 TRH, BTEX		PAHs Metals		Water		X X X					
SULTE S26 - TRH, BTEX, PAHs, Metals		Asbestos		Soil		X X X					
Project No		NEW/22P-0012		Sample Date/Time		dd/mm/yyyy/hh:mm		Total Counts		10 8	
Method of Shipment		<input type="checkbox"/> Courier (#)		<input type="checkbox"/> Hand Delivered		<input type="checkbox"/> Postal		Name		Signature	
Laboratory Use Only		Received By						SYD BNE MEL PER ADL NTL DRW		Signature	
Received By								SYD BNE MEL PER ADL NTL DRW		Signature	
Eurofins Environment Testing Australia Pty Ltd										Signature	
										Date	
										Time	
										Temperature	
										Report No	
1		SS7		7.2.22		Soil		2		8:30am	
2		SS8		3.2.22		Soil		3		861538	
3		WB.3.2.22		3.2.22		Water		4		Approved on: 8 August 2019	
4		WB.4.2.22		4.2.22		Water		5		Signature	
5		WB.7.2.22		7.2.22		Water		6		Date	
6		TB.3.2.22		3.2.22		Water		7		Time	
7		TB.4.2.22		4.2.22		Water		8		Temperature	
8		TB.7.2.22		7.2.22		Water		9		Report No	
9		TP27_024.3		4.2.22		Soil		10			
10		TP28_024.3		4.2.22		Soil					

Eurofins Environment Testing Australia Pty Ltd

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NATA # 1261 Site # 20794

Newcastle
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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Sample Receipt Advice

Company name:	Qualtest
Contact name:	Libby Betz
Project name:	LBD
Project ID:	NEW22P-0012
Turnaround time:	5 Day
Date/Time received	Feb 9, 2022 8:30 AM
Eurofins reference	861538

Sample Information

- ✓ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ✗ All samples have been received as described on the above COC.
- ✗ COC has been completed correctly.
- ✓ Attempt to chill was evident.
- ✓ Appropriately preserved sample containers have been used.
- ✓ All samples were received in good condition.
- ✓ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ✓ Appropriate sample containers have been used.
- ✓ Sample containers for volatile analysis received with zero headspace.
- ✓ Split sample sent to requested external lab.
- ✗ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Two Fragment samples; TP25_0.0-0.1 & TP32_0.0-0.1 logged separately, as different matrix (Building Materials) as Jar and Bag of same name. Asb Presence/Absence not requested, only AsbWA, so Fragments logged on Hold. | DAM3 not received.

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Andrew Black on phone : (+61) 2 9900 8490 or by email: AndrewBlack@eurofins.com

Results will be delivered electronically via email to Libby Betz - libbybetz@qualtest.com.au.

Note: A copy of these results will also be delivered to the general Qualtest email address.

Qualtest
2 Murray Dwyer Circuit
Mayfield West
NSW 2304



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025—Testing
NATA is a signatory to the ILAC Mutual Recognition
Arrangement for the mutual recognition of the
equivalence of testing, medical testing, calibration,
inspection, proficiency testing scheme providers and
reference materials producers reports and certificates.

Attention: Libby Betz
Report 861538-AID
Project Name LBD
Project ID NEW22P-0012
Received Date Feb 09, 2022
Date Reported Feb 17, 2022

Methodology:

Asbestos Fibre Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-containing material (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.

Project Name LBD
Project ID NEW22P-0012
Date Sampled Feb 03, 2022 to Feb 07, 2022
Report 861538-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP01_0.0-0.1	22-Fe13695	Feb 03, 2022	Approximate Sample 35g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP01A_0.0-0.1	22-Fe13696	Feb 03, 2022	Approximate Sample 655g Sample consisted of: Brown fine-grained clayey soil, cement, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP10_0.0-0.1	22-Fe13701	Feb 03, 2022	Approximate Sample 32g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP02_0.0-0.1	22-Fe13703	Feb 03, 2022	Approximate Sample 34g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP03_0.0-0.1	22-Fe13704	Feb 03, 2022	Approximate Sample 35g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP05_0.0-0.1	22-Fe13706	Feb 03, 2022	Approximate Sample 39g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP14_0.0-0.1	22-Fe13710	Feb 03, 2022	Approximate Sample 93g Sample consisted of: Brown fine-grained clayey soil, bitumen, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP23_0.0-0.1	22-Fe13720	Feb 04, 2022	Approximate Sample 29g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP25_0.0-0.1	22-Fe13722	Feb 04, 2022	Approximate Sample 452g Sample consisted of: Brown fine-grained clayey soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP26_0.0-0.1	22-Fe13723	Feb 04, 2022	Approximate Sample 651g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 1.0g Total estimated asbestos content in ACM = 0.10g* Total estimated asbestos concentration in ACM = 0.015% w/w* Organic fibre detected. No trace asbestos detected.
TP27_0.0-0.1	22-Fe13724	Feb 04, 2022	Approximate Sample 691g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP28_0.0-0.1	22-Fe13725	Feb 04, 2022	Approximate Sample 538g Sample consisted of: Brown fine-grained clayey soil, organic debris and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 7.6g Total estimated asbestos content in ACM = 0.76g* Total estimated asbestos concentration in ACM = 0.14% w/w* Organic fibre detected. No trace asbestos detected.
TP32_0.0-0.1	22-Fe13729	Feb 04, 2022	Approximate Sample 607g Sample consisted of: Brown fine-grained clayey soil, brick, cement and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 2.8g Total estimated asbestos content in ACM = 0.28g* Total estimated asbestos concentration in ACM = 0.047% w/w* Organic fibre detected. No trace asbestos detected.
TP35_0.0-0.1	22-Fe13732	Feb 04, 2022	Approximate Sample 33g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP37_0.0-0.1	22-Fe13735	Feb 07, 2022	Approximate Sample 25g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP41_0.0-0.1	22-Fe13741	Feb 07, 2022	Approximate Sample 39g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP42_0.0-0.1	22-Fe13742	Feb 07, 2022	Approximate Sample 56g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP48_0.0-0.1	22-Fe13748	Feb 07, 2022	Approximate Sample 37g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP50_0.0-0.1	22-Fe13750	Feb 07, 2022	Approximate Sample 730g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP50_0.4-0.5	22-Fe13751	Feb 07, 2022	Approximate Sample 751g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP50_0.9-1.0	22-Fe13752	Feb 04, 2022	Approximate Sample 781g Sample consisted of: Brown coarse-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP50_1.4-1.5	22-Fe13753	Feb 04, 2022	Approximate Sample 818g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP51_0.0-0.1	22-Fe13754	Feb 07, 2022	Approximate Sample 664g Sample consisted of: Brown coarse-grained clayey soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP51_0.4-0.5	22-Fe13755	Feb 07, 2022	Approximate Sample 631g Sample consisted of: Brown coarse-grained clayey soil, organic debris, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
TP52_0.0-0.1	22-Fe13756	Feb 07, 2022	Approximate Sample 43g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP53_0.0-0.1	22-Fe13757	Feb 07, 2022	Approximate Sample 57g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP53_0.1-0.2	22-Fe13758	Feb 07, 2022	Approximate Sample 57g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SS1	22-Fe13764	Feb 07, 2022	Approximate Sample 55g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Feb 16, 2022	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Feb 16, 2022	Indefinite

Eurofins Environment Testing Australia Pty Ltd

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6 Monterey Road Dandenong South VIC 3175 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254	Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone : +61 2 9900 8400 NATA # 1261 Site # 18217	1/21 Smallwood Place Murarrie QLD 4172 Phone : +61 7 3902 4600 NATA # 1261 Site # 20794	4/52 Industrial Drive Mayfield East NSW 2304 PO Box 60 Wickham 2293 Phone : +61 2 4968 8448 NATA # 1261 Site # 25079

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Auckland

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Christchurch
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43 Detroit Drive Rolleston, Christchurch 7675
Phone : 0800 856 450

Company Name: Qualtest
Address: 2 Murray Dwyer Circuit
 Mayfield West
 NSW 2304

Project Name: LBD
Project ID: NEW22P-0012

Order No.:
Report #: 861538
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Feb 9, 2022 8:30 AM
Due: Feb 16, 2022
Priority: 5 Day
Contact Name: Libby Betz

Eurofins Analytical Services Manager : Andrew Black
Sample Detail
Melbourne Laboratory - NATA # 1261 Site # 1254
Sydney Laboratory - NATA # 1261 Site # 18217
Brisbane Laboratory - NATA # 1261 Site # 20794
Mayfield Laboratory - NATA # 1261 Site # 25079
Perth Laboratory - NATA # 2377 Site # 2370
External Laboratory

No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID							
1	TP01_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13695	X		X		X	X	X
2	TP01A_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13696		X			X	X	X
3	D3.2.22	Feb 03, 2022		Soil	N22-Fe13697					X		X
4	TP07_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13698			X		X	X	
5	TP08_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13699			X		X	X	
6	TP09_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13700			X		X	X	
7	TP10_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13701	X			X	X		X
8	TP11_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13702			X		X	X	
9	TP02_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13703	X			X	X	X	



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NATA # 1261 Site # 1254	NATA # 1261 Site # 18127	NATA # 1261 Site # 20794	Phone : +61 2 4968 8448
			NATA # 1261 Site # 25079

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IANZ # 1290

Company Name:	Qualtest	Order No.:		Received:	Feb 9, 2022 8:30 AM
Address:	2 Murray Dwyer Circuit Mayfield West NSW 2304	Report #:	861538	Due:	Feb 16, 2022
		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH											
Eurofins Suite B7											
Cation Exchange Capacity											
Moisture Set											
Metals M8											
Organochlorine Pesticides											
Polyyclic Aromatic Hydrocarbons											
pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217									X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
10	TP03_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13704	X			X	X	X
11	TP04_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13705				X	X	X
12	TP05_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13706	X			X	X	X
13	TP06_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13707				X	X	X
14	TP12_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13708				X	X	X
15	TP13_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13709				X	X	X
16	TP14_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13710	X			X	X	X
17	TP15_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13711				X	X	X
18	TP16_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13712					X	X
19	D.4.2.22	Not Provided		Soil	N22-Fe13713					X	X
20	TP17_0.0-0.1	Not Provided		Soil	N22-Fe13714				X	X	X



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			NATA # 1261 Site # 20790

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NATA # 2377 Site # 2370

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		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH											
Eurofins Suite B7											
Cation Exchange Capacity											
Moisture Set											
Metals M8											
Organochlorine Pesticides											
Polyyclic Aromatic Hydrocarbons											
pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217									X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
21	TP18_0.0-0.1	Not Provided		Soil	N22-Fe13715				X	X	X
22	TP19_0.0-0.1	Not Provided		Soil	N22-Fe13716				X	X	X
23	TP20_0.0-0.1	Not Provided		Soil	N22-Fe13717				X	X	X
24	TP21_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13718				X	X	X
25	TP22_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13719				X	X	X
26	TP23_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13720	X			X	X	X
27	TP24_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13721				X	X	X
28	TP25_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13722	X				X	
29	TP26_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13723	X				X	X
30	TP27_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13724	X				X	X
31	TP28_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13725	X				X	X

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 NATA # 1261 Site # 18217

Brisbane
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 NATA # 1261 Site # 20794

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 NATA # 1261 Site # 25079

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Company Name: Qualtest
Address: 2 Murray Dwyer Circuit
 Mayfield West
 NSW 2304

Project Name: LBD
Project ID: NEW22P-0012

Order No.:
Report #: 861538
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Feb 9, 2022 8:30 AM
Due: Feb 16, 2022
Priority: 5 Day
Contact Name: Libby Betz

Eurofins Analytical Services Manager : Andrew Black
Sample Detail
Melbourne Laboratory - NATA # 1261 Site # 1254
Sydney Laboratory - NATA # 1261 Site # 18217
Brisbane Laboratory - NATA # 1261 Site # 20794
Mayfield Laboratory - NATA # 1261 Site # 25079
Perth Laboratory - NATA # 2377 Site # 2370
External Laboratory

32	TP29_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13726			X	X	X	
33	TP30_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13727			X	X	X	
34	TP31_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13728			X	X	X	
35	TP32_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13729	X			X	X	
36	TP33_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13730			X	X	X	
37	TP34_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13731			X	X	X	
38	TP35_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13732	X			X	X	
39	D.7.2.22	Feb 07, 2022		Soil	N22-Fe13733				X	X	
40	TP36_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13734			X	X	X	
41	TP37_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13735	X			X	X	
42	D1.4.2.22	Feb 07, 2022		Soil	N22-Fe13736				X	X	



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			NATA # 1261 Site # 20790

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--	--

Company Name:	Qualtest	Order No.:		Received:	Feb 9, 2022 8:30 AM
Address:	2 Murray Dwyer Circuit Mayfield West NSW 2304	Report #:	861538	Due:	Feb 16, 2022
		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH												
Eurofins Suite B7												
Cation Exchange Capacity												
Moisture Set												
Metals M8												
Organochlorine Pesticides												
Polyyclic Aromatic Hydrocarbons												
pH (1:5 Aqueous extract at 25°C as rec.)												
HOLD												
Asbestos - WA guidelines												
Asbestos - AS4964												
Sample Detail												
Melbourne Laboratory - NATA # 1261 Site # 1254										X		
Sydney Laboratory - NATA # 1261 Site # 18217							X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												
Mayfield Laboratory - NATA # 1261 Site # 25079												
Perth Laboratory - NATA # 2377 Site # 2370												
External Laboratory												
43	TP38_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13737				X	X	X	
44	TP38_0.6-0.7	Feb 07, 2022		Soil	N22-Fe13738				X	X	X	
45	TP39_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13739				X	X	X	
46	TP40_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13740				X	X	X	
47	TP41_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13741	X		X	X	X	X	X
48	TP42_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13742	X		X		X	X	
49	TP43_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13743			X		X	X	
50	TP44_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13744			X		X	X	
51	TP45_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13745			X		X	X	
52	TP46_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13746			X		X	X	
53	TP47_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13747			X		X	X	

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Project Name: LBD
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Eurofins Analytical Services Manager : Andrew Black
Sample Detail
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Sydney Laboratory - NATA # 1261 Site # 18217
Brisbane Laboratory - NATA # 1261 Site # 20794
Mayfield Laboratory - NATA # 1261 Site # 25079
Perth Laboratory - NATA # 2377 Site # 2370
External Laboratory

54	TP48_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13748	X			X	X		
55	TP49_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13749			X	X	X		
56	TP50_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13750	X				X		X
57	TP50_0.4-0.5	Feb 07, 2022		Soil	N22-Fe13751	X						
58	TP50_0.9-1.0	Feb 04, 2022		Soil	N22-Fe13752	X						
59	TP50_1.4-1.5	Feb 04, 2022		Soil	N22-Fe13753	X		X	X	X		
60	TP51_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13754	X				X		X
61	TP51_0.4-0.5	Feb 07, 2022		Soil	N22-Fe13755	X						
62	TP52_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13756	X			X	X	X	
63	TP53_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13757	X			X	X	X	
64	TP53_0.1-0.2	Feb 07, 2022		Soil	N22-Fe13758	X			X	X	X	



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NATA # 1261 Site # 1254	NATA # 1261 Site # 18217	NATA # 1261 Site # 20794	Phone : +61 2 4968 8448
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Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH											
Eurofins Suite B7											
Cation Exchange Capacity											
Moisture Set											
Metals M8											
Organochlorine Pesticides											
Polyyclic Aromatic Hydrocarbons											
pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217									X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
65	SS4	Feb 07, 2022		Soil	N22-Fe13759				X	X	X
66	DAM1	Feb 03, 2022		Water	N22-Fe13760				X		X
67	DAM2	Feb 03, 2022		Water	N22-Fe13761				X		X
68	WD.3.2.22	Feb 03, 2022		Water	N22-Fe13762				X		X
69	LC1	Feb 03, 2022		Water	N22-Fe13763				X		X
70	SS1	Feb 07, 2022		Soil	N22-Fe13764	X				X	X
71	SS2	Feb 07, 2022		Soil	N22-Fe13765			X	X	X	
72	SS3	Feb 07, 2022		Soil	N22-Fe13766				X		X
73	SS5	Feb 07, 2022		Soil	N22-Fe13767			X	X	X	
74	SED1	Feb 03, 2022		Soil	N22-Fe13768				X		X
75	SED2	Feb 03, 2022		Soil	N22-Fe13769			X	X	X	

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Company Name: Qualtest
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NSW 2304

Project Name: LBD
Project ID: NEW22P-0012

Order No.:
Report #: 861538
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Feb 9, 2022 8:30 AM
Due: Feb 16, 2022
Priority: 5 Day
Contact Name: Libby Betz

Eurofins Analytical Services Manager : Andrew Black
Sample Detail
Melbourne Laboratory - NATA # 1261 Site # 1254
Sydney Laboratory - NATA # 1261 Site # 18217
Brisbane Laboratory - NATA # 1261 Site # 20794
Mayfield Laboratory - NATA # 1261 Site # 25079
Perth Laboratory - NATA # 2377 Site # 2370
External Laboratory

76	SED3	Feb 03, 2022		Soil	N22-Fe13770				X		
77	SS6	Feb 03, 2022		Soil	N22-Fe13771			X		X	
78	SS7	Feb 07, 2022		Soil	N22-Fe13772			X		X	
79	SS8	Feb 03, 2022		Soil	N22-Fe13773			X		X	
80	WB.3.2.22	Feb 03, 2022		Water	N22-Fe13774			X			X
81	WB.4.2.22	Feb 04, 2022		Water	N22-Fe13775						X
82	WB.7.2.22	Feb 07, 2022		Water	N22-Fe13776						X
83	TB.3.2.22	Feb 03, 2022		Water	N22-Fe13777						X
84	TB.4.2.22	Feb 04, 2022		Water	N22-Fe13778						X
85	TB.7.2.22	Feb 07, 2022		Water	N22-Fe13779						X
86	TP01_0.4-0.5	Feb 03, 2022		Soil	N22-Fe13780		X				

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87	TP01_0.5-0.6	Feb 03, 2022		Soil	N22-Fe13781		X					
88	TP01A_0.4-0.5	Feb 03, 2022		Soil	N22-Fe13782		X					
89	TP01A_0.9-1.0	Feb 03, 2022		Soil	N22-Fe13783		X					
90	TP01A_1.4-1.5	Feb 03, 2022		Soil	N22-Fe13784		X					
91	TP01A_1.7-1.8	Feb 03, 2022		Soil	N22-Fe13785		X					
92	TP07_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13786		X					
93	TP08_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13787		X					
94	TP09_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13788		X					
95	TP10_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13789		X					
96	TP10_0.5-0.6	Feb 03, 2022		Soil	N22-Fe13790		X					
97	TP02_0.4-0.5	Feb 03, 2022		Soil	N22-Fe13791		X					

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98	TP03_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13792		X					
99	TP04_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13793		X					
100	TP05_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13794		X					
101	TP06_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13795		X					
102	TP11_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13796		X					
103	TP12_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13797		X					
104	TP13_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13798		X					
105	TP14_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13799		X					
106	TP15_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13800		X					
107	TP16_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13801		X					
108	TP17_0.2-0.3	Not Provided		Soil	N22-Fe13802		X					

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109	TP18_0.2-0.3	Not Provided		Soil	N22-Fe13803		X							
110	TP19_0.2-0.3	Not Provided		Soil	N22-Fe13804		X							
111	TP20_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13805		X							
112	TP21_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13806		X							
113	TP22_0.15-0.25	Feb 04, 2022		Soil	N22-Fe13807		X							
114	TP23_0.3-0.4	Feb 04, 2022		Soil	N22-Fe13808		X							
115	TP24_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13809		X							
116	TP25_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13810		X							
117	TP26_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13811		X							
118	TP29_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13812		X							

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119	TP30_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13813		X					
120	TP31_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13814		X					
121	TP32_0.4-0.5	Feb 04, 2022		Soil	N22-Fe13815		X					
122	TP33_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13816		X					
123	TP34_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13817		X					
124	TP35_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13818		X					
125	TP36_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13819		X					
126	TP37_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13820		X					
127	TP38_0.8-0.9	Feb 07, 2022		Soil	N22-Fe13821		X					
128	TP39_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13822		X					
129	TP40_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13823		X					

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130	TP41_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13824		X								
131	TP42_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13825		X								
132	TP43_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13826		X								
133	TP44_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13827		X								
134	TP45_0.3-0.4	Feb 07, 2022		Soil	N22-Fe13828		X								
135	TP46_0.3-0.4	Feb 04, 2022		Soil	N22-Fe13829		X								
136	TP47_0.3-0.4	Feb 07, 2022		Soil	N22-Fe13830		X								
137	TP48_0.3-0.4	Feb 07, 2022		Soil	N22-Fe13831		X								
138	TP49_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13832		X								
139	TP50_1.6-1.7	Feb 07, 2022		Soil	N22-Fe13833		X								
140	TP52_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13834		X								



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Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

	BTEXN and Volatile TRH	Eurofins Suite B7	Cation Exchange Capacity	Moisture Set	Metals M8	Organochlorine Pesticides	Polyyclic Aromatic Hydrocarbons	pH (1:5 Aqueous extract at 25°C as rec.)	HOLD	Asbestos - WA guidelines	Asbestos - AS4964				
Melbourne Laboratory - NATA # 1261 Site # 1254										X					
Sydney Laboratory - NATA # 1261 Site # 18217				X	X	X	X	X	X	X	X				
Brisbane Laboratory - NATA # 1261 Site # 20794															
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External Laboratory															
141	TP53_0.4-0.5	Feb 07, 2022		Soil	N22-Fe13835			X							
142	TP53_0.8-0.9	Feb 04, 2022		Soil	N22-Fe13836			X							
143	TP27_0.2-0.3	Not Provided		Soil	N22-Fe13840			X							
144	TP28_0.2-0.3	Not Provided		Soil	N22-Fe13841			X							
145	TP25_0.0-0.1	Feb 04, 2022		Building Materials	N22-Fe14367			X							
146	TP32_0.0-0.1	Feb 04, 2022		Building Materials	N22-Fe14368			X							
Test Counts					16	12	61	2	50	10	50	72	2	29	3

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. Information identified on this report with the colour **orange** indicates sections of the report not covered by the laboratory's scope of NATA accreditation.
6. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (% w/w)
F/fld	Airborne fibre filter loading as Fibres (N) per Fields counted (n)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (C)
g, kg	Mass, e.g. of whole sample (M) or asbestos-containing find within the sample (m)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (V = r x t)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (r)
min	Time (t), e.g. of air sample collection period

Calculations

$$\text{Airborne Fibre Concentration: } C = \left(\frac{A}{n} \right) \times \left(\frac{N}{v} \right) \times \left(\frac{1}{r} \right) = K \times \left(\frac{N}{n} \right) \times \left(\frac{1}{v} \right)$$

$$\text{Asbestos Content (as asbestos): } \% \text{ w/w} = \frac{(m \times P_A)}{M}$$

$$\text{Weighted Average (of asbestos): } \%_{WA} = \sum \frac{(m \times P_A)x}{x}$$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 Appendix 2, else assumed to be 15% in accordance with WA DOH Appendix 2 (P_A).
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to "non-bonded / friable".
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (% w/w).
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
HSG248	UK HSE HSG248, <i>Asbestos: The Analysts Guide</i> , 2nd Edition (2021).
HSG264	UK HSE HSG264, <i>Asbestos: The Survey Guide</i> (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (K) as derived from the effective filter area of the given AFM membrane used for collecting the sample (A) and the projected eyepiece graticule area of the specific microscope used for the analysis (a).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, <i>Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres</i> , 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according to AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM, Government of Western Australia, <i>Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia</i> (updated 2021), including Appendix Four: <i>Laboratory analysis</i>
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (% _{WA}).

Comments

22-Fe13722: Sample received was less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

22-Fe13695, 22-Fe13701 to 22-Fe13720, 22-Fe13732 to 22-Fe13748, 22-Fe13756 to 22-Fe13764: The samples received were not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-samples to be analysed accurately represented the samples received.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Chamath JHM Annakkage Senior Analyst-Asbestos (NSW)

Authorised by:

Laxman Dias Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accredited

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Environment Testing

Qualtest
**2 Murray Dwyer Circuit
Mayfield West
NSW 2304**

**NATA Accredited
Accreditation Number 1261
Site Number 18217**
Accredited for compliance with ISO/IEC 17025 – Testing NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.
Attention: Libby Betz

Report 861538-S
Project name LBD
Project ID NEW22P-0012
Received Date Feb 09, 2022

Client Sample ID			TP01_0.0-0.1 Soil N22-Fe13695 Feb 03, 2022	TP01A_0.0-0.1 Soil N22-Fe13696 Feb 03, 2022	D3.2.22 Soil N22-Fe13697 Feb 03, 2022	TP07_0.0-0.1 Soil N22-Fe13698 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	132	115	79	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&i)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP01_0.0-0.1 Soil N22-Fe13695 Feb 03, 2022	TP01A_0.0-0.1 Soil N22-Fe13696 Feb 03, 2022	D3.2.22 Soil N22-Fe13697 Feb 03, 2022	TP07_0.0-0.1 Soil N22-Fe13698 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	1.2	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	92	77	78	93
p-Terphenyl-d14 (surr.)	1	%	123	92	88	103
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	120	-	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	8.0	-	-	-
% Moisture	1	%	20	21	26	27
Heavy Metals						
Arsenic	2	mg/kg	5.6	6.3	4.4	3.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	36	35	40	41
Copper	5	mg/kg	15	18	12	13
Lead	5	mg/kg	35	120	39	26
Mercury	0.1	mg/kg	< 0.1	0.3	< 0.1	< 0.1
Nickel	5	mg/kg	18	24	17	18
Zinc	5	mg/kg	76	120	60	44
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	28	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-HCH	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-HCH	0.05	mg/kg	-	< 0.05	-	-
d-HCH	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.5	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.05	mg/kg	-	< 0.05	-	-
Toxaphene	0.5	mg/kg	-	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-

Client Sample ID			TP01_0.0-0.1 Soil N22-Fe13695 Feb 03, 2022	TP01A_0.0-0.1 Soil N22-Fe13696 Feb 03, 2022	D3.2.22 Soil N22-Fe13697 Feb 03, 2022	TP07_0.0-0.1 Soil N22-Fe13698 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.5	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.5	-	-
Dibutylchlorendate (surr.)	1	%	-	75	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	116	-	-

Client Sample ID			TP08_0.0-0.1 Soil N22-Fe13699 Feb 03, 2022	TP09_0.0-0.1 Soil N22-Fe13700 Feb 03, 2022	TP10_0.0-0.1 Soil N22-Fe13701 Feb 03, 2022	TP11_0.0-0.1 Soil N22-Fe13702 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	52	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP08_0.0-0.1 Soil N22-Fe13699 Feb 03, 2022	TP09_0.0-0.1 Soil N22-Fe13700 Feb 03, 2022	TP10_0.0-0.1 Soil N22-Fe13701 Feb 03, 2022	TP11_0.0-0.1 Soil N22-Fe13702 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	90	94	90	93
p-Terphenyl-d14 (surr.)	1	%	124	130	99	122
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	-
% Moisture	1	%	25	15	16	18
Heavy Metals						
Arsenic	2	mg/kg	2.1	2.6	2.7	4.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	72	15	26	53
Copper	5	mg/kg	26	< 5	8.2	12
Lead	5	mg/kg	11	13	15	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	40	< 5	11	19
Zinc	5	mg/kg	38	14	29	26
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-HCH	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-HCH	0.05	mg/kg	-	-	< 0.05	-
d-HCH	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.05	mg/kg	-	-	< 0.05	-
Toxaphene	0.5	mg/kg	-	-	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorethane (surr.)	1	%	-	-	103	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	81	-

Client Sample ID			TP02_0.0-0.1 Soil N22-Fe13703 Feb 03, 2022	TP03_0.0-0.1 Soil N22-Fe13704 Feb 03, 2022	TP04_0.0-0.1 Soil N22-Fe13705 Feb 03, 2022	TP05_0.0-0.1 Soil N22-Fe13706 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	93	91	89	86
p-Terphenyl-d14 (surr.)	1	%	132	129	117	112
% Moisture	1	%	26	15	22	16
Heavy Metals						
Arsenic	2	mg/kg	2.3	5.5	< 2	5.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	86	50	74	30
Copper	5	mg/kg	33	7.7	25	5.5
Lead	5	mg/kg	14	22	11	29
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	41	13	30	8.4
Zinc	5	mg/kg	45	32	23	26

Client Sample ID			TP06_0.0-0.1 Soil N22-Fe13707 Feb 03, 2022	TP12_0.0-0.1 Soil N22-Fe13708 Feb 03, 2022	TP13_0.0-0.1 Soil N22-Fe13709 Feb 03, 2022	G01TP14_0.0-0.1 Soil N22-Fe13710 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	58
TRH C29-C36	50	mg/kg	-	-	-	86
TRH C10-C36 (Total)	50	mg/kg	-	-	-	144

Client Sample ID			TP06_0.0-0.1 Soil N22-Fe13707 Feb 03, 2022	TP12_0.0-0.1 Soil N22-Fe13708 Feb 03, 2022	TP13_0.0-0.1 Soil N22-Fe13709 Feb 03, 2022	G01TP14_0.0-0.1 Soil N22-Fe13710 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	72
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	-	< 0.5
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	-	< 50
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	-	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	85	85	84	79
p-Terphenyl-d14 (surr.)	1	%	109	112	114	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	170
TRH >C34-C40	100	mg/kg	-	-	-	190
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	360
% Moisture	1	%	20	19	9.4	8.6
Heavy Metals						
Arsenic	2	mg/kg	2.5	4.5	3.1	2.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	64	44	55	110
Copper	5	mg/kg	24	7.6	13	15
Lead	5	mg/kg	18	18	23	13
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			TP06_0.0-0.1 Soil N22-Fe13707 Feb 03, 2022	TP12_0.0-0.1 Soil N22-Fe13708 Feb 03, 2022	TP13_0.0-0.1 Soil N22-Fe13709 Feb 03, 2022	G01TP14_0.0-0.1 Soil N22-Fe13710 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Heavy Metals						
Nickel	5	mg/kg	34	14	20	22
Zinc	5	mg/kg	52	18	19	37
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 1
4,4'-DDD	0.05	mg/kg	-	-	-	< 0.5
4,4'-DDE	0.05	mg/kg	-	-	-	< 0.5
4,4'-DDT	0.05	mg/kg	-	-	-	< 0.5
a-HCH	0.05	mg/kg	-	-	-	< 0.5
Aldrin	0.05	mg/kg	-	-	-	< 0.5
b-HCH	0.05	mg/kg	-	-	-	< 0.5
d-HCH	0.05	mg/kg	-	-	-	< 0.5
Dieldrin	0.05	mg/kg	-	-	-	< 0.5
Endosulfan I	0.05	mg/kg	-	-	-	< 0.5
Endosulfan II	0.05	mg/kg	-	-	-	< 0.5
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.5
Endrin	0.05	mg/kg	-	-	-	< 0.5
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.5
Endrin ketone	0.05	mg/kg	-	-	-	< 0.5
g-HCH (Lindane)	0.05	mg/kg	-	-	-	< 0.5
Heptachlor	0.05	mg/kg	-	-	-	< 0.5
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.5
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.5
Methoxychlor	0.05	mg/kg	-	-	-	< 0.5
Toxaphene	0.5	mg/kg	-	-	-	< 10
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.5
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 1
Dibutylchlorendate (surr.)	1	%	-	-	-	101
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	75

Client Sample ID			TP15_0.0-0.1 Soil N22-Fe13711 Feb 03, 2022	TP16_0.0-0.1 Soil N22-Fe13712 Feb 04, 2022	D.4.2.22 Soil N22-Fe13713 Not Provided^{l12}	TP17_0.0-0.1 Soil N22-Fe13714 Not Provided^{l12}
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	-
TRH C10-C14	20	mg/kg	-	< 20	< 20	-
TRH C15-C28	50	mg/kg	-	< 50	< 50	-
TRH C29-C36	50	mg/kg	-	< 50	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	< 50	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	-

Client Sample ID			TP15_0.0-0.1 Soil N22-Fe13711 Feb 03, 2022	TP16_0.0-0.1 Soil N22-Fe13712 Feb 04, 2022	D.4.2.22 Soil N22-Fe13713 Not Provided ^{l12}	TP17_0.0-0.1 Soil N22-Fe13714 Not Provided ^{l12}
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
BTEX						
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	97	91	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	< 0.5	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	< 50	-
TRH C6-C10	20	mg/kg	-	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	83	89	54	91
p-Terphenyl-d14 (surr.)	1	%	108	118	76	120
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	< 50	< 50	-
TRH >C16-C34	100	mg/kg	-	< 100	< 100	-
TRH >C34-C40	100	mg/kg	-	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	< 100	-
% Moisture	1	%	14	17	18	19
Heavy Metals						
Arsenic	2	mg/kg	4.9	17	8.8	6.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	47	45	29	29
Copper	5	mg/kg	7.2	< 5	< 5	6.6
Lead	5	mg/kg	19	24	17	13
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	16	7.3	5.5	8.7
Zinc	5	mg/kg	15	29	16	31

Client Sample ID			TP18_0.0-0.1 Soil N22-Fe13715 Not Provided ^{l12}	TP19_0.0-0.1 Soil N22-Fe13716 Not Provided ^{l12}	TP20_0.0-0.1 Soil N22-Fe13717 Not Provided ^{l12}	TP21_0.0-0.1 Soil N22-Fe13718 Feb 04, 2022
Sample Matrix	LOR	Unit				
Eurofins Sample No.						
Date Sampled						
Test/Reference						
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	95	92	97	97
p-Terphenyl-d14 (surr.)	1	%	127	120	130	134
% Moisture	1	%	17	24	19	21
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	6.9	6.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	18	18	19	40
Copper	5	mg/kg	< 5	12	< 5	< 5
Lead	5	mg/kg	10	12	20	18
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.2	5.7	< 5	8.1
Zinc	5	mg/kg	14	33	20	26

Client Sample ID			TP22_0.0-0.1 Soil N22-Fe13719 Feb 04, 2022	TP23_0.0-0.1 Soil N22-Fe13720 Feb 04, 2022	TP24_0.0-0.1 Soil N22-Fe13721 Feb 04, 2022	TP25_0.0-0.1 Soil N22-Fe13722 Feb 04, 2022
Sample Matrix	LOR	Unit				
Eurofins Sample No.						
Date Sampled						
Test/Reference						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	75
TRH C10-C36 (Total)	50	mg/kg	-	-	-	75

Client Sample ID			TP22_0.0-0.1 Soil N22-Fe13719 Feb 04, 2022	TP23_0.0-0.1 Soil N22-Fe13720 Feb 04, 2022	TP24_0.0-0.1 Soil N22-Fe13721 Feb 04, 2022	TP25_0.0-0.1 Soil N22-Fe13722 Feb 04, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	100
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	-	< 0.5
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	-	< 50
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	-	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	0.8	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	0.8	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	1.6	< 0.5
2-Fluorobiphenyl (surr.)	1	%	96	75	90	79
p-Terphenyl-d14 (surr.)	1	%	128	92	90	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	< 100
% Moisture	1	%	20	20	21	29
Heavy Metals						
Arsenic	2	mg/kg	7.9	5.6	3.7	4.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	3.7
Chromium	5	mg/kg	32	27	60	17
Copper	5	mg/kg	13	8.2	23	35
Lead	5	mg/kg	30	14	22	92
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			TP22_0.0-0.1 Soil N22-Fe13719 Feb 04, 2022	TP23_0.0-0.1 Soil N22-Fe13720 Feb 04, 2022	TP24_0.0-0.1 Soil N22-Fe13721 Feb 04, 2022	TP25_0.0-0.1 Soil N22-Fe13722 Feb 04, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Heavy Metals						
Nickel	5	mg/kg	8.1	9.0	43	16
Zinc	5	mg/kg	44	37	75	1300
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	-	-
4,4'-DDD	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDE	0.05	mg/kg	-	< 0.05	-	-
4,4'-DDT	0.05	mg/kg	-	< 0.05	-	-
a-HCH	0.05	mg/kg	-	< 0.05	-	-
Aldrin	0.05	mg/kg	-	< 0.05	-	-
b-HCH	0.05	mg/kg	-	< 0.05	-	-
d-HCH	0.05	mg/kg	-	< 0.05	-	-
Dieldrin	0.05	mg/kg	-	< 0.05	-	-
Endosulfan I	0.05	mg/kg	-	< 0.05	-	-
Endosulfan II	0.05	mg/kg	-	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	-	-
Endrin	0.05	mg/kg	-	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	-	< 0.05	-	-
Endrin ketone	0.05	mg/kg	-	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	-	< 0.05	-	-
Heptachlor	0.05	mg/kg	-	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	-	-
Methoxychlor	0.05	mg/kg	-	< 0.05	-	-
Toxaphene	0.5	mg/kg	-	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	-	91	-	-
Tetrachloro-m-xylene (surr.)	1	%	-	77	-	-

Client Sample ID			TP26_0.0-0.1 Soil N22-Fe13723 Feb 04, 2022	TP27_0.0-0.1 Soil N22-Fe13724 Feb 04, 2022	TP28_0.0-0.1 Soil N22-Fe13725 Feb 04, 2022	TP29_0.0-0.1 Soil N22-Fe13726 Feb 04, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	58	< 50	-
TRH C29-C36	50	mg/kg	65	110	< 50	-
TRH C10-C36 (Total)	50	mg/kg	65	168	< 50	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-

Client Sample ID			TP26_0.0-0.1 Soil N22-Fe13723 Feb 04, 2022	TP27_0.0-0.1 Soil N22-Fe13724 Feb 04, 2022	TP28_0.0-0.1 Soil N22-Fe13725 Feb 04, 2022	TP29_0.0-0.1 Soil N22-Fe13726 Feb 04, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
BTEX						
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	58	96	114	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound)*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound)*	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound)*	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	67	69	55	95
p-Terphenyl-d14 (surr.)	1	%	86	95	85	124
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	< 100	110	< 100	-
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	110	< 100	-
% Moisture	1	%	12	36	26	22
Heavy Metals						
Arsenic	2	mg/kg	12	13	5.9	7.2
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	24	20	25
Copper	5	mg/kg	21	22	20	6.4
Lead	5	mg/kg	130	61	110	19
Mercury	0.1	mg/kg	0.2	0.1	0.2	< 0.1
Nickel	5	mg/kg	6.5	43	8.8	7.5
Zinc	5	mg/kg	540	270	1100	25

Client Sample ID			TP30_0.0-0.1 Soil N22-Fe13727 Feb 04, 2022	TP31_0.0-0.1 Soil N22-Fe13728 Feb 04, 2022	TP32_0.0-0.1 Soil N22-Fe13729 Feb 04, 2022	TP33_0.0-0.1 Soil N22-Fe13730 Feb 04, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	54	-
TRH C10-C36 (Total)	50	mg/kg	-	-	54	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	94	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&i)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	61	87	92	87
p-Terphenyl-d14 (surr.)	1	%	86	97	88	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	-
% Moisture	1	%	17	16	11	9.8

Client Sample ID			TP30_0.0-0.1 Soil N22-Fe13727 Feb 04, 2022	TP31_0.0-0.1 Soil N22-Fe13728 Feb 04, 2022	TP32_0.0-0.1 Soil N22-Fe13729 Feb 04, 2022	TP33_0.0-0.1 Soil N22-Fe13730 Feb 04, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	9.4	5.4	3.3	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	21	29	31	22
Copper	5	mg/kg	< 5	6.2	25	6.8
Lead	5	mg/kg	17	13	96	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.4	< 0.1
Nickel	5	mg/kg	5.7	10	8.6	7.2
Zinc	5	mg/kg	22	25	180	24

Client Sample ID			TP34_0.0-0.1 Soil N22-Fe13731 Feb 04, 2022	TP35_0.0-0.1 Soil N22-Fe13732 Feb 04, 2022	D.7.2.22 Soil N22-Fe13733 Feb 07, 2022	TP36_0.0-0.1 Soil N22-Fe13734 Feb 07, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	-
TRH C10-C14	20	mg/kg	-	< 20	< 20	-
TRH C15-C28	50	mg/kg	-	< 50	< 50	-
TRH C29-C36	50	mg/kg	-	110	53	-
TRH C10-C36 (Total)	50	mg/kg	-	110	53	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	86	58	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	< 0.5	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	< 50	-
TRH C6-C10	20	mg/kg	-	< 20	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			TP34_0.0-0.1 Soil N22-Fe13731 Feb 04, 2022	TP35_0.0-0.1 Soil N22-Fe13732 Feb 04, 2022	D.7.2.22 Soil N22-Fe13733 Feb 07, 2022	TP36_0.0-0.1 Soil N22-Fe13734 Feb 07, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Polycyclic Aromatic Hydrocarbons						
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	82	59	78	82
p-Terphenyl-d14 (surr.)	1	%	93	84	83	92
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	< 50	< 50	-
TRH >C16-C34	100	mg/kg	-	< 100	< 100	-
TRH >C34-C40	100	mg/kg	-	120	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	120	< 100	-
% Moisture	1	%	20	16	23	16
Heavy Metals						
Arsenic	2	mg/kg	28	6.0	8.4	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	40	32	30	31
Copper	5	mg/kg	6.2	8.0	8.0	< 5
Lead	5	mg/kg	24	11	13	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	9.6	13	12	6.6
Zinc	5	mg/kg	26	21	20	16

Client Sample ID			TP37_0.0-0.1 Soil N22-Fe13735 Feb 07, 2022	D1.4.2.22 Soil N22-Fe13736 Feb 07, 2022	TP38_0.0-0.1 Soil N22-Fe13737 Feb 07, 2022	TP38_0.6-0.7 Soil N22-Fe13738 Feb 07, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	32	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	102	104	-	-

Client Sample ID			TP37_0.0-0.1 Soil N22-Fe13735 Feb 07, 2022	D1.4.2.22 Soil N22-Fe13736 Feb 07, 2022	TP38_0.0-0.1 Soil N22-Fe13737 Feb 07, 2022	TP38_0.6-0.7 Soil N22-Fe13738 Feb 07, 2022
Sample Matrix	LOR	Unit				
Eurofins Sample No.						
Date Sampled						
Test/Reference						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	56	72	89	105
p-Terphenyl-d14 (surr.)	1	%	78	81	111	110
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-
%						
% Moisture	1	%	15	26	25	8.9
Heavy Metals						
Arsenic	2	mg/kg	12	6.0	7.7	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	27	23	100	23
Copper	5	mg/kg	< 5	< 5	11	< 5
Lead	5	mg/kg	15	12	14	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	6.0	5.2	14	< 5
Zinc	5	mg/kg	17	14	34	10

Client Sample ID			TP39_0.0-0.1 Soil N22-Fe13739 Feb 07, 2022	TP40_0.0-0.1 Soil N22-Fe13740 Feb 07, 2022	TP41_0.0-0.1 Soil N22-Fe13741 Feb 07, 2022	TP42_0.0-0.1 Soil N22-Fe13742 Feb 07, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	84	91	58	68
p-Terphenyl-d14 (surr.)	1	%	93	101	72	91
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	48	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	-	5.6	-
% Moisture	1	%	22	19	14	12
Heavy Metals						
Arsenic	2	mg/kg	18	26	7.7	52
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	26	29	16	52
Copper	5	mg/kg	< 5	< 5	< 5	< 5
Lead	5	mg/kg	21	15	9.7	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.1	5.8	< 5	5.7
Zinc	5	mg/kg	17	12	11	11
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	3.9	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4,4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4,4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-HCH	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-HCH	0.05	mg/kg	-	-	< 0.05	-
d-HCH	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-

Client Sample ID			TP39_0.0-0.1 Soil N22-Fe13739 Feb 07, 2022	TP40_0.0-0.1 Soil N22-Fe13740 Feb 07, 2022	TP41_0.0-0.1 Soil N22-Fe13741 Feb 07, 2022	TP42_0.0-0.1 Soil N22-Fe13742 Feb 07, 2022
Sample Matrix	LOR	Unit				
Eurofins Sample No.						
Date Sampled						
Test/Reference						
Organochlorine Pesticides						
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.05	mg/kg	-	-	< 0.05	-
Toxaphene	0.5	mg/kg	-	-	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorethane (surr.)	1	%	-	-	72	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	62	-

Client Sample ID			TP43_0.0-0.1 Soil N22-Fe13743 Feb 07, 2022	TP44_0.0-0.1 Soil N22-Fe13744 Feb 07, 2022	TP45_0.0-0.1 Soil N22-Fe13745 Feb 07, 2022	TP46_0.0-0.1 Soil N22-Fe13746 Feb 04, 2022
Sample Matrix	LOR	Unit				
Eurofins Sample No.						
Date Sampled						
Test/Reference						
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	93	84	91	91
p-Terphenyl-d14 (surr.)	1	%	103	93	108	99
% Moisture	1	%	15	22	21	15

Client Sample ID			TP43_0.0-0.1 Soil N22-Fe13743 Feb 07, 2022	TP44_0.0-0.1 Soil N22-Fe13744 Feb 07, 2022	TP45_0.0-0.1 Soil N22-Fe13745 Feb 07, 2022	TP46_0.0-0.1 Soil N22-Fe13746 Feb 04, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	9.0	32	11	4.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	34	30	38
Copper	5	mg/kg	< 5	< 5	< 5	7.4
Lead	5	mg/kg	8.5	24	16	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	9.3	8.2	14
Zinc	5	mg/kg	< 5	23	26	39

Client Sample ID			TP47_0.0-0.1 Soil N22-Fe13747 Feb 07, 2022	TP48_0.0-0.1 Soil N22-Fe13748 Feb 07, 2022	TP49_0.0-0.1 Soil N22-Fe13749 Feb 07, 2022	G01TP50_0.0-0.1 Soil N22-Fe13750 Feb 07, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 100
TRH C15-C28	50	mg/kg	-	-	-	510
TRH C29-C36	50	mg/kg	-	-	-	370
TRH C10-C36 (Total)	50	mg/kg	-	-	-	880
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	104
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	-	< 0.5
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	-	< 250
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	-	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	22
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	22
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	22
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	2.6
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	11
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	15
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	11
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	9.7
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	15
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	13
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	2.2
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	39

Client Sample ID			TP47_0.0-0.1 Soil N22-Fe13747 Feb 07, 2022	TP48_0.0-0.1 Soil N22-Fe13748 Feb 07, 2022	TP49_0.0-0.1 Soil N22-Fe13749 Feb 07, 2022	G01TP50_0.0-0.1 Soil N22-Fe13750 Feb 07, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Polycyclic Aromatic Hydrocarbons						
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	9.9
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	16
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	34
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	179
2-Fluorobiphenyl (surr.)	1	%	88	89	86	83
p-Terphenyl-d14 (surr.)	1	%	100	90	96	78
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	-	< 250
TRH >C16-C34	100	mg/kg	-	-	-	730
TRH >C34-C40	100	mg/kg	-	-	-	< 500
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	730
% Moisture	1	%	19	12	12	13
Heavy Metals						
Arsenic	2	mg/kg	5.7	7.9	8.8	5.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	13	13	39
Copper	5	mg/kg	< 5	< 5	< 5	13
Lead	5	mg/kg	15	11	9.4	120
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	5.4	< 5	< 5	18
Zinc	5	mg/kg	18	14	13	110

Client Sample ID			TP50_1.4-1.5 Soil N22-Fe13753 Feb 04, 2022	TP51_0.0-0.1 Soil N22-Fe13754 Feb 07, 2022	TP52_0.0-0.1 Soil N22-Fe13756 Feb 07, 2022	TP53_0.0-0.1 Soil N22-Fe13757 Feb 07, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	-	-
TRH C10-C14	20	mg/kg	-	< 20	-	-
TRH C15-C28	50	mg/kg	-	110	-	-
TRH C29-C36	50	mg/kg	-	67	-	-
TRH C10-C36 (Total)	50	mg/kg	-	177	-	-
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	-	-
Toluene	0.1	mg/kg	-	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	-	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	-	< 0.2	-	-
o-Xylene	0.1	mg/kg	-	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	-	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	-	87	-	-

Client Sample ID			TP50_1.4-1.5 Soil N22-Fe13753 Feb 04, 2022	TP51_0.0-0.1 Soil N22-Fe13754 Feb 07, 2022	TP52_0.0-0.1 Soil N22-Fe13756 Feb 07, 2022	TP53_0.0-0.1 Soil N22-Fe13757 Feb 07, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	< 0.5	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	< 50	-	-
TRH C6-C10	20	mg/kg	-	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	< 20	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	53	2.7	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	53	2.9	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	53	3.2	1.2	1.2
Acenaphthene	0.5	mg/kg	1.0	0.6	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	6.3	1.0	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	28	2.4	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	36	2.0	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	28	1.4	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	23	2.0	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	33	1.7	< 0.5	< 0.5
Chrysene	0.5	mg/kg	32	2.9	< 0.5	0.5
Dibenz(a.h)anthracene	0.5	mg/kg	5.6	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	99	12	< 0.5	1.0
Fluorene	0.5	mg/kg	2.4	0.7	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	24	1.0	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	47	8.0	< 0.5	< 0.5
Pyrene	0.5	mg/kg	88	10	< 0.5	1.0
Total PAH*	0.5	mg/kg	453.3	45.7	< 0.5	2.5
2-Fluorobiphenyl (surr.)	1	%	145	88	121	86
p-Terphenyl-d14 (surr.)	1	%	133	85	144	85
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	< 50	-	-
TRH >C16-C34	100	mg/kg	-	150	-	-
TRH >C34-C40	100	mg/kg	-	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	-	150	-	-
% Moisture						
% Moisture	1	%	13	14	15	13
Heavy Metals						
Arsenic	2	mg/kg	7.4	3.0	2.6	3.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	39	31	49	19
Copper	5	mg/kg	13	14	15	11
Lead	5	mg/kg	170	14	17	25
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	20	16	20	15
Zinc	5	mg/kg	130	32	31	58

Client Sample ID			TP53_0.1-0.2 Soil N22-Fe13758 Feb 07, 2022	SS4 Soil N22-Fe13759 Feb 07, 2022	SS1 Soil N22-Fe13764 Feb 07, 2022	SS2 Soil N22-Fe13765 Feb 07, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	-
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	93	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	-	-	< 0.5	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	-	-	< 50	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	-	-	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	1.2	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	1.4	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.7	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	0.6	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	0.9	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	0.7	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	0.8	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	0.8	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	1.7	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	0.6	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	1.8	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	8.4	< 0.5
2-Fluorobiphenyl (surr.)	1	%	64	79	88	86
p-Terphenyl-d14 (surr.)	1	%	82	86	93	86
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	-
% Moisture	1	%	11	20	11	24

Client Sample ID			TP53_0.1-0.2 Soil N22-Fe13758 Feb 07, 2022	SS4 Soil N22-Fe13759 Feb 07, 2022	SS1 Soil N22-Fe13764 Feb 07, 2022	SS2 Soil N22-Fe13765 Feb 07, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	3.7	3.1	6.5	2.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	51	32	42
Copper	5	mg/kg	12	9.8	11	15
Lead	5	mg/kg	8.6	16	56	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	20	13	18
Zinc	5	mg/kg	46	30	74	37

Client Sample ID			SS3 Soil N22-Fe13766 Feb 07, 2022	SS5 Soil N22-Fe13767 Feb 07, 2022	SED1 Soil N22-Fe13768 Feb 03, 2022	SED2 Soil N22-Fe13769 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	< 20	-
TRH C10-C14	20	mg/kg	< 20	-	< 20	-
TRH C15-C28	50	mg/kg	61	-	< 50	-
TRH C29-C36	50	mg/kg	87	-	54	-
TRH C10-C36 (Total)	50	mg/kg	148	-	54	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	102	-	102	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	< 0.5	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	< 50	-
TRH C6-C10	20	mg/kg	< 20	-	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			SS3 Soil N22-Fe13766	SS5 Soil N22-Fe13767	SED1 Soil N22-Fe13768	SED2 Soil N22-Fe13769
Sample Matrix	LOR	Unit	Feb 07, 2022	Feb 07, 2022	Feb 03, 2022	Feb 03, 2022
Eurofins Sample No.						
Date Sampled						
Test/Reference						
Polycyclic Aromatic Hydrocarbons						
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	65	79	55	92
p-Terphenyl-d14 (surr.)	1	%	67	86	58	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	-	< 50	-
TRH >C16-C34	100	mg/kg	110	-	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	110	-	< 100	-
% Moisture	1	%	26	26	51	26
Heavy Metals						
Arsenic	2	mg/kg	3.2	2.4	2.8	8.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	67	37	25	29
Copper	5	mg/kg	24	13	32	6.4
Lead	5	mg/kg	20	15	10	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	24	14	15	6.9
Zinc	5	mg/kg	57	29	86	30

Client Sample ID			SED3 Soil N22-Fe13770	SS6 Soil N22-Fe13771	SS7 Soil N22-Fe13772	SS8 Soil N22-Fe13773
Sample Matrix	LOR	Unit	Feb 03, 2022	Feb 03, 2022	Feb 07, 2022	Feb 03, 2022
Eurofins Sample No.						
Date Sampled						
Test/Reference						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	< 50	-	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	67	-	-	-

Client Sample ID			SED3 Soil N22-Fe13770 Feb 03, 2022	SS6 Soil N22-Fe13771 Feb 03, 2022	SS7 Soil N22-Fe13772 Feb 07, 2022	SS8 Soil N22-Fe13773 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled	LOR	Unit				
Test/Reference						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	-	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	77	89	87	84
p-Terphenyl-d14 (surr.)	1	%	83	92	90	92
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	-
% Moisture	1	%	45	17	12	6.6
Heavy Metals						
Arsenic	2	mg/kg	2.7	5.0	3.6	6.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	66	59	32	14
Copper	5	mg/kg	24	17	17	11
Lead	5	mg/kg	17	11	13	6.0
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	40	25	31	12
Zinc	5	mg/kg	60	80	47	36

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Feb 11, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Feb 11, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 11, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Feb 11, 2022	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 11, 2022	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Sydney	Feb 11, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Sydney	Feb 10, 2022	7 Days
- Method: LTM-INO-4030 Conductivity			
Cation Exchange Capacity	Melbourne	Feb 15, 2022	28 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
pH (1:5 Aqueous extract at 25°C as rec.)	Sydney	Feb 10, 2022	7 Days
- Method: LTM-GEN-7090 pH by ISE			
Organochlorine Pesticides	Sydney	Feb 11, 2022	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Moisture	Sydney	Feb 09, 2022	14 Days
- Method: LTM-GEN-7080 Moisture			

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IANZ # 1290

Company Name:	Qualtest	Order No.:		Received:	Feb 9, 2022 8:30 AM
Address:	2 Murray Dwyer Circuit Mayfield West NSW 2304	Report #:	861538	Due:	Feb 16, 2022
		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH											
Eurofins Suite B7											
Cation Exchange Capacity											
Moisture Set											
Metals M8											
Organochlorine Pesticides											
Polyyclic Aromatic Hydrocarbons											
pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217					X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	TP01_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13695	X		X		X	X
2	TP01A_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13696		X		X	X	X
3	D3.2.22	Feb 03, 2022		Soil	N22-Fe13697					X	X
4	TP07_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13698			X		X	X
5	TP08_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13699			X		X	X
6	TP09_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13700			X		X	X
7	TP10_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13701	X			X	X	X
8	TP11_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13702			X		X	X
9	TP02_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13703	X			X	X	X

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 IANZ # 1290

Company Name: Qualtest
Address: 2 Murray Dwyer Circuit
 Mayfield West
 NSW 2304

Project Name: LBD
Project ID: NEW22P-0012

Order No.:
Report #: 861538
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Feb 9, 2022 8:30 AM
Due: Feb 16, 2022
Priority: 5 Day
Contact Name: Libby Betz

Eurofins Analytical Services Manager : Andrew Black

Sample Detail

Melbourne Laboratory - NATA # 1261 Site # 1254

Sydney Laboratory - NATA # 1261 Site # 18217

Brisbane Laboratory - NATA # 1261 Site # 20794

Mayfield Laboratory - NATA # 1261 Site # 25079

Perth Laboratory - NATA # 2377 Site # 2370

External Laboratory

10	TP03_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13704	X			X		X	X								
11	TP04_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13705				X		X	X								
12	TP05_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13706	X			X		X	X								
13	TP06_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13707				X		X	X								
14	TP12_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13708				X		X	X								
15	TP13_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13709				X		X	X								
16	TP14_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13710	X				X		X		X						
17	TP15_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13711				X		X	X								
18	TP16_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13712							X			X					
19	D.4.2.22	Not Provided		Soil	N22-Fe13713							X		X		X				
20	TP17_0.0-0.1	Not Provided		Soil	N22-Fe13714				X		X	X								



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NATA # 1261 Site # 1254	NATA # 1261 Site # 18127	NATA # 1261 Site # 20794	Phone : +61 2 4968 8448
			NATA # 1261 Site # 25079

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NATA # 2377 Site # 2370

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IANZ # 1327	IANZ # 1290

Company Name:	Qualtest	Order No.:		Received:	Feb 9, 2022 8:30 AM
Address:	2 Murray Dwyer Circuit Mayfield West NSW 2304	Report #:	861538	Due:	Feb 16, 2022
		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH											
Eurofins Suite B7											
Cation Exchange Capacity											
Moisture Set											
Metals M8											
Organochlorine Pesticides											
Polyyclic Aromatic Hydrocarbons											
pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217									X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
21	TP18_0.0-0.1	Not Provided		Soil	N22-Fe13715				X	X	X
22	TP19_0.0-0.1	Not Provided		Soil	N22-Fe13716				X	X	X
23	TP20_0.0-0.1	Not Provided		Soil	N22-Fe13717				X	X	X
24	TP21_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13718				X	X	X
25	TP22_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13719				X	X	X
26	TP23_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13720	X			X	X	X
27	TP24_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13721				X	X	X
28	TP25_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13722	X				X	
29	TP26_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13723	X				X	X
30	TP27_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13724	X				X	X
31	TP28_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13725	X				X	X



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			NATA # 1261 Site # 25079

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Company Name:	Qualtest	Order No.:		Received:	Feb 9, 2022 8:30 AM
Address:	2 Murray Dwyer Circuit Mayfield West NSW 2304	Report #:	861538	Due:	Feb 16, 2022
		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH												
Eurofins Suite B7												
Cation Exchange Capacity												
Moisture Set												
Metals M8												
Organochlorine Pesticides												
Polycyclic Aromatic Hydrocarbons												
pH (1:5 Aqueous extract at 25°C as rec.)												
HOLD												
Asbestos - WA guidelines												
Asbestos - AS4964												
Sample Detail												
Melbourne Laboratory - NATA # 1261 Site # 1254											X	
Sydney Laboratory - NATA # 1261 Site # 18217							X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												
Mayfield Laboratory - NATA # 1261 Site # 25079												
Perth Laboratory - NATA # 2377 Site # 2370												
External Laboratory												
32	TP29_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13726				X	X	X	
33	TP30_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13727				X	X	X	
34	TP31_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13728				X	X	X	
35	TP32_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13729	X				X		X
36	TP33_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13730				X	X	X	
37	TP34_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13731				X	X	X	
38	TP35_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13732	X				X		X
39	D.7.2.22	Feb 07, 2022		Soil	N22-Fe13733					X		X
40	TP36_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13734				X	X	X	
41	TP37_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13735	X				X		X
42	D1.4.2.22	Feb 07, 2022		Soil	N22-Fe13736					X		X



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NATA # 1261 Site # 1254	NATA # 1261 Site # 18127	NATA # 1261 Site # 20794	Phone : +61 2 4968 8448
			NATA # 1261 Site # 25079

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IANZ # 1290

Company Name:	Qualtest	Order No.:		Received:	Feb 9, 2022 8:30 AM
Address:	2 Murray Dwyer Circuit Mayfield West NSW 2304	Report #:	861538	Due:	Feb 16, 2022
		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH												
Eurofins Suite B7												
Cation Exchange Capacity												
Moisture Set												
Metals M8												
Organochlorine Pesticides												
Polyyclic Aromatic Hydrocarbons												
pH (1:5 Aqueous extract at 25°C as rec.)												
HOLD												
Asbestos - WA guidelines												
Asbestos - AS4964												
Sample Detail												
Melbourne Laboratory - NATA # 1261 Site # 1254										X		
Sydney Laboratory - NATA # 1261 Site # 18217							X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												
Mayfield Laboratory - NATA # 1261 Site # 25079												
Perth Laboratory - NATA # 2377 Site # 2370												
External Laboratory												
43	TP38_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13737				X	X	X	
44	TP38_0.6-0.7	Feb 07, 2022		Soil	N22-Fe13738				X	X	X	
45	TP39_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13739				X	X	X	
46	TP40_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13740				X	X	X	
47	TP41_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13741	X		X	X	X	X	X
48	TP42_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13742	X		X		X	X	
49	TP43_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13743			X		X	X	
50	TP44_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13744			X		X	X	
51	TP45_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13745			X		X	X	
52	TP46_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13746			X		X	X	
53	TP47_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13747			X		X	X	

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Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH												
Eurofins Suite B7												
Cation Exchange Capacity												
Moisture Set												
Metals M8												
Organochlorine Pesticides												
Polyyclic Aromatic Hydrocarbons												
pH (1:5 Aqueous extract at 25°C as rec.)												
HOLD												
Asbestos - WA Guidelines												
Asbestos - AS4964												
Sample Detail												
Melbourne Laboratory - NATA # 1261 Site # 1254											X	
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												
Mayfield Laboratory - NATA # 1261 Site # 25079												
Perth Laboratory - NATA # 2377 Site # 2370												
External Laboratory												
54	TP48_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13748	X			X	X	X	
55	TP49_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13749				X	X	X	
56	TP50_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13750		X				X	
57	TP50_0.4-0.5	Feb 07, 2022		Soil	N22-Fe13751		X					X
58	TP50_0.9-1.0	Feb 04, 2022		Soil	N22-Fe13752		X					
59	TP50_1.4-1.5	Feb 04, 2022		Soil	N22-Fe13753		X			X	X	
60	TP51_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13754		X				X	
61	TP51_0.4-0.5	Feb 07, 2022		Soil	N22-Fe13755		X					
62	TP52_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13756	X			X	X	X	
63	TP53_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13757	X			X	X	X	
64	TP53_0.1-0.2	Feb 07, 2022		Soil	N22-Fe13758	X			X	X	X	



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		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH											
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Cation Exchange Capacity											
Moisture Set											
Metals M8											
Organochlorine Pesticides											
Polycyclic Aromatic Hydrocarbons											
pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217							X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794							X	X	X	X	X
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
65	SS4	Feb 07, 2022		Soil	N22-Fe13759				X	X	X
66	DAM1	Feb 03, 2022		Water	N22-Fe13760				X		X
67	DAM2	Feb 03, 2022		Water	N22-Fe13761				X		X
68	WD.3.2.22	Feb 03, 2022		Water	N22-Fe13762				X		X
69	LC1	Feb 03, 2022		Water	N22-Fe13763				X		X
70	SS1	Feb 07, 2022		Soil	N22-Fe13764	X				X	X
71	SS2	Feb 07, 2022		Soil	N22-Fe13765			X	X	X	
72	SS3	Feb 07, 2022		Soil	N22-Fe13766				X		X
73	SS5	Feb 07, 2022		Soil	N22-Fe13767			X	X	X	
74	SED1	Feb 03, 2022		Soil	N22-Fe13768				X		X
75	SED2	Feb 03, 2022		Soil	N22-Fe13769			X	X	X	

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Company Name: Qualtest
Address: 2 Murray Dwyer Circuit
 Mayfield West
 NSW 2304

Project Name: LBD
Project ID: NEW22P-0012

Order No.:
Report #: 861538
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Feb 9, 2022 8:30 AM
Due: Feb 16, 2022
Priority: 5 Day
Contact Name: Libby Betz

Eurofins Analytical Services Manager : Andrew Black
Sample Detail
Melbourne Laboratory - NATA # 1261 Site # 1254
Sydney Laboratory - NATA # 1261 Site # 18217
Brisbane Laboratory - NATA # 1261 Site # 20794
Mayfield Laboratory - NATA # 1261 Site # 25079
Perth Laboratory - NATA # 2377 Site # 2370
External Laboratory

76	SED3	Feb 03, 2022		Soil	N22-Fe13770				X		X
77	SS6	Feb 03, 2022		Soil	N22-Fe13771			X	X	X	
78	SS7	Feb 07, 2022		Soil	N22-Fe13772			X	X	X	
79	SS8	Feb 03, 2022		Soil	N22-Fe13773			X	X	X	
80	WB.3.2.22	Feb 03, 2022		Water	N22-Fe13774			X			X
81	WB.4.2.22	Feb 04, 2022		Water	N22-Fe13775						X
82	WB.7.2.22	Feb 07, 2022		Water	N22-Fe13776						X
83	TB.3.2.22	Feb 03, 2022		Water	N22-Fe13777						X
84	TB.4.2.22	Feb 04, 2022		Water	N22-Fe13778						X
85	TB.7.2.22	Feb 07, 2022		Water	N22-Fe13779						X
86	TP01_0.4-0.5	Feb 03, 2022		Soil	N22-Fe13780		X				

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Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH												
Eurofins Suite B7												
Cation Exchange Capacity												
Moisture Set												
Metals M8												
Organochlorine Pesticides												
Polyyclic Aromatic Hydrocarbons												
pH (1:5 Aqueous extract at 25°C as rec.)												
HOLD												
Asbestos - WA Guidelines												
Asbestos - AS4964												
Sample Detail												
Melbourne Laboratory - NATA # 1261 Site # 1254											X	
Sydney Laboratory - NATA # 1261 Site # 18217							X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												
Mayfield Laboratory - NATA # 1261 Site # 25079												
Perth Laboratory - NATA # 2377 Site # 2370												
External Laboratory												
87	TP01_0.5-0.6	Feb 03, 2022		Soil	N22-Fe13781				X			
88	TP01A_0.4-0.5	Feb 03, 2022		Soil	N22-Fe13782				X			
89	TP01A_0.9-1.0	Feb 03, 2022		Soil	N22-Fe13783				X			
90	TP01A_1.4-1.5	Feb 03, 2022		Soil	N22-Fe13784				X			
91	TP01A_1.7-1.8	Feb 03, 2022		Soil	N22-Fe13785				X			
92	TP07_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13786				X			
93	TP08_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13787				X			
94	TP09_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13788				X			
95	TP10_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13789				X			
96	TP10_0.5-0.6	Feb 03, 2022		Soil	N22-Fe13790				X			
97	TP02_0.4-0.5	Feb 03, 2022		Soil	N22-Fe13791				X			

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External Laboratory

98	TP03_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13792		X					
99	TP04_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13793		X					
100	TP05_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13794		X					
101	TP06_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13795		X					
102	TP11_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13796		X					
103	TP12_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13797		X					
104	TP13_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13798		X					
105	TP14_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13799		X					
106	TP15_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13800		X					
107	TP16_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13801		X					
108	TP17_0.2-0.3	Not Provided		Soil	N22-Fe13802		X					



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Sample Detail

BTEXN and Volatile TRH											
Eurofins Suite B7											
Cation Exchange Capacity											
Moisture Set											
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pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
109	TP18_0.2-0.3	Not Provided		Soil	N22-Fe13803			X			
110	TP19_0.2-0.3	Not Provided		Soil	N22-Fe13804			X			
111	TP20_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13805			X			
112	TP21_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13806			X			
113	TP22_0.15-0.25	Feb 04, 2022		Soil	N22-Fe13807			X			
114	TP23_0.3-0.4	Feb 04, 2022		Soil	N22-Fe13808			X			
115	TP24_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13809			X			
116	TP25_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13810			X			
117	TP26_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13811			X			
118	TP29_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13812			X			

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Received: Feb 9, 2022 8:30 AM
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Contact Name: Libby Betz

Eurofins Analytical Services Manager : Andrew Black
Sample Detail
Melbourne Laboratory - NATA # 1261 Site # 1254
Sydney Laboratory - NATA # 1261 Site # 18217
Brisbane Laboratory - NATA # 1261 Site # 20794
Mayfield Laboratory - NATA # 1261 Site # 25079
Perth Laboratory - NATA # 2377 Site # 2370
External Laboratory

119	TP30_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13813		X					
120	TP31_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13814		X					
121	TP32_0.4-0.5	Feb 04, 2022		Soil	N22-Fe13815		X					
122	TP33_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13816		X					
123	TP34_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13817		X					
124	TP35_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13818		X					
125	TP36_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13819		X					
126	TP37_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13820		X					
127	TP38_0.8-0.9	Feb 07, 2022		Soil	N22-Fe13821		X					
128	TP39_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13822		X					
129	TP40_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13823		X					



Environment Testing

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NATA # 1261 Site # 1254	NATA # 1261 Site # 18127	NATA # 1261 Site # 20794	Phone : +61 2 4968 8448
			NATA # 1261 Site # 25079

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IANZ # 1290

Company Name:	Qualtest	Order No.:		Received:	Feb 9, 2022 8:30 AM
Address:	2 Murray Dwyer Circuit Mayfield West NSW 2304	Report #:	861538	Due:	Feb 16, 2022
		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

	BTEXN and Volatile TRH	Eurofins Suite B7	Cation Exchange Capacity	Moisture Set	Metals M8	Organochlorine Pesticides	Polyyclic Aromatic Hydrocarbons	pH (1:5 Aqueous extract at 25°C as rec.)	HOLD	Asbestos - WA guidelines	Asbestos - AS4964
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217				X	X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
130	TP41_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13824			X			
131	TP42_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13825			X			
132	TP43_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13826			X			
133	TP44_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13827			X			
134	TP45_0.3-0.4	Feb 07, 2022		Soil	N22-Fe13828			X			
135	TP46_0.3-0.4	Feb 04, 2022		Soil	N22-Fe13829			X			
136	TP47_0.3-0.4	Feb 07, 2022		Soil	N22-Fe13830			X			
137	TP48_0.3-0.4	Feb 07, 2022		Soil	N22-Fe13831			X			
138	TP49_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13832			X			
139	TP50_1.6-1.7	Feb 07, 2022		Soil	N22-Fe13833			X			
140	TP52_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13834			X			



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Rolleston, Christchurch 7675
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IANZ # 1290

Company Name:	Qualtest	Order No.:		Received:	Feb 9, 2022 8:30 AM
Address:	2 Murray Dwyer Circuit Mayfield West NSW 2304	Report #:	861538	Due:	Feb 16, 2022
		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

µg/L: micrograms per litre

ppm: parts per million

ppb: parts per billion

%: Percentage

org/100 mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Conductivity (1:5 aqueous extract at 25°C as rec.)	uS/cm	< 10			10	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	86			70-130	Pass	
TRH C10-C14	%	80			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	103			70-130	Pass	
Toluene	%	92			70-130	Pass	
Ethylbenzene	%	88			70-130	Pass	
m&p-Xylenes	%	86			70-130	Pass	
o-Xylene	%	81			70-130	Pass	
Xylenes - Total*	%	84			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	115			70-130	Pass	
TRH C6-C10	%	82			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	100			70-130	Pass	
Acenaphthylene	%	93			70-130	Pass	
Anthracene	%	101			70-130	Pass	
Benz(a)anthracene	%	91			70-130	Pass	
Benzo(a)pyrene	%	78			70-130	Pass	
Benzo(b&j)fluoranthene	%	78			70-130	Pass	
Benzo(g.h.i)perylene	%	98			70-130	Pass	
Benzo(k)fluoranthene	%	99			70-130	Pass	
Chrysene	%	101			70-130	Pass	
Dibenz(a,h)anthracene	%	80			70-130	Pass	
Fluoranthene	%	117			70-130	Pass	
Fluorene	%	101			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Indeno(1,2,3-cd)pyrene	%	71			70-130	Pass	
Naphthalene	%	88			70-130	Pass	
Phenanthrene	%	105			70-130	Pass	
Pyrene	%	117			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	78			70-130	Pass	
LCS - % Recovery							
Conductivity (1:5 aqueous extract at 25°C as rec.)	%	98			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	94			80-120	Pass	
Cadmium	%	91			80-120	Pass	
Chromium	%	93			80-120	Pass	
Copper	%	92			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	97			80-120	Pass	
Nickel	%	92			80-120	Pass	
Zinc	%	86			80-120	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	106			70-130	Pass	
4,4'-DDD	%	105			70-130	Pass	
4,4'-DDE	%	111			70-130	Pass	
4,4'-DDT	%	91			70-130	Pass	
a-HCH	%	111			70-130	Pass	
Aldrin	%	110			70-130	Pass	
b-HCH	%	112			70-130	Pass	
d-HCH	%	112			70-130	Pass	
Dieldrin	%	114			70-130	Pass	
Endosulfan I	%	109			70-130	Pass	
Endosulfan II	%	104			70-130	Pass	
Endosulfan sulphate	%	90			70-130	Pass	
Endrin	%	83			70-130	Pass	
Endrin aldehyde	%	83			70-130	Pass	
Endrin ketone	%	90			70-130	Pass	
g-HCH (Lindane)	%	91			70-130	Pass	
Heptachlor	%	104			70-130	Pass	
Heptachlor epoxide	%	106			70-130	Pass	
Hexachlorobenzene	%	113			70-130	Pass	
Methoxychlor	%	95			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits
							Pass Limits
							Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1			
TRH C6-C9	S22-Fe23590	NCP	%	83			70-130
TRH C10-C14	N22-Fe13695	CP	%	94			Pass
Spike - % Recovery							
BTEX				Result 1			
Benzene	S22-Fe23590	NCP	%	97			70-130
Toluene	S22-Fe23590	NCP	%	89			Pass
Ethylbenzene	S22-Fe23590	NCP	%	87			70-130
m&p-Xylenes	S22-Fe23590	NCP	%	81			70-130
o-Xylene	S22-Fe23590	NCP	%	81			70-130
Xylenes - Total*	S22-Fe23590	NCP	%	81			Pass

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
Naphthalene	S22-Fe23590	NCP	%	109			70-130	Pass	
TRH C6-C10	S22-Fe23590	NCP	%	82			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
TRH >C10-C16	N22-Fe13695	CP	%	91			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	N22-Fe13706	CP	%	114			70-130	Pass	
Acenaphthylene	N22-Fe13706	CP	%	107			70-130	Pass	
Anthracene	N22-Fe13706	CP	%	115			70-130	Pass	
Benz(a)anthracene	N22-Fe13706	CP	%	102			70-130	Pass	
Benzo(a)pyrene	N22-Fe13706	CP	%	113			70-130	Pass	
Benzo(b&j)fluoranthene	N22-Fe13706	CP	%	93			70-130	Pass	
Benzo(g.h.i)perylene	N22-Fe13706	CP	%	105			70-130	Pass	
Benzo(k)fluoranthene	N22-Fe13706	CP	%	113			70-130	Pass	
Chrysene	N22-Fe13706	CP	%	110			70-130	Pass	
Dibenz(a.h)anthracene	N22-Fe13706	CP	%	81			70-130	Pass	
Fluoranthene	N22-Fe13706	CP	%	120			70-130	Pass	
Fluorene	N22-Fe13706	CP	%	114			70-130	Pass	
Indeno(1.2.3-cd)pyrene	N22-Fe13706	CP	%	88			70-130	Pass	
Naphthalene	N22-Fe13706	CP	%	101			70-130	Pass	
Phenanthrene	N22-Fe13706	CP	%	117			70-130	Pass	
Pyrene	N22-Fe13706	CP	%	119			70-130	Pass	
Spike - % Recovery									
Heavy Metals									
Arsenic	N22-Fe13709	CP	%	77			75-125	Pass	
Cadmium	N22-Fe13709	CP	%	100			75-125	Pass	
Chromium	N22-Fe13709	CP	%	94			75-125	Pass	
Copper	N22-Fe13709	CP	%	88			75-125	Pass	
Lead	N22-Fe13709	CP	%	80			75-125	Pass	
Mercury	N22-Fe13709	CP	%	95			75-125	Pass	
Nickel	N22-Fe13709	CP	%	80			75-125	Pass	
Zinc	N22-Fe13709	CP	%	91			75-125	Pass	
Spike - % Recovery									
Heavy Metals									
Lead	N22-Fe13722	CP	%	87			75-125	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons									
Acenaphthene	N22-Fe13728	CP	%	87			70-130	Pass	
Acenaphthylene	N22-Fe13728	CP	%	90			70-130	Pass	
Anthracene	N22-Fe13728	CP	%	89			70-130	Pass	
Benz(a)anthracene	N22-Fe13728	CP	%	91			70-130	Pass	
Benzo(a)pyrene	N22-Fe13728	CP	%	97			70-130	Pass	
Benzo(b&j)fluoranthene	N22-Fe13728	CP	%	89			70-130	Pass	
Benzo(g.h.i)perylene	N22-Fe13728	CP	%	101			70-130	Pass	
Benzo(k)fluoranthene	N22-Fe13728	CP	%	102			70-130	Pass	
Chrysene	N22-Fe13728	CP	%	88			70-130	Pass	
Dibenz(a.h)anthracene	N22-Fe13728	CP	%	102			70-130	Pass	
Fluoranthene	N22-Fe13728	CP	%	96			70-130	Pass	
Fluorene	N22-Fe13728	CP	%	95			70-130	Pass	
Indeno(1.2.3-cd)pyrene	N22-Fe13728	CP	%	100			70-130	Pass	
Naphthalene	N22-Fe13728	CP	%	89			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenanthrene	N22-Fe13728	CP	%	98			70-130	Pass	
Pyrene	N22-Fe13728	CP	%	97			70-130	Pass	
Spike - % Recovery									
Heavy Metals									
Arsenic	N22-Fe13734	CP	%	114			75-125	Pass	
Cadmium	N22-Fe13734	CP	%	117			75-125	Pass	
Chromium	N22-Fe13734	CP	%	121			75-125	Pass	
Copper	N22-Fe13734	CP	%	121			75-125	Pass	
Lead	N22-Fe13734	CP	%	125			75-125	Pass	
Mercury	N22-Fe13734	CP	%	117			75-125	Pass	
Nickel	N22-Fe13734	CP	%	119			75-125	Pass	
Zinc	N22-Fe13734	CP	%	111			75-125	Pass	
Spike - % Recovery									
Heavy Metals									
Cadmium	N22-Fe13743	CP	%	86			75-125	Pass	
Chromium	N22-Fe13743	CP	%	105			75-125	Pass	
Copper	N22-Fe13743	CP	%	83			75-125	Pass	
Lead	N22-Fe13743	CP	%	98			75-125	Pass	
Mercury	N22-Fe13743	CP	%	86			75-125	Pass	
Nickel	N22-Fe13743	CP	%	86			75-125	Pass	
Zinc	N22-Fe13743	CP	%	86			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	N22-Fe13695	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	N22-Fe13695	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	N22-Fe13695	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	N22-Fe13695	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	N22-Fe13695	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	N22-Fe13695	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	N22-Fe13695	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	N22-Fe13695	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	N22-Fe13695	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Conductivity (1:5 aqueous extract at 25°C as rec.)	S22-Fe19843	NCP	uS/cm	290	270	9.1	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	S22-Fe19843	NCP	pH Units	5.1	5.1	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Toxaphene	S22-Fe19763	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N22-Fe13698	CP	mg/kg	3.7	3.5	4.0	30%	Pass	
Cadmium	N22-Fe13698	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	N22-Fe13698	CP	mg/kg	41	40	1.0	30%	Pass	
Copper	N22-Fe13698	CP	mg/kg	13	13	3.0	30%	Pass	
Lead	N22-Fe13698	CP	mg/kg	26	25	4.0	30%	Pass	
Mercury	N22-Fe13698	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Duplicate							
Heavy Metals				Result 1	Result 2	RPD	
Nickel	N22-Fe13698	CP	mg/kg	18	17	4.0	30% Pass
Zinc	N22-Fe13698	CP	mg/kg	44	45	3.0	30% Pass
Duplicate							
Heavy Metals				Result 1	Result 2	RPD	
Arsenic	N22-Fe13703	CP	mg/kg	2.3	2.6	12	30% Pass
Cadmium	N22-Fe13703	CP	mg/kg	< 0.4	< 0.4	<1	30% Pass
Chromium	N22-Fe13703	CP	mg/kg	86	96	11	30% Pass
Copper	N22-Fe13703	CP	mg/kg	33	37	11	30% Pass
Lead	N22-Fe13703	CP	mg/kg	14	18	22	30% Pass
Mercury	N22-Fe13703	CP	mg/kg	< 0.1	< 0.1	<1	30% Pass
Nickel	N22-Fe13703	CP	mg/kg	41	47	12	30% Pass
Zinc	N22-Fe13703	CP	mg/kg	45	53	17	30% Pass
Duplicate							
				Result 1	Result 2	RPD	
% Moisture	N22-Fe13705	CP	%	22	21	3.0	30% Pass
Duplicate							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD	
TRH C10-C14	N22-Fe13710	CP	mg/kg	< 20	< 20	<1	30% Pass
TRH C15-C28	N22-Fe13710	CP	mg/kg	58	< 50	28	30% Pass
TRH C29-C36	N22-Fe13710	CP	mg/kg	86	75	14	30% Pass
Duplicate							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD	
TRH >C10-C16	N22-Fe13710	CP	mg/kg	< 50	< 50	<1	30% Pass
TRH >C16-C34	N22-Fe13710	CP	mg/kg	170	120	32	30% Fail
TRH >C34-C40	N22-Fe13710	CP	mg/kg	190	170	11	30% Pass
Duplicate							
Heavy Metals				Result 1	Result 2	RPD	
Arsenic	N22-Fe13714	CP	mg/kg	6.7	5.1	26	30% Pass
Cadmium	N22-Fe13714	CP	mg/kg	< 0.4	< 0.4	<1	30% Pass
Chromium	N22-Fe13714	CP	mg/kg	29	25	12	30% Pass
Copper	N22-Fe13714	CP	mg/kg	6.6	5.9	12	30% Pass
Lead	N22-Fe13714	CP	mg/kg	13	14	4.0	30% Pass
Mercury	N22-Fe13714	CP	mg/kg	< 0.1	< 0.1	<1	30% Pass
Nickel	N22-Fe13714	CP	mg/kg	8.7	8.2	5.0	30% Pass
Zinc	N22-Fe13714	CP	mg/kg	31	30	2.0	30% Pass
Duplicate							
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD	
Acenaphthene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Acenaphthylene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Anthracene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Benz(a)anthracene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Benzo(a)pyrene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Benzo(b&j)fluoranthene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Benzo(g,h,i)perylene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Benzo(k)fluoranthene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Chrysene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Dibenz(a,h)anthracene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Fluoranthene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Fluorene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Indeno(1,2,3-cd)pyrene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Naphthalene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Phenanthrene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass
Pyrene	N22-Fe13716	CP	mg/kg	< 0.5	< 0.5	<1	30% Pass

Duplicate								
% Moisture	N22-Fe13716	CP	%	Result 1	Result 2	RPD		
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	N22-Fe13719	CP	mg/kg	7.9	5.1	42	30%	Fail Q15
Cadmium	N22-Fe13719	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	N22-Fe13719	CP	mg/kg	32	28	13	30%	Pass
Copper	N22-Fe13719	CP	mg/kg	13	19	35	30%	Fail Q15
Lead	N22-Fe13719	CP	mg/kg	30	28	7.0	30%	Pass
Mercury	N22-Fe13719	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	N22-Fe13719	CP	mg/kg	8.1	8.7	7.0	30%	Pass
Zinc	N22-Fe13719	CP	mg/kg	44	43	3.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	N22-Fe13724	CP	mg/kg	13	3.4	120	30%	Fail Q15
Cadmium	N22-Fe13724	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	N22-Fe13724	CP	mg/kg	24	14	52	30%	Fail Q15
Copper	N22-Fe13724	CP	mg/kg	22	17	27	30%	Pass
Lead	N22-Fe13724	CP	mg/kg	61	58	5.0	30%	Pass
Mercury	N22-Fe13724	CP	mg/kg	0.1	0.1	1.0	30%	Pass
Nickel	N22-Fe13724	CP	mg/kg	43	21	71	30%	Fail Q15
Zinc	N22-Fe13724	CP	mg/kg	270	260	3.0	30%	Pass
Duplicate								
% Moisture	N22-Fe13726	CP	%	22	22	<1	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	N22-Fe13732	CP	mg/kg	6.0	9.1	40	30%	Fail Q15
Cadmium	N22-Fe13732	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	N22-Fe13732	CP	mg/kg	32	33	2.0	30%	Pass
Copper	N22-Fe13732	CP	mg/kg	8.0	8.5	6.0	30%	Pass
Lead	N22-Fe13732	CP	mg/kg	11	14	20	30%	Pass
Mercury	N22-Fe13732	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	N22-Fe13732	CP	mg/kg	13	11	14	30%	Pass
Zinc	N22-Fe13732	CP	mg/kg	21	23	8.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	N22-Fe13735	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	N22-Fe13735	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	N22-Fe13735	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	N22-Fe13735	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	N22-Fe13735	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	N22-Fe13735	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total*	N22-Fe13735	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	N22-Fe13735	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	N22-Fe13735	CP	mg/kg	< 20	< 20	<1	30%	Pass

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	N22-Fe13740	CP	mg/kg	26	16	48	30%	Fail
Cadmium	N22-Fe13740	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	N22-Fe13740	CP	mg/kg	29	26	12	30%	Pass
Copper	N22-Fe13740	CP	mg/kg	< 5	< 5	<1	30%	Pass
Lead	N22-Fe13740	CP	mg/kg	15	12	19	30%	Pass
Mercury	N22-Fe13740	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	N22-Fe13740	CP	mg/kg	5.8	5.6	3.0	30%	Pass
Zinc	N22-Fe13740	CP	mg/kg	12	13	8.0	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(a)pyrene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g.h.i)perylene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a.h)anthracene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	N22-Fe13741	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	N22-Fe13741	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	N22-Fe13741	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass

Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Benzo(a)pyrene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(b&j)fluoranthene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(g.h.i)perylene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benzo(k)fluoranthene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chrysene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibenz(a.h)anthracene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluorene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1.2.3-cd)pyrene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Naphthalene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Pyrene	N22-Fe13742	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	N22-Fe13742	CP	%	12	12	<1	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	N22-Fe13742	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-HCH	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-HCH	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-HCH	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieleadrin	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-HCH (Lindane)	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	N22-Fe13742	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	N22-Fe13744	CP	%	22	21	1.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	N22-Fe13757	CP	%	13	14	6.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	N22-Fe13757	CP	mg/kg	3.0	3.2	7.0	30%	Pass
Cadmium	N22-Fe13757	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	N22-Fe13757	CP	mg/kg	19	21	11	30%	Pass
Copper	N22-Fe13757	CP	mg/kg	11	11	5.0	30%	Pass
Lead	N22-Fe13757	CP	mg/kg	25	19	27	30%	Pass
Mercury	N22-Fe13757	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	N22-Fe13757	CP	mg/kg	15	15	3.0	30%	Pass
Zinc	N22-Fe13757	CP	mg/kg	58	49	16	30%	Pass

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N22-Fe13769	CP	mg/kg	8.7	17	65	30%	Fail	Q15
Cadmium	N22-Fe13769	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	N22-Fe13769	CP	mg/kg	29	25	15	30%	Pass	
Copper	N22-Fe13769	CP	mg/kg	6.4	5.1	22	30%	Pass	
Lead	N22-Fe13769	CP	mg/kg	15	15	1.0	30%	Pass	
Mercury	N22-Fe13769	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	N22-Fe13769	CP	mg/kg	6.9	5.6	21	30%	Pass	
Zinc	N22-Fe13769	CP	mg/kg	30	23	29	30%	Pass	

Comments**Sample Integrity**

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
I12	Where sampling date has not been provided, Eurofins Environment Testing is not able to determine whether analysis has been performed within recommended holding times.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Emma Beesley	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Charl Du Preez	Senior Analyst-Inorganic (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)

**Glenn Jackson**
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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Environment Testing

Qualtest
2 Murray Dwyer Circuit
Mayfield West
NSW 2304



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
 NATA is a signatory to the ILAC Mutual Recognition
 Arrangement for the mutual recognition of the
 equivalence of testing, medical testing, calibration,
 inspection, proficiency testing scheme providers and
 reference materials producers reports and certificates.

Attention: **Libby Betz**

Report **861538-W**
Project name **LBD**
Project ID **NEW22P-0012**
Received Date **Feb 09, 2022**

Client Sample ID			DAM1 Water N22-Fe13760 Feb 03, 2022	DAM2 Water N22-Fe13761 Feb 03, 2022	WD.3.2.22 Water N22-Fe13762 Feb 03, 2022	LC1 Water N22-Fe13763 Feb 03, 2022
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	0.11	0.07	0.16	< 0.05
TRH C15-C28	0.1	mg/L	0.5	0.4	0.8	< 0.1
TRH C29-C36	0.1	mg/L	0.2	0.1	0.2	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	0.81	0.57	1.16	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	0.003	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	121	100	92	101
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	0.12	0.11	0.18	< 0.05
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID	LOR	Unit	DAM1 Water N22-Fe13760 Feb 03, 2022	DAM2 Water N22-Fe13761 Feb 03, 2022	WD.3.2.22 Water N22-Fe13762 Feb 03, 2022	LC1 Water N22-Fe13763 Feb 03, 2022
Sample Matrix						
Eurofins Sample No.						
Date Sampled						
Test/Reference						
Polycyclic Aromatic Hydrocarbons						
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	89	116	103	101
p-Terphenyl-d14 (surr.)	1	%	131	148	98	^{Q09} INT
Organochlorine Pesticides						
Chlordanes - Total	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
4,4'-DDD	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
4,4'-DDE	0.0002	mg/L	< 0.0002	< 0.0002	0.0002	< 0.0002
4,4'-DDT	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
a-HCH	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Aldrin	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
b-HCH	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
d-HCH	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Dieldrin	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endosulfan I	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endosulfan II	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endosulfan sulphate	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endrin	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Endrin aldehyde	0.0002	mg/L	< 0.0002	< 0.0002	0.0002	< 0.0002
Endrin ketone	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
g-HCH (Lindane)	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Heptachlor	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Heptachlor epoxide	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Hexachlorobenzene	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Methoxychlor	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Toxaphene	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005
Aldrin and Dieldrin (Total)*	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	< 0.0002	< 0.0002	0.0002	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dibutylchlorendate (surr.)	1	%	96	129	143	142
Tetrachloro-m-xylene (surr.)	1	%	85	100	143	107
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	0.05	mg/L	0.12	0.11	0.18	< 0.05
TRH >C16-C34	0.1	mg/L	0.6	0.5	0.9	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	0.72	0.61	1.18	< 0.1
Heavy Metals						
Arsenic	0.001	mg/L	0.003	0.004	0.002	0.002
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium	0.001	mg/L	0.003	< 0.001	0.002	0.001
Copper	0.001	mg/L	0.006	< 0.001	0.008	0.003
Lead	0.001	mg/L	0.002	0.001	0.002	< 0.001
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel	0.001	mg/L	0.003	0.004	0.005	0.004
Zinc	0.005	mg/L	0.019	0.010	0.023	0.008

Client Sample ID			WB.3.2.22	WB.4.2.22	WB.7.2.22	TB.3.2.22
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			N22-Fe13774	N22-Fe13775	N22-Fe13776	N22-Fe13777
Date Sampled			Feb 03, 2022	Feb 04, 2022	Feb 07, 2022	Feb 03, 2022
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	97	97	98	95
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.01	mg/L	< 0.01	< 0.01	< 0.01	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	< 0.02	< 0.02	-
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(b&j)fluoranthene ^{N07}	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
2-Fluorobiphenyl (surr.)	1	%	113	83	76	-
p-Terphenyl-d14 (surr.)	1	%	009INT	150	137	-
Organochlorine Pesticides						
Chlordanes - Total	0.002	mg/L	< 0.002	-	-	-
4,4'-DDD	0.0002	mg/L	< 0.0002	-	-	-
4,4'-DDE	0.0002	mg/L	< 0.0002	-	-	-
4,4'-DDT	0.0002	mg/L	< 0.0002	-	-	-
a-HCH	0.0002	mg/L	< 0.0002	-	-	-
Aldrin	0.0002	mg/L	< 0.0002	-	-	-
b-HCH	0.0002	mg/L	< 0.0002	-	-	-
d-HCH	0.0002	mg/L	< 0.0002	-	-	-
Dieldrin	0.0002	mg/L	< 0.0002	-	-	-
Endosulfan I	0.0002	mg/L	< 0.0002	-	-	-

Client Sample ID			WB.3.2.22	WB.4.2.22	WB.7.2.22	TB.3.2.22
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			N22-Fe13774	N22-Fe13775	N22-Fe13776	N22-Fe13777
Date Sampled			Feb 03, 2022	Feb 04, 2022	Feb 07, 2022	Feb 03, 2022
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan II	0.0002	mg/L	< 0.0002	-	-	-
Endosulfan sulphate	0.0002	mg/L	< 0.0002	-	-	-
Endrin	0.0002	mg/L	< 0.0002	-	-	-
Endrin aldehyde	0.0002	mg/L	< 0.0002	-	-	-
Endrin ketone	0.0002	mg/L	< 0.0002	-	-	-
g-HCH (Lindane)	0.0002	mg/L	< 0.0002	-	-	-
Heptachlor	0.0002	mg/L	< 0.0002	-	-	-
Heptachlor epoxide	0.0002	mg/L	< 0.0002	-	-	-
Hexachlorobenzene	0.0002	mg/L	< 0.0002	-	-	-
Methoxychlor	0.0002	mg/L	< 0.0002	-	-	-
Toxaphene	0.005	mg/L	< 0.005	-	-	-
Aldrin and Dieldrin (Total)*	0.0002	mg/L	< 0.0002	-	-	-
DDT + DDE + DDD (Total)*	0.0002	mg/L	< 0.0002	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	< 0.002	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	< 0.002	-	-	-
Dibutylchlorendate (surr.)	1	%	143	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	113	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	-
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	-
Heavy Metals						
Arsenic	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	-
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	-
Nickel	0.001	mg/L	< 0.001	< 0.001	< 0.001	-
Zinc	0.005	mg/L	< 0.005	< 0.005	< 0.005	-
Naphthalene ^{N02}	0.01	mg/L	-	-	-	< 0.01
Total Recoverable Hydrocarbons						
TRH C6-C10	0.02	mg/L	-	-	-	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	-	-	-	< 0.02

Client Sample ID			TB.4.2.22	TB.7.2.22
Sample Matrix			Water	Water
Eurofins Sample No.			N22-Fe13778	N22-Fe13779
Date Sampled			Feb 04, 2022	Feb 07, 2022
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02

Client Sample ID			TB.4.2.22	TB.7.2.22
Sample Matrix			Water	Water
Eurofins Sample No.			N22-Fe13778	N22-Fe13779
Date Sampled			Feb 04, 2022	Feb 07, 2022
Test/Reference	LOR	Unit		
BTEX				
Benzene	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	83	104
Naphthalene ^{N02}	0.01	mg/L	< 0.01	< 0.01
Total Recoverable Hydrocarbons				
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1) ^{N04}	0.02	mg/L	< 0.02	< 0.02

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Feb 10, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Feb 10, 2022	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 10, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Sydney	Feb 10, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Feb 10, 2022	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Feb 10, 2022	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Sydney	Feb 10, 2022	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Feb 10, 2022	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			



Environment Testing

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Eurofins Environment Testing Australia Pty Ltd

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Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name:	Qualtest	Order No.:		Received:	Feb 9, 2022 8:30 AM
Address:	2 Murray Dwyer Circuit Mayfield West NSW 2304	Report #:	861538	Due:	Feb 16, 2022
		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH											
Eurofins Suite B7											
Cation Exchange Capacity											
Moisture Set											
Metals M8											
Organochlorine Pesticides											
Polyyclic Aromatic Hydrocarbons											
pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217						X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID						
1	TP01_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13695	X		X		X	X
2	TP01A_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13696		X		X	X	X
3	D3.2.22	Feb 03, 2022		Soil	N22-Fe13697					X	X
4	TP07_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13698			X		X	X
5	TP08_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13699			X		X	X
6	TP09_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13700			X		X	X
7	TP10_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13701	X			X	X	
8	TP11_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13702			X		X	X
9	TP02_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13703	X		X		X	X

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne
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 NATA # 1261 Site # 1254

Sydney
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 Phone : +61 2 9900 8400
 NATA # 1261 Site # 18217

Brisbane
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 Phone : +61 7 3902 4600
 NATA # 1261 Site # 20794

Newcastle
 4/52 Industrial Drive
 Mayfield East NSW 2304
 PO Box 60 Wickham 2293
 Phone : +61 2 4968 8448
 NATA # 1261 Site # 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
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 Phone : +61 8 6253 4444
 NATA # 2377 Site # 2370

Eurofins Environment Testing NZ Limited

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Christchurch
 43 Detroit Drive
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 Phone : 0800 856 450
 IANZ # 1290

Company Name: Qualtest
Address: 2 Murray Dwyer Circuit
 Mayfield West
 NSW 2304

Project Name: LBD
Project ID: NEW22P-0012

Order No.:
Report #: 861538
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Feb 9, 2022 8:30 AM
Due: Feb 16, 2022
Priority: 5 Day
Contact Name: Libby Betz

Eurofins Analytical Services Manager : Andrew Black
Sample Detail

Melbourne Laboratory - NATA # 1261 Site # 1254															X					
Sydney Laboratory - NATA # 1261 Site # 18217		X	X	X	X	X	X	X	X	X	X	X								
Brisbane Laboratory - NATA # 1261 Site # 20794																				
Mayfield Laboratory - NATA # 1261 Site # 25079																				
Perth Laboratory - NATA # 2377 Site # 2370																				
External Laboratory																				
10	TP03_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13704	X			X		X	X								
11	TP04_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13705				X		X	X								
12	TP05_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13706	X			X		X	X								
13	TP06_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13707				X		X	X								
14	TP12_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13708				X		X	X								
15	TP13_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13709				X		X	X								
16	TP14_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13710	X			X		X	X								
17	TP15_0.0-0.1	Feb 03, 2022		Soil	N22-Fe13711				X		X	X								
18	TP16_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13712						X						X			
19	D.4.2.22	Not Provided		Soil	N22-Fe13713						X		X				X			
20	TP17_0.0-0.1	Not Provided		Soil	N22-Fe13714				X		X	X								



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		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH											
Eurofins Suite B7											
Cation Exchange Capacity											
Moisture Set											
Metals M8											
Organochlorine Pesticides											
Polyyclic Aromatic Hydrocarbons											
pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217									X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
21	TP18_0.0-0.1	Not Provided		Soil	N22-Fe13715				X	X	X
22	TP19_0.0-0.1	Not Provided		Soil	N22-Fe13716				X	X	X
23	TP20_0.0-0.1	Not Provided		Soil	N22-Fe13717				X	X	X
24	TP21_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13718				X	X	X
25	TP22_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13719				X	X	X
26	TP23_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13720	X			X	X	X
27	TP24_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13721				X	X	X
28	TP25_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13722	X				X	
29	TP26_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13723	X				X	X
30	TP27_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13724	X				X	X
31	TP28_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13725	X				X	X



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			NATA # 1261 Site # 20790

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Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

Melbourne Laboratory - NATA # 1261 Site # 1254								X
Sydney Laboratory - NATA # 1261 Site # 18217		X	X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794								
Mayfield Laboratory - NATA # 1261 Site # 25079								
Perth Laboratory - NATA # 2377 Site # 2370								
External Laboratory								
32 TP29_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13726			X	X X
33 TP30_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13727			X	X X
34 TP31_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13728			X	X X
35 TP32_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13729	X			X X
36 TP33_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13730			X	X X
37 TP34_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13731			X	X X
38 TP35_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13732	X			X X
39 D.7.2.22	Feb 07, 2022		Soil	N22-Fe13733				X X
40 TP36_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13734			X	X X
41 TP37_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13735	X			X X
42 D1.4.2.22	Feb 07, 2022		Soil	N22-Fe13736				X X



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NATA # 2377 Site # 2370

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		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH												
Eurofins Suite B7												
Cation Exchange Capacity												
Moisture Set												
Metals M8												
Organochlorine Pesticides												
Polyyclic Aromatic Hydrocarbons												
pH (1:5 Aqueous extract at 25°C as rec.)												
HOLD												
Asbestos - WA guidelines												
Asbestos - AS4964												
Sample Detail												
Melbourne Laboratory - NATA # 1261 Site # 1254										X		
Sydney Laboratory - NATA # 1261 Site # 18217							X	X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794												
Mayfield Laboratory - NATA # 1261 Site # 25079												
Perth Laboratory - NATA # 2377 Site # 2370												
External Laboratory												
43	TP38_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13737				X	X	X	
44	TP38_0.6-0.7	Feb 07, 2022		Soil	N22-Fe13738				X	X	X	
45	TP39_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13739				X	X	X	
46	TP40_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13740				X	X	X	
47	TP41_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13741	X		X	X	X	X	X
48	TP42_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13742	X		X		X	X	
49	TP43_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13743			X		X	X	
50	TP44_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13744			X		X	X	
51	TP45_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13745			X		X	X	
52	TP46_0.0-0.1	Feb 04, 2022		Soil	N22-Fe13746			X		X	X	
53	TP47_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13747			X		X	X	

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Eurofins Analytical Services Manager : Andrew Black
Sample Detail
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Brisbane Laboratory - NATA # 1261 Site # 20794
Mayfield Laboratory - NATA # 1261 Site # 25079
Perth Laboratory - NATA # 2377 Site # 2370
External Laboratory

54	TP48_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13748	X		X	X	X		
55	TP49_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13749			X	X	X		
56	TP50_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13750	X				X		X
57	TP50_0.4-0.5	Feb 07, 2022		Soil	N22-Fe13751	X						
58	TP50_0.9-1.0	Feb 04, 2022		Soil	N22-Fe13752	X						
59	TP50_1.4-1.5	Feb 04, 2022		Soil	N22-Fe13753	X		X	X	X		
60	TP51_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13754	X				X		X
61	TP51_0.4-0.5	Feb 07, 2022		Soil	N22-Fe13755	X						
62	TP52_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13756	X		X	X	X		
63	TP53_0.0-0.1	Feb 07, 2022		Soil	N22-Fe13757	X		X	X	X		
64	TP53_0.1-0.2	Feb 07, 2022		Soil	N22-Fe13758	X		X	X	X		



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Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH											
Eurofins Suite B7											
Cation Exchange Capacity											
Moisture Set											
Metals M8											
Organochlorine Pesticides											
Polyyclic Aromatic Hydrocarbons											
pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217									X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
65	SS4	Feb 07, 2022		Soil	N22-Fe13759				X	X	X
66	DAM1	Feb 03, 2022		Water	N22-Fe13760				X		X
67	DAM2	Feb 03, 2022		Water	N22-Fe13761				X		X
68	WD.3.2.22	Feb 03, 2022		Water	N22-Fe13762				X		X
69	LC1	Feb 03, 2022		Water	N22-Fe13763				X		X
70	SS1	Feb 07, 2022		Soil	N22-Fe13764	X				X	X
71	SS2	Feb 07, 2022		Soil	N22-Fe13765			X	X	X	
72	SS3	Feb 07, 2022		Soil	N22-Fe13766				X		X
73	SS5	Feb 07, 2022		Soil	N22-Fe13767			X	X	X	
74	SED1	Feb 03, 2022		Soil	N22-Fe13768				X		X
75	SED2	Feb 03, 2022		Soil	N22-Fe13769			X	X	X	

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76	SED3	Feb 03, 2022		Soil	N22-Fe13770				X		X
77	SS6	Feb 03, 2022		Soil	N22-Fe13771			X	X	X	
78	SS7	Feb 07, 2022		Soil	N22-Fe13772			X	X	X	
79	SS8	Feb 03, 2022		Soil	N22-Fe13773			X	X	X	
80	WB.3.2.22	Feb 03, 2022		Water	N22-Fe13774			X			X
81	WB.4.2.22	Feb 04, 2022		Water	N22-Fe13775						X
82	WB.7.2.22	Feb 07, 2022		Water	N22-Fe13776						X
83	TB.3.2.22	Feb 03, 2022		Water	N22-Fe13777						X
84	TB.4.2.22	Feb 04, 2022		Water	N22-Fe13778						X
85	TB.7.2.22	Feb 07, 2022		Water	N22-Fe13779						X
86	TP01_0.4-0.5	Feb 03, 2022		Soil	N22-Fe13780		X				

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87	TP01_0.5-0.6	Feb 03, 2022		Soil	N22-Fe13781		X					
88	TP01A_0.4-0.5	Feb 03, 2022		Soil	N22-Fe13782		X					
89	TP01A_0.9-1.0	Feb 03, 2022		Soil	N22-Fe13783		X					
90	TP01A_1.4-1.5	Feb 03, 2022		Soil	N22-Fe13784		X					
91	TP01A_1.7-1.8	Feb 03, 2022		Soil	N22-Fe13785		X					
92	TP07_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13786		X					
93	TP08_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13787		X					
94	TP09_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13788		X					
95	TP10_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13789		X					
96	TP10_0.5-0.6	Feb 03, 2022		Soil	N22-Fe13790		X					
97	TP02_0.4-0.5	Feb 03, 2022		Soil	N22-Fe13791		X					

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Company Name: Qualtest
Address: 2 Murray Dwyer Circuit
 Mayfield West
 NSW 2304

Project Name: LBD
Project ID: NEW22P-0012

Order No.:
Report #: 861538
Phone: 02 4968 4468
Fax: 02 4960 9775

Received: Feb 9, 2022 8:30 AM
Due: Feb 16, 2022
Priority: 5 Day
Contact Name: Libby Betz

Eurofins Analytical Services Manager : Andrew Black
Sample Detail
Melbourne Laboratory - NATA # 1261 Site # 1254
Sydney Laboratory - NATA # 1261 Site # 18217
Brisbane Laboratory - NATA # 1261 Site # 20794
Mayfield Laboratory - NATA # 1261 Site # 25079
Perth Laboratory - NATA # 2377 Site # 2370
External Laboratory

98	TP03_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13792		X					
99	TP04_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13793		X					
100	TP05_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13794		X					
101	TP06_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13795		X					
102	TP11_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13796		X					
103	TP12_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13797		X					
104	TP13_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13798		X					
105	TP14_0.3-0.4	Feb 03, 2022		Soil	N22-Fe13799		X					
106	TP15_0.2-0.3	Feb 03, 2022		Soil	N22-Fe13800		X					
107	TP16_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13801		X					
108	TP17_0.2-0.3	Not Provided		Soil	N22-Fe13802		X					



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Company Name:	Qualtest	Order No.:		Received:	Feb 9, 2022 8:30 AM
Address:	2 Murray Dwyer Circuit Mayfield West NSW 2304	Report #:	861538	Due:	Feb 16, 2022
		Phone:	02 4968 4468	Priority:	5 Day
		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail



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Project ID:	NEW22P-0012				

Sample Detail

BTEXN and Volatile TRH											
Eurofins Suite B7											
Cation Exchange Capacity											
Moisture Set											
Metals M8											
Organochlorine Pesticides											
Polycyclic Aromatic Hydrocarbons											
pH (1:5 Aqueous extract at 25°C as rec.)											
HOLD											
Asbestos - WA guidelines											
Asbestos - AS4964											
Sample Detail											
Melbourne Laboratory - NATA # 1261 Site # 1254										X	
Sydney Laboratory - NATA # 1261 Site # 18217							X	X	X	X	X
Brisbane Laboratory - NATA # 1261 Site # 20794											
Mayfield Laboratory - NATA # 1261 Site # 25079											
Perth Laboratory - NATA # 2377 Site # 2370											
External Laboratory											
119	TP30_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13813			X			
120	TP31_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13814			X			
121	TP32_0.4-0.5	Feb 04, 2022		Soil	N22-Fe13815			X			
122	TP33_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13816			X			
123	TP34_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13817			X			
124	TP35_0.2-0.3	Feb 04, 2022		Soil	N22-Fe13818			X			
125	TP36_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13819			X			
126	TP37_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13820			X			
127	TP38_0.8-0.9	Feb 07, 2022		Soil	N22-Fe13821			X			
128	TP39_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13822			X			
129	TP40_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13823			X			

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External Laboratory

130	TP41_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13824		X					
131	TP42_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13825		X					
132	TP43_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13826		X					
133	TP44_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13827		X					
134	TP45_0.3-0.4	Feb 07, 2022		Soil	N22-Fe13828		X					
135	TP46_0.3-0.4	Feb 04, 2022		Soil	N22-Fe13829		X					
136	TP47_0.3-0.4	Feb 07, 2022		Soil	N22-Fe13830		X					
137	TP48_0.3-0.4	Feb 07, 2022		Soil	N22-Fe13831		X					
138	TP49_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13832		X					
139	TP50_1.6-1.7	Feb 07, 2022		Soil	N22-Fe13833		X					
140	TP52_0.2-0.3	Feb 07, 2022		Soil	N22-Fe13834		X					



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		Fax:	02 4960 9775	Contact Name:	Libby Betz
Project Name:	LBD				
Project ID:	NEW22P-0012				

Sample Detail

	BTEXN and Volatile TRH	Eurofins Suite B7	Cation Exchange Capacity	Moisture Set	Metals M8	Organochlorine Pesticides	Polyyclic Aromatic Hydrocarbons	pH (1:5 Aqueous extract at 25°C as rec.)	HOLD	Asbestos - WA guidelines	Asbestos - AS4964				
Melbourne Laboratory - NATA # 1261 Site # 1254										X					
Sydney Laboratory - NATA # 1261 Site # 18217				X	X	X	X	X	X	X	X				
Brisbane Laboratory - NATA # 1261 Site # 20794															
Mayfield Laboratory - NATA # 1261 Site # 25079															
Perth Laboratory - NATA # 2377 Site # 2370															
External Laboratory															
141	TP53_0.4-0.5	Feb 07, 2022		Soil	N22-Fe13835			X							
142	TP53_0.8-0.9	Feb 04, 2022		Soil	N22-Fe13836			X							
143	TP27_0.2-0.3	Not Provided		Soil	N22-Fe13840			X							
144	TP28_0.2-0.3	Not Provided		Soil	N22-Fe13841			X							
145	TP25_0.0-0.1	Feb 04, 2022		Building Materials	N22-Fe14367			X							
146	TP32_0.0-0.1	Feb 04, 2022		Building Materials	N22-Fe14368			X							
Test Counts					16	12	61	2	50	10	50	72	2	29	3

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

µg/L: micrograms per litre

ppm: parts per million

ppb: parts per billion

%: Percentage

org/100 mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100 mL: Most Probable Number of organisms per 100 millilitres

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (<i>bis</i> -tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Method Blank						
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	mg/L	< 0.02		0.02	Pass	
TRH C10-C14	mg/L	< 0.05		0.05	Pass	
TRH C15-C28	mg/L	< 0.1		0.1	Pass	
TRH C29-C36	mg/L	< 0.1		0.1	Pass	
Method Blank						
BTEX						
Benzene	mg/L	< 0.001		0.001	Pass	
Toluene	mg/L	< 0.001		0.001	Pass	
Ethylbenzene	mg/L	< 0.001		0.001	Pass	
m&p-Xylenes	mg/L	< 0.002		0.002	Pass	
o-Xylene	mg/L	< 0.001		0.001	Pass	
Xylenes - Total*	mg/L	< 0.003		0.003	Pass	
Method Blank						
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	mg/L	< 0.01		0.01	Pass	
TRH C6-C10	mg/L	< 0.02		0.02	Pass	
Method Blank						
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	mg/L	< 0.001		0.001	Pass	
Acenaphthylene	mg/L	< 0.001		0.001	Pass	
Anthracene	mg/L	< 0.001		0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001		0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001		0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001		0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001		0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001		0.001	Pass	
Chrysene	mg/L	< 0.001		0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001		0.001	Pass	
Fluoranthene	mg/L	< 0.001		0.001	Pass	
Fluorene	mg/L	< 0.001		0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001		0.001	Pass	
Naphthalene	mg/L	< 0.001		0.001	Pass	
Phenanthrene	mg/L	< 0.001		0.001	Pass	
Pyrene	mg/L	< 0.001		0.001	Pass	
Method Blank						
Organochlorine Pesticides						
Chlordanes - Total	mg/L	< 0.002		0.002	Pass	
4,4'-DDD	mg/L	< 0.0002		0.0002	Pass	
4,4'-DDE	mg/L	< 0.0002		0.0002	Pass	
4,4'-DDT	mg/L	< 0.0002		0.0002	Pass	
a-HCH	mg/L	< 0.0002		0.0002	Pass	
Aldrin	mg/L	< 0.0002		0.0002	Pass	
b-HCH	mg/L	< 0.0002		0.0002	Pass	
d-HCH	mg/L	< 0.0002		0.0002	Pass	
Dieldrin	mg/L	< 0.0002		0.0002	Pass	
Endosulfan I	mg/L	< 0.0002		0.0002	Pass	
Endosulfan II	mg/L	< 0.0002		0.0002	Pass	
Endosulfan sulphate	mg/L	< 0.0002		0.0002	Pass	
Endrin	mg/L	< 0.0002		0.0002	Pass	
Endrin aldehyde	mg/L	< 0.0002		0.0002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin ketone	mg/L	< 0.0002			0.0002	Pass	
g-HCH (Lindane)	mg/L	< 0.0002			0.0002	Pass	
Heptachlor	mg/L	< 0.0002			0.0002	Pass	
Heptachlor epoxide	mg/L	< 0.0002			0.0002	Pass	
Hexachlorobenzene	mg/L	< 0.0002			0.0002	Pass	
Methoxychlor	mg/L	< 0.0002			0.0002	Pass	
Toxaphene	mg/L	< 0.005			0.005	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	93			70-130	Pass	
TRH C10-C14	%	110			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	88			70-130	Pass	
Toluene	%	98			70-130	Pass	
Ethylbenzene	%	99			70-130	Pass	
m&p-Xylenes	%	100			70-130	Pass	
o-Xylene	%	100			70-130	Pass	
Xylenes - Total*	%	100			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	82			70-130	Pass	
TRH C6-C10	%	93			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	92			70-130	Pass	
Acenaphthylene	%	83			70-130	Pass	
Anthracene	%	84			70-130	Pass	
Benz(a)anthracene	%	82			70-130	Pass	
Benzo(a)pyrene	%	84			70-130	Pass	
Benzo(b&i;)fluoranthene	%	84			70-130	Pass	
Benzo(g,h,i)perylene	%	74			70-130	Pass	
Benzo(k)fluoranthene	%	79			70-130	Pass	
Chrysene	%	83			70-130	Pass	
Dibenz(a,h)anthracene	%	81			70-130	Pass	
Fluoranthene	%	81			70-130	Pass	
Fluorene	%	79			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	82			70-130	Pass	
Naphthalene	%	76			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code		
Phenanthrene	%	87			70-130	Pass			
Pyrene	%	80			70-130	Pass			
LCS - % Recovery									
Organochlorine Pesticides									
Chlordanes - Total	%	98			70-130	Pass			
4,4'-DDD	%	91			70-130	Pass			
4,4'-DDE	%	87			70-130	Pass			
4,4'-DDT	%	125			70-130	Pass			
a-HCH	%	79			70-130	Pass			
Aldrin	%	88			70-130	Pass			
b-HCH	%	99			70-130	Pass			
d-HCH	%	82			70-130	Pass			
Dieldrin	%	93			70-130	Pass			
Endosulfan I	%	90			70-130	Pass			
Endosulfan II	%	88			70-130	Pass			
Endosulfan sulphate	%	101			70-130	Pass			
Endrin	%	116			70-130	Pass			
Endrin aldehyde	%	103			70-130	Pass			
Endrin ketone	%	109			70-130	Pass			
g-HCH (Lindane)	%	101			70-130	Pass			
Heptachlor	%	111			70-130	Pass			
Heptachlor epoxide	%	99			70-130	Pass			
Hexachlorobenzene	%	73			70-130	Pass			
Methoxychlor	%	118			70-130	Pass			
LCS - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
TRH >C10-C16	%	107			70-130	Pass			
LCS - % Recovery									
Heavy Metals									
Arsenic	%	94			80-120	Pass			
Cadmium	%	92			80-120	Pass			
Chromium	%	89			80-120	Pass			
Copper	%	89			80-120	Pass			
Lead	%	85			80-120	Pass			
Mercury	%	91			80-120	Pass			
Nickel	%	89			80-120	Pass			
Zinc	%	89			80-120	Pass			
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	S22-Fe16319	NCP	%	113			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S22-Fe16319	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S22-Fe17500	NCP	%	94			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S22-Fe17500	NCP	%	99			70-130	Pass	
Toluene	S22-Fe17500	NCP	%	112			70-130	Pass	
Ethylbenzene	S22-Fe17500	NCP	%	115			70-130	Pass	
m&p-Xylenes	S22-Fe17500	NCP	%	115			70-130	Pass	
o-Xylene	S22-Fe17500	NCP	%	114			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Xylenes - Total*	S22-Fe17500	NCP	%	114			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					Result 1				
Naphthalene	S22-Fe17500	NCP	%	114			70-130	Pass	
TRH C6-C10	S22-Fe17500	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	N22-Fe13761	CP	%	108			75-125	Pass	
Cadmium	N22-Fe13761	CP	%	105			75-125	Pass	
Chromium	N22-Fe13761	CP	%	101			75-125	Pass	
Copper	N22-Fe13761	CP	%	99			75-125	Pass	
Lead	N22-Fe13761	CP	%	94			75-125	Pass	
Mercury	N22-Fe13761	CP	%	103			75-125	Pass	
Nickel	N22-Fe13761	CP	%	100			75-125	Pass	
Zinc	N22-Fe13761	CP	%	108			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					Result 1	Result 2	RPD		
TRH C10-C14	S22-Fe16287	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	S22-Fe16287	NCP	mg/L	0.3	0.3	17	30%	Pass	
TRH C29-C36	S22-Fe16287	NCP	mg/L	0.2	0.1	8.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					Result 1	Result 2	RPD		
TRH >C10-C16	S22-Fe16287	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	S22-Fe16287	NCP	mg/L	0.4	0.4	16	30%	Pass	
TRH >C34-C40	S22-Fe16287	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N22-Fe13763	CP	mg/L	0.002	0.002	11	30%	Pass	
Cadmium	N22-Fe13763	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	N22-Fe13763	CP	mg/L	0.001	< 0.001	61	30%	Fail	Q15
Copper	N22-Fe13763	CP	mg/L	0.003	0.003	4.0	30%	Pass	
Lead	N22-Fe13763	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	N22-Fe13763	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	N22-Fe13763	CP	mg/L	0.004	0.004	13	30%	Pass	
Zinc	N22-Fe13763	CP	mg/L	0.008	0.007	23	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					Result 1	Result 2	RPD		
TRH C6-C9	N22-Fe13779	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	N22-Fe13779	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	N22-Fe13779	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	N22-Fe13779	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	N22-Fe13779	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	N22-Fe13779	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	N22-Fe13779	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					Result 1	Result 2	RPD		
Naphthalene	N22-Fe13779	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	N22-Fe13779	CP	mg/L	< 0.02	0.02	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q09	The Surrogate recovery is outside of the recommended acceptance criteria due to matrix interference. Acceptance criteria were met for all other QC
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Emma Beesley	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
John Nguyen	Senior Analyst-Metal (NSW)
Roopesh Rangarajan	Senior Analyst-Volatile (NSW)

Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested
 - * Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2204817	Page	: 1 of 9
Client	: QUALTEST LABORATORY(NSW) PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: LIBBY BETZ	Telephone	: +61-2-8784 8555
Project	: NEW22P-0012	Date Samples Received	: 11-Feb-2022
Site	: ----	Issue Date	: 18-Feb-2022
Sampler	: BILLY SNOW	No. of samples received	: 5
Order number	: ----	No. of samples analysed	: 5

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- Analysis Holding Time Outliers exist - please see following pages for full details.

Outliers : Frequency of Quality Control Samples

- Quality Control Sample Frequency Outliers exist - please see following pages for full details.

Outliers : Analysis Holding Time Compliance

Matrix: WATER

Method	Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP068A: Organochlorine Pesticides (OC)							
Amber Glass Bottle - Unpreserved	WT.3.2.22		14-Feb-2022	10-Feb-2022	4	---	---
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved	WT.3.2.22		14-Feb-2022	10-Feb-2022	4	---	---
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved	WT.3.2.22		14-Feb-2022	10-Feb-2022	4	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved	WT.3.2.22		14-Feb-2022	10-Feb-2022	4	---	---

Outliers : Frequency of Quality Control Samples

Matrix: WATER

Quality Control Sample Type	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)					
PAH/Phenols (GC/MS - SIM)	0	8	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	1	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	8	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)					
PAH/Phenols (GC/MS - SIM)	0	8	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	0	1	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	0	8	0.00	5.00	NEPM 2013 B3 & ALS QC Standard

Analysis Holding Time Compliance

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOU**

Evaluation: ✗ = Holding time breach ; ✓ = Within holding time

Matrix: SCUE		Evaluation: <input checked="" type="checkbox"/> Holding time breached; <input type="checkbox"/> Within holding time		
Method	Sample Date	Extraction / Preparation		Analysis
Container / Client Sample ID(s)	Date extracted	Due for extraction	Evaluation	Date analysed

Matrix: SOIL

Evaluation: ✗ = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055) T.3.2.22		03-Feb-2022	----	----	---	16-Feb-2022	17-Feb-2022	✓
Soil Glass Jar - Unpreserved (EA055) T.4.2.22		04-Feb-2022	----	----	---	16-Feb-2022	18-Feb-2022	✓
Soil Glass Jar - Unpreserved (EA055) T.7.2.22, T.1.2.22		07-Feb-2022	----	----	---	16-Feb-2022	21-Feb-2022	✓
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T) T.3.2.22		03-Feb-2022	16-Feb-2022	02-Aug-2022	✓	17-Feb-2022	02-Aug-2022	✓
Soil Glass Jar - Unpreserved (EG005T) T.4.2.22		04-Feb-2022	16-Feb-2022	03-Aug-2022	✓	17-Feb-2022	03-Aug-2022	✓
Soil Glass Jar - Unpreserved (EG005T) T.7.2.22, T.1.2.22		07-Feb-2022	16-Feb-2022	06-Aug-2022	✓	17-Feb-2022	06-Aug-2022	✓
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T) T.3.2.22		03-Feb-2022	16-Feb-2022	03-Mar-2022	✓	17-Feb-2022	03-Mar-2022	✓
Soil Glass Jar - Unpreserved (EG035T) T.4.2.22		04-Feb-2022	16-Feb-2022	04-Mar-2022	✓	17-Feb-2022	04-Mar-2022	✓
Soil Glass Jar - Unpreserved (EG035T) T.7.2.22, T.1.2.22		07-Feb-2022	16-Feb-2022	07-Mar-2022	✓	17-Feb-2022	07-Mar-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM)) T.3.2.22		03-Feb-2022	15-Feb-2022	17-Feb-2022	✓	17-Feb-2022	27-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) T.4.2.22		04-Feb-2022	15-Feb-2022	18-Feb-2022	✓	17-Feb-2022	27-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) T.7.2.22, T.1.2.22		07-Feb-2022	15-Feb-2022	21-Feb-2022	✓	17-Feb-2022	27-Mar-2022	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080) T.3.2.22		03-Feb-2022	15-Feb-2022	17-Feb-2022	✓	15-Feb-2022	17-Feb-2022	✓
Soil Glass Jar - Unpreserved (EP071) T.3.2.22		03-Feb-2022	15-Feb-2022	17-Feb-2022	✓	17-Feb-2022	27-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) T.4.2.22		04-Feb-2022	15-Feb-2022	18-Feb-2022	✓	15-Feb-2022	18-Feb-2022	✓
Soil Glass Jar - Unpreserved (EP071) T.4.2.22		04-Feb-2022	15-Feb-2022	18-Feb-2022	✓	17-Feb-2022	27-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) T.7.2.22, T.1.2.22		07-Feb-2022	15-Feb-2022	21-Feb-2022	✓	15-Feb-2022	21-Feb-2022	✓
Soil Glass Jar - Unpreserved (EP071) T.7.2.22, T.1.2.22		07-Feb-2022	15-Feb-2022	21-Feb-2022	✓	17-Feb-2022	27-Mar-2022	✓

Matrix: SOIL

Evaluation: ✗ = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP080) T.3.2.22		03-Feb-2022	15-Feb-2022	17-Feb-2022	✓	15-Feb-2022	17-Feb-2022	✓
Soil Glass Jar - Unpreserved (EP071) T.3.2.22		03-Feb-2022	15-Feb-2022	17-Feb-2022	✓	17-Feb-2022	27-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) T.4.2.22		04-Feb-2022	15-Feb-2022	18-Feb-2022	✓	15-Feb-2022	18-Feb-2022	✓
Soil Glass Jar - Unpreserved (EP071) T.4.2.22		04-Feb-2022	15-Feb-2022	18-Feb-2022	✓	17-Feb-2022	27-Mar-2022	✓
Soil Glass Jar - Unpreserved (EP080) T.7.2.22, T.1.2.22	T.1.2.22	07-Feb-2022	15-Feb-2022	21-Feb-2022	✓	15-Feb-2022	21-Feb-2022	✓
Soil Glass Jar - Unpreserved (EP071) T.7.2.22, T.1.2.22	T.1.2.22	07-Feb-2022	15-Feb-2022	21-Feb-2022	✓	17-Feb-2022	27-Mar-2022	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080) T.3.2.22		03-Feb-2022	15-Feb-2022	17-Feb-2022	✓	15-Feb-2022	17-Feb-2022	✓
Soil Glass Jar - Unpreserved (EP080) T.4.2.22		04-Feb-2022	15-Feb-2022	18-Feb-2022	✓	15-Feb-2022	18-Feb-2022	✓
Soil Glass Jar - Unpreserved (EP080) T.7.2.22, T.1.2.22	T.1.2.22	07-Feb-2022	15-Feb-2022	21-Feb-2022	✓	15-Feb-2022	21-Feb-2022	✓

Matrix: WATER

Evaluation: ✗ = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T) WT.3.2.22		03-Feb-2022	16-Feb-2022	02-Aug-2022	✓	16-Feb-2022	02-Aug-2022	✓
EG035T: Total Recoverable Mercury by FIMS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T) WT.3.2.22		03-Feb-2022	----	----	----	16-Feb-2022	03-Mar-2022	✓
EP068A: Organochlorine Pesticides (OC)								
Amber Glass Bottle - Unpreserved (EP068) WT.3.2.22		03-Feb-2022	14-Feb-2022	10-Feb-2022	✗	17-Feb-2022	26-Mar-2022	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP075(SIM)) WT.3.2.22		03-Feb-2022	14-Feb-2022	10-Feb-2022	✗	17-Feb-2022	26-Mar-2022	✓
EP080/071: Total Petroleum Hydrocarbons								
Amber Glass Bottle - Unpreserved (EP071) WT.3.2.22		03-Feb-2022	14-Feb-2022	10-Feb-2022	✗	17-Feb-2022	26-Mar-2022	✓
Amber VOC Vial - HCl (EP080) WT.3.2.22		03-Feb-2022	16-Feb-2022	17-Feb-2022	✓	16-Feb-2022	17-Feb-2022	✓

Matrix: WATER									Evaluation: ✗ = Holding time breach ; ✓ = Within holding time.					
Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis								
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation						
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions														
Amber Glass Bottle - Unpreserved (EP071)	WT.3.2.22	03-Feb-2022	14-Feb-2022	10-Feb-2022	✗	17-Feb-2022	26-Mar-2022	✓						
Amber VOC Vial - HCl (EP080)	WT.3.2.22	03-Feb-2022	16-Feb-2022	17-Feb-2022	✓	16-Feb-2022	17-Feb-2022	✓						
EP080: BTEXN														
Amber VOC Vial - HCl (EP080)	WT.3.2.22	03-Feb-2022	16-Feb-2022	17-Feb-2022	✓	16-Feb-2022	17-Feb-2022	✓						

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: SOIL

Evaluation: ✗ = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification	
Analytical Methods	Method	QC	Regular	Actual	Expected		
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	15	13.33	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	15	6.67	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: WATER

Evaluation: ✗ = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.



Matrix: WATER Evaluation: ✗ = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification	
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Control Samples (LCS) - Continued							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	1	100.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	8	12.50	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	8	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	1	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	17	5.88	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	8	0.00	5.00	✗	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl ₂) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH - Semivolatile Fraction	EP071	WATER	In house: Referenced to USEPA SW 846 - 8015 The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with the QC requirements of NEPM Schedule B(3)
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	WATER	In house: Referenced to USEPA SW 846 - 8270 Sample extracts are analysed by Capillary GC/MS in SIM Mode and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)



Analytical Methods		Method	Matrix	Method Descriptions
TRH Volatiles/BTEX		EP080	WATER	In house: Referenced to USEPA SW 846 - 8260 Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM Schedule B(3)
Preparation Methods		Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges		EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap		ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids		ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals		EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)
Separatory Funnel Extraction of Liquids		ORG14	WATER	In house: Referenced to USEPA SW 846 - 3510 100 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM Schedule B(3) . ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation		ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for purging.

CERTIFICATE OF ANALYSIS

Work Order	: ES2204817	Page	: 1 of 9
Client	: QUALTEST LABORATORY(NSW) PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: LIBBY BETZ	Contact	: Customer Services ES
Address	: 2 Murray Dwyer Circuit, Mayfield West, 2304 Mayfield West 2304	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: 02 4968 4468	Telephone	: +61-2-8784 8555
Project	: NEW22P-0012	Date Samples Received	: 11-Feb-2022 16:20
Order number	: ----	Date Analysis Commenced	: 14-Feb-2022
C-O-C number	: ----	Issue Date	: 18-Feb-2022 18:15
Sampler	: BILLY SNOW		
Site	: ----		
Quote number	: EN/333		
No. of samples received	: 5		
No. of samples analysed	: 5		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW



Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

∅ = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- EP075 (SIM): Where reported, Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- EP080: Positive result for ES2204817-005 has been confirmed by re-analysis.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID	T.3.2.22	T.4.2.22	T.7.2.22	T.1.2.22	---
Compound	CAS Number	LOR	Sampling date / time	03-Feb-2022 00:00	04-Feb-2022 00:00	07-Feb-2022 00:00	07-Feb-2022 00:00
			Unit	ES2204817-001	ES2204817-002	ES2204817-003	ES2204817-004
EA055: Moisture Content (Dried @ 105-110°C)							
Moisture Content	---	1.0	%	23.1	18.7	18.9	14.0
EG005(ED093)T: Total Metals by ICP-AES							
Arsenic	7440-38-2	5	mg/kg	5	14	8	9
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	34	39	31	19
Copper	7440-50-8	5	mg/kg	14	<5	11	<5
Lead	7439-92-1	5	mg/kg	43	14	11	13
Nickel	7440-02-0	2	mg/kg	18	6	14	4
Zinc	7440-66-6	5	mg/kg	67	10	18	10
EG035T: Total Recoverable Mercury by FIMS							
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3,cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID	T.3.2.22	T.4.2.22	T.7.2.22	T.1.2.22	---
Compound	CAS Number	LOR	Sampling date / time	03-Feb-2022 00:00	04-Feb-2022 00:00	07-Feb-2022 00:00	07-Feb-2022 00:00
			Unit	ES2204817-001	ES2204817-002	ES2204817-003	ES2204817-004
EP080/071: Total Petroleum Hydrocarbons - Continued							
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50
EP080: BTEXN							
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates							
Phenol-d6	13127-88-3	0.5	%	91.0	92.1	94.2	94.5
2-Chlorophenol-D4	93951-73-6	0.5	%	93.2	94.6	97.2	97.3
2,4,6-Tribromophenol	118-79-6	0.5	%	76.3	76.5	78.8	77.6
EP075(SIM)T: PAH Surrogates							
2-Fluorobiphenyl	321-60-8	0.5	%	97.0	96.1	99.8	98.4
Anthracene-d10	1719-06-8	0.5	%	97.0	96.3	99.6	99.2
4-Terphenyl-d14	1718-51-0	0.5	%	94.5	94.2	98.1	97.5
EP080S: TPH(V)/BTEX Surrogates							
1,2-Dichloroethane-D4	17060-07-0	0.2	%	98.8	94.7	90.1	91.9
Toluene-D8	2037-26-5	0.2	%	96.5	91.2	85.1	85.3

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Sample ID	T.3.2.22	T.4.2.22	T.7.2.22	T.1.2.22	---	
		Sampling date / time	03-Feb-2022 00:00	04-Feb-2022 00:00	07-Feb-2022 00:00	07-Feb-2022 00:00	---	
Compound	CAS Number	LOR	Unit	ES2204817-001	ES2204817-002	ES2204817-003	ES2204817-004	-----
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.2	%	89.7	83.0	78.5	74.6	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	WT.3.2.22	---	---	---	---	---	
Compound	CAS Number	LOR	Unit	Sampling date / time	03-Feb-2022 00:00	---	---	---	---
				ES2204817-005	Result	----	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L	0.002	---	---	---	---	---
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	---	---	---	---	---
Chromium	7440-47-3	0.001	mg/L	<0.001	---	---	---	---	---
Copper	7440-50-8	0.001	mg/L	0.003	---	---	---	---	---
Lead	7439-92-1	0.001	mg/L	<0.001	---	---	---	---	---
Nickel	7440-02-0	0.001	mg/L	0.002	---	---	---	---	---
Zinc	7440-66-6	0.005	mg/L	0.012	---	---	---	---	---
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	---	---	---	---	---
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.5	µg/L	<0.5	---	---	---	---	---
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	---	---	---	---	---
beta-BHC	319-85-7	0.5	µg/L	<0.5	---	---	---	---	---
gamma-BHC	58-89-9	0.5	µg/L	<0.5	---	---	---	---	---
delta-BHC	319-86-8	0.5	µg/L	<0.5	---	---	---	---	---
Heptachlor	76-44-8	0.5	µg/L	<0.5	---	---	---	---	---
Aldrin	309-00-2	0.5	µg/L	<0.5	---	---	---	---	---
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	---	---	---	---	---
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	---	---	---	---	---
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	---	---	---	---	---
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	---	---	---	---	---
Dieldrin	60-57-1	0.5	µg/L	<0.5	---	---	---	---	---
4,4'-DDE	72-55-9	0.5	µg/L	<0.5	---	---	---	---	---
Endrin	72-20-8	0.5	µg/L	<0.5	---	---	---	---	---
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	---	---	---	---	---
4,4'-DDD	72-54-8	0.5	µg/L	<0.5	---	---	---	---	---
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	---	---	---	---	---
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	---	---	---	---	---
4,4'-DDT	50-29-3	2.0	µg/L	<2.0	---	---	---	---	---
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	---	---	---	---	---
Methoxychlor	72-43-5	2.0	µg/L	<2.0	---	---	---	---	---
^ Total Chlordane (sum)	-----	0.5	µg/L	<0.5	---	---	---	---	---
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/0-2	0.5	µg/L	<0.5	---	---	---	---	---
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.5	µg/L	<0.5	---	---	---	---	---

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	WT.3.2.22	---	---	---	---	---		
Compound	CAS Number	LOR	Sampling date / time	03-Feb-2022 00:00	---	---	---	---		
			Unit	ES2204817-005	-----	-----	-----	-----		
EP068A: Organochlorine Pesticides (OC) - Continued										
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons										
Naphthalene	91-20-3	1.0	µg/L	<1.0	---	---	---	---		
Acenaphthylene	208-96-8	1.0	µg/L	<1.0	---	---	---	---		
Acenaphthene	83-32-9	1.0	µg/L	<1.0	---	---	---	---		
Fluorene	86-73-7	1.0	µg/L	<1.0	---	---	---	---		
Phenanthrrene	85-01-8	1.0	µg/L	<1.0	---	---	---	---		
Anthracene	120-12-7	1.0	µg/L	<1.0	---	---	---	---		
Fluoranthene	206-44-0	1.0	µg/L	<1.0	---	---	---	---		
Pyrene	129-00-0	1.0	µg/L	<1.0	---	---	---	---		
Benz(a)anthracene	56-55-3	1.0	µg/L	<1.0	---	---	---	---		
Chrysene	218-01-9	1.0	µg/L	<1.0	---	---	---	---		
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1.0	µg/L	<1.0	---	---	---	---		
Benzo(k)fluoranthene	207-08-9	1.0	µg/L	<1.0	---	---	---	---		
Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	---	---	---	---		
Indeno(1,2,3,cd)pyrene	193-39-5	1.0	µg/L	<1.0	---	---	---	---		
Dibenz(a,h)anthracene	53-70-3	1.0	µg/L	<1.0	---	---	---	---		
Benzo(g,h,i)perylene	191-24-2	1.0	µg/L	<1.0	---	---	---	---		
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	µg/L	<0.5	---	---	---	---		
^ Benzo(a)pyrene TEQ (zero)	----	0.5	µg/L	<0.5	---	---	---	---		
EP080/071: Total Petroleum Hydrocarbons										
C6 - C9 Fraction	----	20	µg/L	<20	---	---	---	---		
C10 - C14 Fraction	----	50	µg/L	80	---	---	---	---		
C15 - C28 Fraction	----	100	µg/L	580	---	---	---	---		
C29 - C36 Fraction	----	50	µg/L	210	---	---	---	---		
^ C10 - C36 Fraction (sum)	----	50	µg/L	870	---	---	---	---		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions										
C6 - C10 Fraction	C6_C10	20	µg/L	<20	---	---	---	---		
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	<20	---	---	---	---		
>C10 - C16 Fraction	----	100	µg/L	<100	---	---	---	---		
>C16 - C34 Fraction	----	100	µg/L	730	---	---	---	---		
>C34 - C40 Fraction	----	100	µg/L	<100	---	---	---	---		
^ >C10 - C40 Fraction (sum)	----	100	µg/L	730	---	---	---	---		

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)		Sample ID	WT.3.2.22	---	---	---	---	---
		Sampling date / time	03-Feb-2022 00:00	---	---	---	---	---
Compound	CAS Number	LOR	Unit	ES2204817-005	-----	-----	-----	-----
				Result	---	---	---	---
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ >C10 - C16 Fraction minus Naphthalene (F2)	---	100	µg/L	<100	---	---	---	---
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	<1	---	---	---	---
Toluene	108-88-3	2	µg/L	3	---	---	---	---
Ethylbenzene	100-41-4	2	µg/L	<2	---	---	---	---
meta- & para-Xylene	108-38-3	106-42-3	2	µg/L	<2	---	---	---
ortho-Xylene	95-47-6	2	µg/L	<2	---	---	---	---
^ Total Xylenes	----	2	µg/L	<2	---	---	---	---
^ Sum of BTEX	----	1	µg/L	3	---	---	---	---
Naphthalene	91-20-3	5	µg/L	<5	---	---	---	---
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.5	%	82.2	---	---	---	---
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.5	%	81.4	---	---	---	---
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	1.0	%	25.3	---	---	---	---
2-Chlorophenol-D4	93951-73-6	1.0	%	53.2	---	---	---	---
2,4,6-Tribromophenol	118-79-6	1.0	%	69.0	---	---	---	---
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	1.0	%	67.2	---	---	---	---
Anthracene-d10	1719-06-8	1.0	%	77.1	---	---	---	---
4-Terphenyl-d14	1718-51-0	1.0	%	74.7	---	---	---	---
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	2	%	107	---	---	---	---
Toluene-D8	2037-26-5	2	%	116	---	---	---	---
4-Bromofluorobenzene	460-00-4	2	%	118	---	---	---	---



Surrogate Control Limits

Sub-Matrix: SOIL

Compound	CAS Number	Recovery Limits (%)	
		Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

Sub-Matrix: WATER

Compound	CAS Number	Recovery Limits (%)	
		Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	67	111
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	67	111
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	44
2-Chlorophenol-D4	93951-73-6	14	94
2,4,6-Tribromophenol	118-79-6	17	125
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	20	104
Anthracene-d10	1719-06-8	27	113
4-Terphenyl-d14	1718-51-0	32	112
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	71	137
Toluene-D8	2037-26-5	79	131
4-Bromofluorobenzene	460-00-4	70	128