

Preliminary Site Investigation

559 Anambah Road, Gosforth, NSW, 2320

Prepared for: Thirdi Anambah Pty Ltd
EP3864.001_v2 8 January 2025

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EP RISK

Preliminary Site Investigation

559 Anambah Road, Gosforth, NSW, 2320

Thirdi Anambah Pty Ltd
53 Hume Street,
Crows Nest, NSW 2065

8 January 2025

Our Ref: EP3864.001_v2

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Executive Summary

Introduction

EP Risk Management Pty Ltd (EP Risk) was engaged by Thirdi Anambah Pty Ltd (Thirdi) to undertake a Preliminary Site Investigation (PSI) for a property located at 559 Anambah Road, Gosforth, New South Wales (NSW) and the carriageway titled River Road (the Site). It is understood the Site is proposed to be developed as a residential land lease community (Proposed Development). The Site is legally defined as part Lot 177 in deposited plan (DP) 87171, part Lot 55 in DP 874170 and the carriageway comprising River Road. The Site covers approximately 35 hectares (ha) in area.

Objective

The PSI was required to assess whether any contaminating activities are likely to have occurred at the Site which may present a human health or ecological risk under the proposed land use to support the development application (DA) to council and in accordance with State Environmental Planning Policy (SEPP) (Resilience and Hazards) 2021.

Scope of Works

The scope of works completed to achieve the objective included a review of historical records, site inspection and collection of soil samples from 19 test pit locations to a maximum depth of 2.0 m below ground level (m BGL) or prior refusal. Selected samples were analysed for the contaminants of potential concern (CoPC)[1] by a National Association of Testing Authorities (NATA) accredited laboratory.

Summary of Findings

Based on the review of historical information, the Site has been cleared and used as farmland/grazing land. Surrounding land use was comprised of agricultural/rural land zoned as RU1 – Primary Production, RU2 – Rural Landscape, R1 – General Residential and C4 – Environmental Living.

The subsurface conditions encountered at the Site include:

- 0 - 0.2 m BGL TOPSOIL: Silty CLAY/Sandy CLAY/ Clayey SAND, low to medium plasticity, fine to medium grained sand, dark brown.
- 0.17 – 1.3 m BGL RESIDUAL SOIL: Silty CLAY/Sandy CLAY, medium to plasticity, pale brown to brown, grey, orange, with fine to coarse grained sand.
- 0.1 – 2.7 m BGL EXTREMELY WEATHERED ROCK: SANDSTONE, recovered as sandy CLAY/Clayey SAND, fine to coarse grained sand medium to high plasticity, grey, brown, red; and MUDSTONE, recovered as Sandy CLAY, medium to high plasticity, red, grey, orange fine to coarse grained sand.

Soil samples collected from 12 sampling locations were screened through a 7mm screen and reported bonded (non-friable) ACM concentrations below the adopted health-based soil criteria HSL (0.02% w/w). Additionally,

[1] Total Recoverable Hydrocarbons (TRH) / Benzene, toluene, xylene, ethylbenzene, Naphthalene (BTEXN) / Polyaromatic Hydrocarbons (PAH) / Polychlorinated biphenyls (PCB), Heavy metals (Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc) / Organochlorine pesticides (OCP) / Organophosphorus pesticides (OPP) and asbestos.

asbestos fines/friable asbestos (AF/FA) were reported below the limit of reporting (LOR) and health-based soil criteria HSL. No fragments of ACM were observed within the test pits.

BTEXN, PAH, OCP, OPP, TRH, phenols and PCBs of the soil samples analysed were reported below the adopted human health and ecological criteria and/or LOR.

Total Chromium (Chromium III and Chromium VI) was detected in exceedance of the adopted HIL criteria at TP02L_0.1 and TP21-P_0.1. Additional speciation testing was undertaken to determine the concentration of Chromium VI within sample TP02L_0.1, Chromium VI was reported to be below the adopted HIL criteria and below the LOR. Chromium III is considered to have low toxicity, and it not compared against the HIL and HSL criteria. The concentration of total chromium at TP02L_0.1 is considered to be low risk.

A 95% UCL was calculated for the dataset for total Chromium, and the Students t UCL was adopted based on the calculated result of a similar value to the calculated mean of the dataset. The calculated 95% UCL was below the adopted HIL criteria.

Minor anthropogenic materials were identified within the southern portion of River Road within the Site and along the Site boundaries, including structures such as stables and round yards. A burnt area and stockpile including green waste, plastic and cardboard was identified within the southern portion of River Road. Two culverts with minor fill material were identified within the boundaries of River Road.

Conclusions and Recommendations

Based on this assessment and the conceptual site model for the proposed development complete source-pathway-receptor linkages are considered rare. Based on the results of the Site history review, Site inspection and analytical results, the Site is considered to present a low risk of contamination and is considered suitable for the proposed residential land use, subject to the development and implementation of an unexpected finds protocol during redevelopment and appropriate housekeeping activities to remove identified anthropogenic material.

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1 Introduction

EP Risk Management Pty Ltd (EP Risk) was engaged by Thirdi Anambah Pty Ltd (Thirdi) to undertake a Preliminary Site Investigation (PSI) for a property located at 559 Anambah Road, Gosforth, New South Wales (NSW) (the Site) and the carriageway titled River Road. It is understood the Site is proposed to be developed as a residential land lease community (Proposed Development) and the PSI is required as part of the development application (DA) and in accordance with State Environmental Planning Policy (SEPP) (Resilience and Hazards) 2021.

1.1 Site Identification

The Site identification details are presented in **Table 1**

Table 1 – Site Identification

Item	Description
Address	559 Anambah Road, Gosforth, NSW 2320 **(Figure 1)**.
Legal Description	The Site is legally described as part Lot 177 in deposited plan (DP) 87171, part Lot 55 in DP 874170 and River Road carriage way running north to south.
Approximate Area	Approximately 35 hectares (ha).
Municipality	Maitland City Council (Council).
Zoning	The Maitland Local Environment Plan (LEP) 2011 identifies the Site as RU2 Rural Landscape and R1 – General Residential

1.2 Proposed Development

It is understood the Site is proposed to be developed as Manufactured Home Community comprising:

- A total 332 Manufactured Home Sites.
- Community Facilities including clubhouse, secondary community hub, pool, bowling green, tennis court and pickleball court
- Access roads via the proposed adjacent residential development and the proposed extension of River Road.

1.3 Objective

The PSI was required to assess whether contaminating activities are likely to have occurred at the Site which may present a human health or ecological risk under the proposed (residential) land use.

1.4 Scope of Work

The scope of work completed to achieve the objective included:

- Preparation of all work health and safety documentation and procure dial before you dig information.
- Undertake an inspection of the Site to observe onsite and offsite conditions.
- Advance a total of 19 test pits to a maximum depth of 4.0 m below ground level (m BGL) or prior refusal.

- Screening of surface materials with a 7mm screen for the assessment of asbestos containing material (ACM).
- Collection of samples from intervals of 0.1 m BGL, 0.5 m BGL, 1.0 m BGL, 2.0 m BGL and 3.0 m BGL, or prior to refusal.
- Analytical testing of the soil samples by a National Association of Testing Authorities (NATA) accredited laboratory.
- Preparation of a report with the findings of the investigation in accordance with NSW EPA (2020) *Guidelines for Consultants Reporting on Contaminated Land* and the National Environment Protection (Assessment of Site Contamination) Measure 1999 (ASC NEPM 2013).

1.5 Technical Framework

- ASC NEPM (2013).
- Protection of the Environment Operations (POEO) Act 1997.
- NSW EPA (2017) *Guidelines for the NSW Auditor Scheme (3rd Edition) (NSW Auditor Guidelines)*.
- NSW EPA (2020) *Contaminated Land Guidelines – Consultants Reporting on Contaminated Land*.
- NSW EPA (2022a) *Contaminated Land Guidelines: Sampling Design part 1 – application.*
- NSW EPA (2022b) *Contaminated Land Guidelines: Sampling Design part 2 – interpretation.*
- State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP).
- The Maitland LEP (2011).
- United State Environment Protection Agency (USEPA) (2006) *Guidance on Systematic Planning Using the Data Quality Objectives Process*, ref: EPA QA/G-4.
- Western Australian (WA) Department of Health (DOH) (2020) *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (DOH 2020).

2 Site Condition and Surrounding Environment

The majority of information provided in the following sections was obtained from the Lotsearch Environmental Risk and Planning Report (Lotsearch, 2024) which was obtained for the Site. A copy of the Lotsearch (2024) report is attached as **Appendix D**.

2.1 Land Use and Layout

The Site is comprised of a large irregular shaped portion of land, approximately 35 Ha in size. An Environmental Scientist from EP Risk attended the Site on the 12 September 2024 to undertake a Site inspection. General Site features observed are summarised below:

- The Site comprises undulating hills and is currently used for grazing purposes.
- The Site is mostly cleared with the exception of a few mature trees scattered around the Site and dense bushland to the west of the Site.
- A water course runs through the south western portion of the Site.
- Three dams are located at the Site.
- Timber post and wire fencing surrounds the Site.

An Environmental Scientist from EP Risk attended the Site on the 22 – 24 April 2024 to undertake a Site inspection of the proposed access roads which are located within the adjacent proposed residential development and on the 25 September 2024 to undertake a Site inspection of the proposed River Road extension (EP Risk 2024a[2]). General Site features observed are summarised below:

- A gully with connects to a dam is located just outside the boundary of the northern access road.
- The access roads are mostly cleared with scattered matured trees.
- An existing track is located on the northern portion of the proposed River Road.
- The majority of the proposed Road is cleared farmland used for grazing purposes.
- Two concrete culverts with potential for fill material were identified within the boundaries of the proposed Road.
- Structures including stables and round yards made of timber, tin and rubber were identified within the southern portion and at the boundaries of the proposed Road.
- A stockpile of green waste, cardboard and minor plastic was identified in the southern portion of the proposed Road.
- A burnt area was observed within the southern portion of the proposed Road.

Photographs of the Site are attached as **Appendix B**.

[2] EP Risk Management (EP Risk) (2024a) Preliminary Site Investigation, 559 Anambah Road, Gosforth, NSW, 2320, dated 3rd October 2024 (ref: EP3627.001_v4)

2.2 Surrounding Land Use

Based on a review of the Maitland LEP (2011) Land Zoning Map, the Site is located within an area zoned RU2 Rural Landscape and R1 General Residential that is typically cleared agricultural farmland.

- **North:** Rural land zoned as RU1 – Primary Production and R1 – General Residential.
- **East:** Rural land zoned as R1 – General Residential, Anambah Road and a quarry zoned RU2 – Rural Landscape beyond.
- **West:** Rural land zoned as RU1 – Primary Production and Hunter River beyond.
- **South:** Rural land zoned as RU2 – Rural Landscape, R1 – General Residential and C4 – Environmental Living.

2.3 Environmental Setting

A summary of the information sourced from the Lotsearch report (2024) is summarised in **Table 2.**

Table 2 – Environmental Setting	
Record	**Findings**
Topography and Hydrology	The majority of the Site is undulating and gently to moderate slopes to the east at an elevation ranging between 40 to 70 m AHD. The Site drainage is considered to consist of surface runoff migrating across the Site following surface contours as overland flow towards the creek lines and dams located on the Site and off site.
Geology	Based on the geological data sourced from the NSW Department of Industry, Resources and Energy (Lotsearch, 2024) the Site is underlain by the following geological units: • Seaham formation, comprising tillite, varved siltstone, tuff, mudstone interbedded with lithic sandstone and conglomerate located across the majority of the Site. • Lochinvar formation, comprising basalt, siltstone and sandstone in the central and eastern portion of the Site. An area of the Lochinvar Basalt formation comprising amygdaloidal basalt is also located within the north eastern portion of the Site. A faulted boundary line is also present at the Site running northwest to southeast.
Soil Landscapes	Based on the soil landscapes data sourced from the NSW OEH (Lotsearch, 2024) the Site is located within the Tenosol soil order. The soil landscapes are the Rothbury Soil Landscape. which covers undulating and rolling low hills south and south-east of Singleton. Red Podzolic Soils occur on upper slopes with Yellow Podzolic Soils on midslopes. Yellow Solodic Soils and brown Soloths occur on lower slopes. Prairie Soils are present in the drainage lines. The southern portion of the proposed River Road boundaries is located within the Branxton Soil Landscape which covers undulating low hills and rises with many small creek flats, extending over a large area between Singleton and Cessnock. The main soils are Yellow Pozolic Soils on midslopes and Red Podzolic Soils on crests. Yellow Soloths occur on lower slopes and in drainage lines. Alluvial Sands occur in some creeks with Siliceous Sands on flats within large valleys. Some acid topsoil problems are encountered in the area.
Hydrogeology	A search of the NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation undertaken by Lotsearch (2024) indicated there were no registered groundwater bores located onsite. However, two registered groundwater bores were located within 2 km of the Site, standing water levels were not reported on the bore reports. The groundwater bore information is listed below: • The authorised purpose of bore GW061253 was for water supply, the salinity was between 3001-7000 ppm and the depth was 25 m BGL. • The authorised purpose of bore GW080640 was for water supply and the depth was unknown. Review of the Hydrogeology Map of Australia, Lotsearch (2024) identified porous and extensive highly productive aquifers on the Site. Groundwater flow direction is considered to be in an easterly direction towards the down-gradient Hunter River.
Natural Occurring Asbestos Potential	No reported naturally occurring asbestos potential has been identified within 1 km of the Site.

Table 2 – Environmental Setting	
Record	**Findings**
Acid Sulfate Soils	Based upon a review of the Maitland LEP (2011), the Site is located within a class 5 Acid Sulfate Soils zone. Works within 500m of adjacent Class 1, 2, 3 or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 meter AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk. With reference to the CSIRO Atlas of Australian Acid Sulfate Soil, the Site is located in a Class C zone with an extremely low (1-5%) probability of occurrence.
Dryland Salinity	With reference to the Dryland Salinity Data sourced from Lotsearch (2024), the southern portion of the Site including the proposed river road is located within a high hazard or risk defined for all years of dryland salinity potential
Bushfire Prone Area	The Site was listed as a bush fire prone area with vegetation category 1, 2, 3 and vegetation buffers located on Site
Ecology	According to NSW Office of Environment and Health (OEH), no RAMSAR wetlands were reported within 1 km of the Site and no terrestrial or marine protected areas were reported within 1 km of the Site. Low, moderate and high potential terrestrial groundwater dependant ecosystems (GDEs) were identified on the Site. A moderate and high potential aquatic GDEs are present within 1 km of the Site.
Waste Management Facilities	No waste management facilities were identified within 1 km of the Site.
National Liquid Fuel Facilities	No national liquid fuel facilities were identified within 1 km of the Site.
Mining Subsidence	With reference to the Mining Subsidence District Data sourced from Lotsearch (2024), the Site is not located within a mining subsidence district.
Mining and Exploration Titles	No current mining or exploration titles exist at the Site. A total of seven Historical Mining and Exploration Titles exist within the boundaries of the Site, identified for petroleum and mineral resources. The most recent end date for the titles was 07/06/2015 for Sydney Oil Co Pty Ltd Australia, Base Resources LTD, Seahawk Oil Australia and Reading & Bates. The remaining end dates are noted between 1970 and 1999.
Cattle Dips	No records of cattle dips were recorded at or within 1 km of the Site according to a search of the Department of Primary Industries Data Base and visual observations of the Site.
Former Gasworks	No former gasworks have been identified at or within 1 km of the Site.

2.4 Regulatory Searches

A summary of the regulatory searches performed by Lotsearch (2024) are summarised in **Table 3.**

Table 3 – Regulatory Searches	
Search	**Results**
Contaminated Land	The Site was not listed as contaminated under the Contaminated Land Management Act (CLM Act) 1997. As of 24.09.24 the Site was not listed on the NSW Environment Protection Authority (NSW EPA) Record for Contaminated Sites notified to the NSW EPA in accordance with the CLM Act 1997. No Sites notified to the NSW EPA were located within 1 km of the Site.
Licensed Activities under the Under the Protection of the Environment Operations Act 1997	Licensed activities under the POEO Act at or within 1 km of the Site are: • Maitland City Council, all waterbodies in the Maitland local government area for other activities, onsite. • Ditton Properties Pty Ltd, for all land-based extractive activity, 850 m east of the Site. The licensed activities are considered to present a low risk of contamination based upon the nature of the activities, which are common to most waterways in NSW. The land based extractive activity is considered not to be a potential off-site source of contamination due to the separation distance and down gradient location.
Former Licensed Activities under the POEO Act 1997, now revoked or surrendered	There were four records of Former Licensed Activities under the POEO Act 1997, now surrendered, located at or within 1 km of the Site boundary. They are as follows: • Luhrmann Environment Management Pty Ltd, for waterways throughout NSW, surrendered for other activities / non-scheduled activity – application of herbicides, surrendered on the 06/09/2000. • Robert Orchard, for various waterways throughout NSW, surrendered for other activities / non-scheduled activity – application of herbicides, surrendered on the 07/09/2000. • Sydney Weed and Pest Management Pty Ltd, for waterways throughout NSW – Prospect NSW, 2148, surrendered for other activities / non-scheduled activity – application of herbicides, surrendered on the 09/11/2000. • State of New South Wales (Department of Primary Industries – Land), for soil conservation service, waterways within the Hunter Valley Flood Mitigation Scheme, Maitland, surrendered for other activities – application of herbicide. The former licensed activities are considered to present a low risk of contamination based upon the nature of the activities, which are common to most waterways in NSW.
Delicensed Activities Still Regulated by the NSW EPA	No delicensed activities still regulated by the NSW EPA were identified at or within 1 km of the Site.
NSW EPA per- and poly-fluoroalkyl substances (PFAS) Investigation and Management Programs	No Sites under the NSW PFAS Investigation Program, Defence PFAS Investigation Program, Defence PFAS Management Program or Airservices Australian National PFAS Management Program were identified at or within 1 km of the Site.
Defence 3 Year Regional Contamination Investigation Program	No Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program were identified within 1 km of the Site.
Heritage	No Environmental Planning Instrument (EPI) heritage items were identified within 1km of the Site which were considered to pose a risk to the Site or impacted by potential contamination at the Site.

3 Previous Investigations

Previous investigations undertaken at the Site include:

- Robert Car Associates (RCA) (2023) Preliminary Geotechnical Assessment, 559 Anambah Road, Anambah, NSW, dated 1st August 2023 (ref: 16742-201/0).
- EP Risk Management (EP Risk) (2024b) Preliminary Site Investigation, 559 Anambah Road, Gosforth, NSW, 2320, dated 3rd October 2024 (ref: EP3627.001_v4)

Robert Car Associates (2023) Preliminary Geotechnical Assessment

RCA were engaged by Thirdi to undertake a Preliminary Geotechnical Assessment for the Site and adjacent land to the east . The scope of the assessment included:

- A Site walkover and logging of existing soil and rock exposures,
- Excavation, sampling and logging of eight test pits to a maximum depth of 2.3 m BGL (TP1 and TP2),
- Sampling of subsurface materials for geotechnical laboratory testings,

The encountered soil can be summarised as topsoil 0-0.2 m BGL, slope wash (TP1) from 0.15 - 0.6 m BGL, fine grained residual soils from 0.2 – 0.8 m BGL, coarse grained residual soils (TP2) from 0.8 - 2.3 m BGL, extremely weathered material from 0.8 - 1.5 m BGL, rock at 1.5 m BGL.

No groundwater was encountered within the test pits during the investigation. The salinity of the soils tested was reported as non-saline.

EP Risk Management (2024) Preliminary Site Investigation

EP Risk were engaged by Thirdi to undertake a Preliminary Site Investigation for adjacent land to the east of the Site and two proposed access roads and the proposed extension to River Road located within the Site boundaries. The scope of the assessment included:

- A Site walkover to observe onsite and offsite conditions
- Excavation, sampling and logging of 40 test pits including seven test pits within the Site boundaries (TP02-P, TP21-P, TP24-P, TP25-P, TP30-P, TP35-P, TP38-P). to a maximum depth of 3.2 m BGL.
- Review of historical and current information regarding the Site

The encountered soil can be summarised as Topsoil: Silty CLAY, Residual soil: Silty CLAY and Extremely weathered rock: SANDSTONE recovered as Sandy CLAY and SANDSTONE recovered as clayey gravelly SAND.

The soil samples were analysed for heavy metals, BTEXN, PAH, OCP, OPP, TPH, TRH and asbestos and compared against the NEPM (2013) health and ecological criteria for residential land use. Exceedances of the adopted HIL criteria for chromium were reported in three samples, including one sample within the Site boundary. A 95% upper confidence limit (UCL) for chromium was calculated and the dataset was reported below the adopted criteria. Fill or anthropogenic material was not observed in the excavated test pits. Minor anthropogenic materials were identified within the southern portion of the proposed River Road. Complete source-pathway-receptor linkages were not identified during the investigation.

EP Risk concluded there was a low risk of contamination and was suitable for residential land use, subject to the development and implementation of an unexpected finds protocol.

4 Site History

The Site history sources utilised during the review included:

- Historical aerial photography
- Historical business directories
- Historical title search information

4.1 Review of Historical Aerial Photos

Aerial photographs from 1950, 1961, 1971, 1976, 1994, 2004, 2013, 2023 were reviewed to identify past land uses of the Site and surroundings. **Table 4** provides a summary of the review.

Table 4 – Historical Aerial Photograph Review

Year	Description
1950	**Site:** The Site appears to be mostly cleared for grazing with bushland present in the south western portion of the Site, no structures were present at the Site. **Surroundings:** The surrounding area comprises mostly cleared grazing land with bushland to the south of the Site.
1961	**Site:** No significant changes have occurred. **Surroundings:** No significant changes have occurred.
1971	**Site:** A dam was constructed within the northern portion of the Site. **Surroundings:** A track was constructed to the south west of the Site. A dam was constructed on the boundary of the proposed access road.
1976	**Site:** No significant changes have occurred. **Surroundings:** No significant changes have occurred.
1984	**Site:** No significant changes have occurred. **Surroundings:** Dwellings have been constructed to the west of the southern portion of the proposed River Road within the Site.
1994	**Site:** No significant changes have occurred. **Surroundings:** No significant changes have occurred.
1998	**Site:** No significant changes have occurred. **Surroundings:** Additional dwellings have been constructed to the west of the southern and central portion of the proposed River Road at the Site.
2004	**Site:** A dam was constructed in the north eastern portion of the Site. **Surroundings:** Two residential dwellings were constructed to the north of the Site, the access track to the south west of the Site was covered by trees.
2013	**Site:** A dam was constructed in the middle of the Site. **Surroundings:** The cropping to the north has ceased, another rural/residential property constructed to the north.
2023	**Site:** Bushland in the south western portion of the Site became more dense. **Surroundings:** No significant changes have occurred.

The aerial photographs reviewed are provided in the Lotsearch (2024) report as **Appendix D.**

4.2 Business Directory Search

No business activities were recorded at the Site or within 1km of the Site. No records of dry cleaners, motor garages or service stations were recorded onsite or matched to the area or roads.

4.3 Historical Title Search

The historical title information indicated the title was created in 1909 and first owned by William Hooke Mackay (Grazier), since then the title has been transferred six times and most owners were also Graziers. The current owner was listed as Rodney David Bird who has owned the Site from 1998 to date.

A right of carriageway easement (River Road) was noted at the Site running from north to south in the centre of the Site.

The historical title information is attached as **Appendix E**.

4.4 Summary of Site History

Based on the review of the historical information, the Site was formerly used as cleared farmland/grazing land. No farming sheds, machinery or residential structures on the Site were evident from the desktop review. The surrounding land use comprised rural/agricultural land use.

River Road in the southern portion of the Site was identified to have structures made of timber and tin such as stables and round yards built between late 1990s - early 2000s. Dwellings to the west which have access to the River Road at the Site were built between 1980 – 1990s. Stockpiles of green waste and anthropogenic material (cardboard and plastic), soil, hay and horse manure were also identified within the southern portion of the Site.

The surrounding land use predominately comprised rural / agricultural land use.

5 Sampling and Analysis

5.1 Data Quality Objectives

To assess whether an appropriate sampling strategy was adopted for the PSI, EP Risk adopted the data quality objectives (DQOs) planning process as:

- Recommended in the ASC NEPM 2013.
- Required within the NSW EPA (2017), *Guidelines for the NSW Site Auditors Scheme (3rd edition)*.
- With consideration to technical details outlined in US EPA (2006) *Guidance on Systematic Planning Using the Data Quality Objectives Process, ref: EPA QA/G-4* and AS 4482.1-2005 *Guide to the investigation and sampling of sites with potentially contaminated soil – Part 1: Non-volatile and semi-volatile compounds*.

Step 1 - State the Problem

Preliminary Conceptual Site Model based on the Site history review:

- **Sources** – Former agricultural/grazing usage and potential filling.
- **Contaminants** – potentially metals (As, Cd, Cr, Cu, Pb, Ni and Zn[3]), organics (TRHs, TPH, BTEX, PAHs and OCPs/OPPs[4]), and asbestos (bonded (non-friable) asbestos containing material (ACM) / asbestos fines (AF) / fibrous asbestos (FA).
- **Media** – The current potential affected media at the Site includes soil. Based on the preliminary nature of this assessment, sampling and reporting is limited to soils onsite.
- **Receptors** – Current Site owners and maintenance workers. Once developed, future Site workers (surface and sub-surface), residents and visitors (adults and children).
- **Pathways** – dermal contact, inhalation of dust and ingestion have been identified as the pathways of concern. Further assessment of groundwater and/or soil gas may be considered based on the findings of this investigation.

The PSI was required to assess whether any contaminating activities are likely to have occurred at the Site which may present a human health or ecological risk for the current or proposed land use.

Step 2, 3 and 5 - Goals of the Study, Required Inputs and Analytic Approach

Given the Site is to be redeveloped into a low-density residential development, the decision-making process for urban redevelopment Sites provided by the NSW EPA (2017) was considered in the development of the following decisions that need to be addressed.

The decision-making process for assessing urban redevelopment Sites was adopted and summarised in **Table 5.**

The inputs required to make the decision are presented in **Table 5.**

[3] Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, and Zinc.
[4] Total Recoverable Hydrocarbons, Total Petroleum Hydrocarbons, Benzene, Toluene, Ethylbenzene and Xylene, Polynuclear Aromatic Hydrocarbons, Polychlorinated Biphenyls, Organochlorine Pesticides and Organophosphorus Pesticides.

The Tier 1 assessment criteria for the contaminants of concern are presented in **Table 6**. These criteria have been adopted to determine whether additional assessment is required and/or whether the Site is suitable for the proposed land use.

Confirmation that data generated by sampling and analysis are of an acceptable quality to allow reliable comparison to adopted assessment criteria as undertaken by assessment of quality assurance / quality control (QA/QC) as per the data quality indicators (DQIs) established in **Section 6**.

Step 4 - Define the Boundaries of the Study

The spatial boundary is limited to 559 Anambah Road, Gosforth, NSW. The legal description of the Site is Part Lot 177 in DP 874171, Part Lot 55 DP 874170 and the carriageway comprising River Road which covers an area approximately 35 ha. The maximum proposed depth for the investigation set at 4.0 m BGL for soil. The approximate boundaries are shown in **Figure 1**.

Due to the project objectives, seasonality was not assessed as part of this investigation. Data was therefore representative of the timing and duration of the current investigation.

Table 5 – Goals of the Study, Required Inputs and Analytical Approach

Decision	Rule	Inputs/Media	Associated AECs	CoPCs
1. Has soil been assessed against relevant health investigation levels (HILs) and health screening levels (HSLs), and has potential for migration of contamination been considered?	The nature and extent of soil impacts will be assessed, and analytical data will be compared against the adopted health and ecological criteria. The following statistical criteria was adopted with respect to soils and groundwater: Either: the reported concentrations are all below the adopted Site criteria; Or: the average Site concentration for each analyte must be below the adopted Site criterion; no single analyte concentration exceeds 250% of the adopted Site criterion; and the standard deviation of the results must be less than 50% of the site criteria. And: the 95% upper confidence limit ('UCLmean') of the average concentration for each analyte must be below the adopted site criterion. If the statistical criteria stated above are satisfied, and an assessment of risk indicates no unacceptable risks then there is no potential for migration of contamination. Otherwise, there is potential for migration of contamination and further assessments may be required to determine the risk at the Site.	Soil sampling and analysis and Site observations.	AEC 1 - Rural agricultural land use. AEC 2 – Potential fly tipping/uncontrolled filling	Soil – TRH, TPH, BTEX, PAH, PCB, OCP, OPP, heavy metals, asbestos.
2. Are there any issues relating to local area background soil concentrations that exceed relevant investigation levels have been adequately addressed in the Site assessment report(s)?	If the 95% UCL of natural soils, that are considered to not be impacted by potential sources of contamination, exceed adopted health and ecological criteria. Otherwise, additional assessment of background concentrations will be required.			
3. Are there impacts of chemical mixtures?	Is more than one chemical within a group of contaminants considered to have a similar mode of action present which increase the risk of harm? If there is, a hazard quotient (HQ) and Hazard Index (HI) should be calculated from the analytical results for each sample in accordance with NEPM 2013. If the HI is calculated to be greater than 1. Otherwise, there are impacts of chemical mixtures that will require additional assessment.			
4. Are there any potential ecological risks? If yes, have these been assessed? Are there any potential human health risks to the identified Site receptors?	Soil impacts will be assessed, and data will be compared to the adopted criteria. The decisions will be made based on Decisions 1 and 2 above. And: If the reported concentrations are all below the adopted Site criteria and an assessment of risk indicates no unacceptable risks. Otherwise, potential ecological and human health risks have been adequately assessed.			
5. Is there any evidence of, or potential for, migration of contaminants from the Site? Has this been appropriately addressed, including potential risks to offsite receptors, and reported to the Site owner or occupier?	Are chemical contaminants present within natural soil at concentrations exceeding the adopted Site criteria? And: is there a potential transport pathway/mechanism If yes, then there is the potential for offsite migration that will require additional assessment.			
6. Are there any aesthetics issues in fill at the Site?	If there are any unacceptable staining, odours, or significant amounts of anthropogenic fill materials then additional assessment or management will be required.			
7. Is there sufficient information to accurately characterise the Site contamination?	If the total number of samples collected is greater than or equal to the recommended number of sample points in accordance with NSW EPA (2022) Sampling Design Guidelines; And: the likelihood of onsite soil contamination impacting, groundwater, surface water and offsite receptors is considered unlikely. And: no areas which exceeded the adopted criteria require further characterisation. Then sufficient information to accurately characterise the Site contamination has been provided.			
8. Is further investigation required?	Where indicated in by the answers to any of the above decisions above, further investigation may be required to be developed.			
9. Is a Site management strategy required?	Where indicated in by the answers to any of the above decisions above a management strategy may be required to be developed.			

Step 6 – Specify Performance or Acceptance Criteria

As per EPA (2022) Step 6 of the DQOs process establishes quantitative criteria known as performance or acceptance criteria:

- for decision problems, these are typically tolerable limits on the probability or chance (risk) of the collected data leading to making an erroneous decision (e.g. confidence levels).
- for estimation problems, these are typically an acceptable uncertainty, for example, the width of an uncertainty band or interval, associated with a point estimate at a desired level of statistical confidence (e.g. confidence intervals).

Specify probability limits for false rejection and false acceptance of decision errors.

- Specify the decision rule as a statistical hypothesis test – The null hypothesis is that the material is contaminated and exceeds the adopted criteria. The alternative hypothesis is that the material is not contaminated above the adopted criteria.
- Examine consequences of making incorrect decisions from the test:
    - the material being accepted as suitable for a HIL-A land use when it is not, thereby potentially risking human health or environmental impacts.
    - unnecessary disposal of the material offsite, imposing needless financial and resource burdens on the development project and resulting in an inappropriate waste classification.
- Place acceptable limits on the likelihood of making decision errors, including acceptable alpha (α) and beta (β) risk levels for the hypotheses:
    - null hypothesis (H_0): the 95% UCL, and other requirements, are > the action level.
    - alternate hypothesis (H_A): the 95% UCL, and other requirements, are ≤ the action level.
    - Potential outcomes include Type I and Type II errors:
        - Type I error of determining the material is acceptable for the proposed HIL-A land use when it is not (wrongly rejects true H_0).
        - Type II error of determining the material is unacceptable for the proposed HIL-A land use when it is acceptable (wrongly accepts false H_0).
    - For performance criteria, the acceptable limits on the likelihood of making decision errors to be applied are:
        - alpha risk (Type I error) of $\alpha = 0.05$
        - beta risk (Type II error) of $\beta = 0.2$.

No previously collected data are available for use, therefore acceptance criteria are not required.

Step 7 – Sampling Design and Methodology

Various strategies for developing a statistically based sampling plan are identified in EPA (2022)[5], including judgemental, random, systematic, and stratified sampling patterns. Random sampling is considered not appropriate. The specific scope is discussed below.

The minimum recommended sampling density in Table 2 of NSW EPA (2022) is 385 soil samples to assess an area of 35 ha. The proposed sampling frequency of 19 sampling locations is considered appropriate based upon the preliminary nature of the assessment. The main potential contamination is inferred to be usage of pesticides and herbicides across the Site. However, it should be noted depending upon the results of the assessment, additional sampling and testing may be required to comprehensively delineate contamination, which is outside the scope of work provided for a preliminary assessment.

The soil sampling locations are provided as **Figure 3** attached and the scope is detailed in **Table 6** below.

EP Risk used Australian Laboratory Services (ALS) and Eurofins as the primary and secondary laboratories, both of which are NATA accredited for the required analysis. The laboratory analysis was undertaken in accordance with **Table 6.**

[5] NSW EPA (2022) *Sampling Design Guidelines part 1.*

Table 6 – Sampling and Analysis Plan and Methodology

Media	Scope of Work (Inputs)	Number of Sampling Locations	Samples and Analysis	Adopted Tier 1 Criteria
Soil	The methodology for soil sampling was as follows: • Soil samples were collected from 12 test pit locations on the 12 September 2024 and 9 test pit locations on the 22 – 24 April 2024 (EP Risk 2024a). • Collection of soil samples from 0.1 m BGL, 0.5 m BGL, 1.0 m BGL and every 1.0 m thereafter until a target depth of 4.0 m BGL or refusal (whichever is encountered first). • Test pits were advanced via a 15-tonne excavator fitted with a 400 mm bucket to a maximum depth of 4.0 m BGL or prior rock refusal. • Soils were logged for type, colour, texture, other characteristics, and indications of contamination as presented in the test pit logs attached as **Appendix C**. • Screening of soil samples using a photoionisation detector (PID). • A dedicated pair of nitrile gloves was used for each sample to prevent cross contamination. • Sufficient soil samples were collected and placed into laboratory prepared sampling jars with a unique sample ID added to the label on each jar. • The sample jars were preserved on ice immediately after sampling and during shipment to a NATA accredited laboratories for analysis. The laboratory chain of custody documentation was completed and accompanied the samples during shipment.	19 Test Pits	Analytical testing by a National Association Testing Authorities (NATA) accredited laboratory of one soil sample per borehole for the following: • Heavy metals (Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel and Zinc) / Organochlorine pesticides (OCP) / Organophosphorus pesticides (OPP) – 19 • Total Recoverable Hydrocarbons (TRH) / Benzene, toluene, xylene, ethylbenzene, Naphthalene (BTEXN) / Polyaromatic Hydrocarbons (PAH) / Polychlorinated biphenyls (PCB) – 15 • Asbestos w/w % - 15 QA/QC Samples as follows: • Duplicates / triplicates (as per primary) – 2 • Rinsate (as per primary) – Metals, TRH, PAH, BTEX, PAHs - 2 • Trip Blank and Spike- BTEX, TRH C6-C9 - 2	For the purposes of assessing the results of analytical testing of soil at the Site, the following guidelines will be considered: • **Health-based Criteria** for the current and proposed land use: ASC NEPM 2013 Health-based Investigation Levels (HILs) and Health Based Screening Levels (HSLs) for residential land and the CRC Care (2011) HSLs for intrusive maintenance worker (shallow trench) and direct contact. • **Ecological Criteria**: ASC NEPM 2013 Ecological-based Investigation Levels (EILs) and Ecological based Screening Levels (ESLs) for urban residential. • **Management Limits**: ASC NEPM 2013 management limits are based upon the physical properties of petroleum hydrocarbons to form observable light non-aqueous phase liquid (LNAPL); create fire and explosion hazards or penetrate or damage underground services. The management limits for residential land based on coarse/fine soil have been adopted. • **Aesthetics**: The consultant should also consider the need for remediation based on the 'aesthetic' contamination as outlined in Schedule B (1) of the ASC NEPM 2013 that states that 'there are no numeric Aesthetic Guidelines however site assessment requires balanced consideration of the quality, type and distribution of foreign material or odours in relation to the specific land use and its sensitivity'. Soil odour, discolouration and the presence of anthropogenic materials will need to be assessed during the assessment. The adopted soil criteria for the Site are presented below:

Guidelines	COPC	Adopted Criteria
ASC NEPM 2013	Heavy metals/OCP/PCB/ Phenols	• HIL A (residential land)
	Heavy metals/OCP/PAH	• EIL (urban residential); < 2 m
	TRH and BTEXN	• Vapour intrusion HSL A (residential land); 0 - <1m; silt/clay • ESLs (urban residential); <2m
	TRH	• Management limits (urban residential); fine and coarse soil.
	AF/FA and Bonded Asbestos	• HSL A bonded ACM; 0.01% • FA and AF Res A; 0.001%

5.2 Data Quality Indicators

The acceptable limit of error for sampling techniques and laboratory analysis was defined by the DQIs as follows:

Precision

A measure of the reproducibility of on measurements under a given set of conditions. The relative percent difference (RPD) has been adopted to assess the precision of data between duplicate sample pairs according to the following equation.

$$RPD\% = \frac{[\mathrm{Cp} - \mathrm{Cd}]}{\mathrm{Cp} + \mathrm{Cd}} \times 200$$

Where:
Cp = Primary sample
Cd = Duplicate Sample

An acceptance criterion of ±50% had been adopted for inorganic field duplicates and triplicates and ±50% for organic field duplicates and triplicates. However, it should be noted that exceedances of these criteria are common for heterogeneous soil or fill or for low analyte concentrations.

Accuracy

A measure of the bias in the analytical results and can often be attributed to field contamination; insufficient preservation or sample preparation; or inappropriate analytical techniques. Accuracy of the analytical data is assessed by consideration of laboratory control samples and laboratory spikes.

The DQOs, requirements and indicators for the assessment are presented in **Table 7.**

Representativeness

Expresses the accuracy and precision with which sample data represents an environmental condition. Data representativeness was achieved by the collection of samples at an appropriate pattern and density as well as consistent and repeatable sampling techniques and procedures.

Completeness

Refers to, the percentage of data that can be considered valid data. Sufficient data was required to enable an assessment of the Decision Rules.

Comparability

A qualitative comparison of the confidence with which one data set can be compared to another. This was achieved through consistent sampling and analytical testing and reporting techniques.

Table 7 – DQI and Requirements		
DQI	**Requirement**	**Data Quality Assessment (DQA) Criteria**
Precision		
Standard operating procedures appropriate and complied with	The sampling methods comply with industry standards and guidelines	Meet requirement
Field duplicates	1 per 20 samples	RPDs < 50%
Field triplicates	1 per 20 samples	RPDs < 50%
Laboratory duplicates	Minimum of 1 per batch per analyte	RPDs < 50%
Accuracy		
Laboratory matrix spikes	1 per batch per volatile/semi-volatile analyte	Recoveries 70% to 130%
Laboratory surrogate spikes	1 per volatile/semi-volatile analyte sample (as appropriate)	Recoveries 70% to 130%
Laboratory control samples	At least 1 per batch per analyte tested for	Result < laboratory reporting limit
Representativeness		
Sampling methodology - preservation	Appropriate for the sample type and analytes	Meet requirement
Decontamination procedures	All sampling equipment to be decontaminated between each sample	Meet requirement
Samples extracted and analysed within holding times	Specific to each analyte	Meet requirement
Laboratory method blanks	At least 1 per batch per analyte tested for	Result < laboratory reporting limit
Trip blanks	1 per lab batch for volatile analytes	Result < laboratory reporting limit
Trip spikes	1 per lab batch for volatile analytes	Recoveries 60-100%
Rinsate	1 per lab batch for volatile analytes	Result < laboratory reporting limit
Comparability		
Sampling approach	Consistent for each sample	Meet requirement
Analysis methodology	Consistent methodology for each sample	Meet requirement

Table 7 – DQI and Requirements		
DQI	**Requirement**	**Data Quality Assessment (DQA) Criteria**
Handling conditions and sampler	Consistent for each sample	Meet requirement
Field observations and analytical	Field observations to support analytical results	Meet requirement
Consistent laboratory reporting limit	Consistent between primary and secondary laboratories	Meet requirement
Completeness		
Sample receipt acknowledgement	Provided	Yes
Laboratory reports	Provided	Yes
Sampling staff	Consistent sampling staff used.	Meet requirement
Laboratory accreditation	NATA Accredited laboratory for methods used	Meet requirement
Accredited methods	NATA accredited methods used appropriate for each analyte.	Meet requirement
ASC NEPM (2013) lab methods	Lab methods consistent with the ASC NEPM (2013).	Meet requirement
Laboratory reporting limit	Laboratory reporting limit consistent and appropriate	Meet requirement
Consistent weather / field conditions	Consistent	Meet requirement
Chain of custody documentation	Appropriately completed	Meet requirement
Field sampling documentation	Appropriately completed	Meet requirement
Overall data set quality	95% of the data must satisfy the DQIs of both field and laboratory data.	

6 Quality Assurance and Quality Control (QA/QC)

An assessment of the field and laboratory DQI results in presented in **Table 8.**

Table 8 – DQI Results Summary

DQI	Requirement	DQA
Precision		
Standard operating procedures appropriate and complied with	The sampling methods comply with industry standards and guidelines.	Yes
Field duplicates	• 1 per 20 samples; and • RPDs < 50%.	Yes Yes[6]
Field triplicates	• 1 per 20 samples; and • RPDs < 50%.	Yes Yes
Laboratory duplicates	• Minimum of 1 per batch per analyte; • RPDs < 50%; and • >10%, laboratory specified.	Yes[7] Yes Yes
Accuracy		
Laboratory matrix spikes	• 1 per batch per volatile/semi-volatile analyte; and • Recoveries >70% to 130%	Yes[8] Yes
Laboratory surrogate spikes	• 1 per volatile/semi-volatile analyte sample (as appropriate); and • Recoveries 70% to 130%	Yes Yes
Laboratory control samples	• At least 1 per batch for analyte tested; and • Result < laboratory reporting limit	Yes Yes
Representativeness		
Sample methodology - preservation	Appropriate for the sample type and analytes	Yes
Decontamination procedures	All sampling equipment to be decontaminated between each sample	Yes
Samples extracted and analysed within holding times	Specific to each analyte	Yes
Laboratory Method Blanks	• At least 1 per batch per analyte tested for; and • Result < laboratory reporting limit	Yes Yes

[6] One soil duplicate analyte exceeded the adopted quality control criteria. The soil exceedances are attributed to the heterogenous nature of the soil samples. It is considered that these exceedances of the quality control criteria does not affect the precision of the data set collected in this investigation.
[7] Non-conformance of two analytes were reported for water laboratory duplicates where the laboratory did not meet the requirement of 1 in 10 samples, this is attributed to only the rinsate samples which reported no results above LOR and thus is considered a minor non-conformance and unlikely to materially affect the precision of the data.
[8] Non-conformance of two analytes were reported for water matrix spikes where the laboratory did not meet the requirement of 1 in 5 samples, this is attributed to the rinsate samples which reported no results above LOR and thus is considered a minor non-conformance and unlikely to affect the accuracy of the dataset.

Table 8 – DQI Results Summary		
DQI	**Requirement**	**DQA**
Trip blanks	• 1 per field laboratory reporting limit • Result < laboratory reporting limit	Yes Yes
Trip spikes	• 1 per field batch for volatile analytes; and • Recoveries 60-100%	Yes Yes
Rinsate	• 1 per field batch for volatile analytes; and • Result < laboratory reporting limit	Yes Yes
Comparability		
Sampling approach	Consistent sampling approach used	Yes
Analysis methodology	Consistent methodology for each sample	Yes
Handling conditions and sampler	Consistent of each sample	Yes
Field observations and analytical	Field observations to support analytical results	Yes
Consistent laboratory reporting limits	Consistent between primary and secondary laboratories	Yes
Completeness		
Sample receipt acknowledgement	Provided	Yes
Laboratory reports	Provided	Yes
Sampling staff	Consistent sampling staff used	Yes
Laboratory accreditation	NATA Accredited laboratory for methods used.	Yes
Accredited methods	NATA accredited methods used appropriate for each analyte	Yes
ASC NEPM (2013) lab methods	Lab methods consistent with the ASC NEPM (2013)	Yes
Laboratory reporting limits	Laboratory reporting limit consistent and appropriate	Yes
Consistent weather / field data	Consistent	Yes
Chain of custody documentation	Provided	Yes
Field sampling documentation	Provided	Yes
Overall data set quality	95% of the data must satisfy the DQIs of both field and laboratory data	Yes

On the basis of the information provided in **Table 8**, EP Risk considers that the DQIs for the project have been met and the data is appropriate for the purposes of this assessment.

7 Results

7.1 Subsurface Conditions

The subsurface conditions encountered in the test pits across the Site are detailed in the attached test pit logs. These should be read in conjunction with the general notes proceeding them, which explain the descriptive terms and classification methods used in the report. In general, the subsurface conditions in the test pits can be summarised as follows:

- TOPSOIL: Silty CLAY/Sandy CLAY/ Clayey SAND, low to medium plasticity, fine to medium grained sand, dark brown.
- RESIDUAL SOIL: Silty CLAY, medium to plasticity, pale brown to brown, grey, orange, with fine to coarse grained sand.
- EXTREMELY WEATHERED ROCK: SANDSTONE, recovered as sandy CLAY/Clayey SAND, fine to coarse grained sand medium to high plasticity, grey, brown, red; and MUDSTONE, recovered as Sandy CLAY, medium to high plasticity, red, grey, orange fine to coarse grained sand.

Groundwater was not observed in any of the test pits at the time of the investigation. It should be noted the groundwater conditions may vary with seasonal and weather conditions along with construction related Site conditions. Detailed soil profile logs are attached as **Appendix C.**

Visual Asbestos on Site

During the Site walkover and intrusive investigation, asbestos was not observed on the surface of the Site.

Soil Vapour Screening

Signs of visual staining or odours were not observed in any sample collection with PID readings all recorded at <2 ppm.

7.2 Soil Analytical Testing

The results of soil analytical testing are contained in the analytical summary tables section at the rear of the report and the laboratory Certificates of Analysis (COA) are attached as **Appendix G.**

Bonded Asbestos Containing Material (ACM)

Soil samples were collected from 12 sampling locations and at three sampling locations within the proposed access roads (EP Risk 2024a). All samples were screened through a 7mm screen and reported bonded (non-friable) ACM concentrations below the adopted health-based soil criteria HSL (0.02% w/w). Bonded ACM fragments were not observed in the test pits.

Friable Asbestos (AF / FA)

Soil samples were obtained from 12 sampling locations and at three sampling locations within the proposed access roads (EP Risk 2024a) at the Site within the upper topsoil/fill profile to assess the presence of friable asbestos. Friable asbestos fibres were not detected above the limit of reporting and exceedances of the adopted asbestos HSL were not reported.

Heavy Metals / BTEXN / PAH / OCP / OPP / TPH / TRH

BTEXN, PAH, OCP, OPP, TRH and PCBs of the soil samples analysed were reported below the adopted human health and ecological criteria and/or laboratory limit of reporting (LOR). Soil analytical results are shown in **Table 1A.**

Total Chromium (Chromium III and Chromium VI) was detected in exceedance of the adopted HIL criteria at TP02L_0.1 and TP21-P_0.1. Additional speciation testing for Chromium VI was undertaken for TP02L_0.1 and was reported to be below the adopted HIL criteria and LOR.

Aesthetics

Minor anthropogenic materials were identified within the southern portion of River Road within the Site and along Site boundaries during the inspection undertaken on the 25 September 2024 (EP Risk 2024a), including structures such as stables and round yards, a burnt area and stockpile including green waste, plastic and cardboard. Two culverts with minor fill material were identified within the boundaries of River Road, which is considered likely to be site won, based upon the historical land use.

8 Discussion

Based on the decision-making process for assessing urban redevelopment Sites detailed in EPA (2017) and present in **Section 5**, the decisions required to be made are detailed below.

Has soil been assessed against relevant health investigation levels (HILs) and health screening levels (HSLs), and has potential for migration of contamination been considered?

The individual results of soil analytical testing have been compared against the relevant health-based criteria. There were two exceedances of Total Chromium (Chromium III and Chromium VI) of the adopted HIL criteria at TP02L_0.1 and TP21-P_0.1. Additional speciation testing was undertaken to determine the concentration of Chromium VI within sample TP02L_0.1, Chromium VI was reported to be below the adopted HIL criteria and below the LOR. Chromium III is considered to have low toxicity, and it not compared against the HIL and HSL criteria. The concentration of total chromium at TP02L_0.1 is considered to be low risk.

A 95% UCL was calculated for the dataset for total Chromium, and the Students t UCL was adopted based on the calculated result based on the similarity to the calculated mean value of the dataset. The calculated 95% UCL was below the adopted HIL criteria and is attached as **Appendix F.**

Are there issues relating to local area background soil concentrations that exceed relevant investigation levels have been adequately addressed in the Site assessment reports?

No background soil concentration issues were identified at the Site during this PSI.

Are there impacts of chemical mixtures?

Visual or olfactory impacts were not identified across the Site and within the test pit / borehole locations. All analytical sample results were recorded below health and ecological criteria.

Are there potential ecological risks? If yes, have these been assessed?

The individual results of the soil analytical testing have been compared against the relevant ecological-based criteria and there were no exceedances to the adopted criteria, therefore no assessment was required.

Are there potential human health risks to the identified Site receptors?

The individual and 95% UCL results of the soil analytical testing have been compared against the relevant human health criteria and there were no exceedances to the adopted criteria.

Is there evidence of, or potential for, migration of contaminants from the Site? Has this been appropriately addressed including potential risks to offsite receptors, and reported to the Site owner or occupier?

The potential for migration of contaminants in fill materials offsite is considered low, on account of potential fill materials which were observed at scattered locations within the proposed River Road being minor in nature.

Are there aesthetics issues in fill at the Site?

Anthropogenic materials, structures and potential minor fill were identified within the boundaries of River Road

at the Site predominantly within the southern portion of the Site. Aesthetic issues are considered to be low for the Site and can be addressed by appropriate housekeeping activities.

Is there sufficient information to accurately characterise the Site contamination?

EP Risk has adopted a preliminary assessment and based on the historical land use the Site presents a low risk of soil contamination. The PSI met the adopted data quality objectives and is therefore considered sufficient for the purposes of assessing contamination associated with the historical land use.

Is Further Investigation Required?

Based on the proposed future residential land use for the development, with all analytical sample results reported below the health and ecological criteria, further investigation is considered not necessary with respect to contamination.

Is a Site Management Strategy Required?

While contamination at a level warranting management or remediation was not identified, it is recommended an unexpected finds protocol be implemented during redevelopment to address unidentified contamination that may be encountered during the proposed redevelopment works and undertake appropriate housekeeping activities to remove identified anthropogenic materials.

9 Conceptual Site Model

A conceptual Site model (CSM) has been developed based upon the information provided in previous sections of this report.

Contaminating activities based on the Site inspection and review of historical records, the following activities have occurred at the Site which may have resulted in the potential for contamination. These activities are summarised as follows:

- AEC 1 - Rural agricultural land use.
- AEC 2 – Potential fly tipping/uncontrolled filling.

9.1 Affected Media

The potential affected media at the Site is considered to be soil.

9.2 Human and Ecological Receptors

Sensitive receptors identified at and near the Site were considered to be:

- Future residential users and visitors at the Site including potential users of residential buildings (ASC NEPM 2013 HIL A and HSL A).
- Future construction and sub-surface maintenance workers at the Site (ASC NEPM 2013 HIL A and HSL A – Residential; CRC CARE 2011 Direct contact and intrusive maintenance workers HSLs and Vapour Intrusion HSLs for Intrusive Maintenance Workers (Shallow Trench)).
- Terrestrial fauna and flora at the Site and on adjoining land (ASC NEPM EIL and ESLs).
- Ecosystems dependant on the downgradient creeks and rivers.

9.3 Potential and Complete Exposure Pathways

An analysis of the potential exposure pathways between the COPC and the identified human and ecological receptors are presented in **Table 9.**

Overall, based on this assessment and the conceptual site model for the proposed development complete source-pathway-receptor linkages were not identified.

Table 9 – Source-Pathway-Receptor Linkages

Sources				Pathways	Receptors	Linkages	Summary of Findings and Comments
Primary	**Secondary**	**Contaminants**	**Affected Media**	**Exposure Pathways**			
AEC 1 - Rural agricultural land use.	Potential use of herbicides and pesticides	OCP and OPP	Soil	Human Health • Dermal contact • Incidental ingestion	• Future construction and sub-surface maintenance workers. • Future residential users.	Not complete.	All results recorded below health and ecological criteria.
				Ecological: • Uptake by flora and fauna	• Terrestrial fauna and flora at the Site and on adjoining land. • Ecosystems dependant on the downgradient creeks and rivers.		
AEC 2 – Potential fly tipping/uncontrolled filling	Contaminants leaching from uncontrolled fill.	TRH, BTEX, PAH and heavy metals.	Soil	Human Health • Dermal contact • Incidental ingestion	• Future construction and sub-surface maintenance workers. • Future residential users.	Not complete.	All results recorded below health and ecological criteria.
				Ecological: • Uptake by flora and fauna	• Terrestrial fauna and flora at the Site and on adjoining land. • Ecosystems dependant on the downgradient creeks and rivers.		
	Generation of airborne fibres during soil disturbance	Asbestos.	Soil	Human Health • Inhalation	• Future construction and sub-surface maintenance workers. • Future residential users.	Not complete.	All results recorded below health criteria. No asbestos material observed on the surface with the proposed River Road.

10 Conclusion

EP Risk was engaged by Thirdi to undertake a PSI for a Site located at 559 Anambah Road, Gosforth, NSW and the road carriageway titled River Road. It is understood the client requires a PSI for the development application package for a proposed land lease community development and associated proposed access roads as required in accordance with SEPP (Resilience and Hazards) 2021.

The PSI was required to assess whether any contaminating activities are likely to have occurred at the Site which may present a human health or ecological risk under the proposed land use.

Potentially contaminating activities identified to have been undertaken at the Site include clearing of land with potential use of herbicides and pesticides and potential fly tipping/uncontrolled filling.

EP Risk (2024a) undertook Site inspections and test pitting on the 22-24 April 2024 and 25 September 2024. Additional inspections and test pitting was undertaken on the 12 September 2024. The Site was comprised of a large area of vacant grassland with scattered mature trees across the Site. Three dams were present at the Site, one dam located on the boundary of the Site, and a portion of a watercourse runs through the south western area of the Site. Timber post and wire fencing surrounds the Site. The River Road portion of the Site was comprised of cleared farmland used for grazing purposes with an existing track within the northern portion of the proposed Road. Two concrete culverts with potential for fill material were identified within the boundaries of River Road. The southern portion of the proposed River Road had structures utilised as stables and round yards made of timber, tin and rubber, a stockpile of green waste, cardboard and minor plastic and a burnt area was also identified.

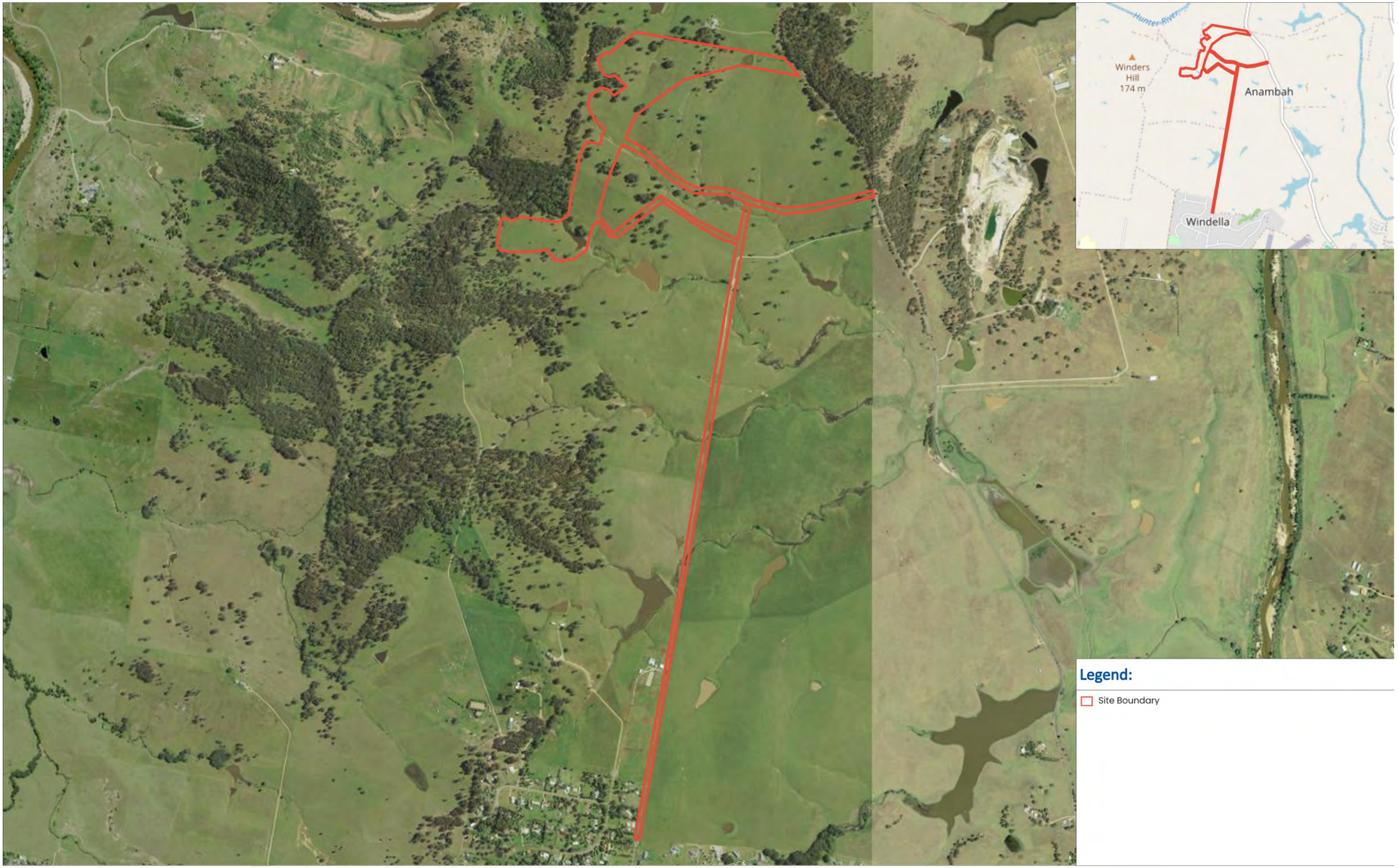
Based on the review of the historical information, the Site was formerly and currently being used as cleared farmland / grazing land. The surrounding land use comprised rural / agricultural land use.

A total of 19 soil samples from test pits advanced to a maximum depth of 3.0 m BGL (or prior refusal) was undertaken.

The results of analytical testing reported total concentrations and 95% UCL below the adopted health and ecological criteria for residential land use.

Overall, based on this assessment and the conceptual site model for the proposed development complete source-pathway-receptor linkages are considered rare. Based on the results of the Site history review, Site inspection and analytical results, the Site is considered to present a low risk of contamination and is considered suitable for the proposed residential land use, subject to the development and implementation of an unexpected finds protocol during redevelopment and appropriate housekeeping activities to remove identified anthropogenic material.

Figures



Legend:

- Site Boundary

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Preliminary Site Investigation

559 Anambah Road, Gosforth NSW, Australia

Job No: EP3864
Date: 23-09-2024
Version: v1

N

0 250 m 500 m

Approximate Scale Only

Figure 1 - Site Location

Coordinate System: WGS84
Drawn By: HE Checked: NM
Scale of regional map not shown

ISO 9001 Quality management system
ISO 45001 OH&S management system
ISO 14001 Environment management system

Concrete Culvert and minor fill

Legend:

- Site Features
- Approximate Location of Dams
- Site Boundary
- Proposed Access Roads
- Proposed River Road

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559 Anambah Road, Gosforth NSW, Australia
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Date: 19-12-2024
Version: v1

N

0 50 m 100 m

Approximate Scale Only

Figure 2a - Site Layout (Northern Portion)

Coordinate System: WGS 84

Drawn By: HE **Checked By: NM**

Scale of regional map not shown

ISO 9001 Quality Management System
ISO 45001 OH&S Management System
ISO 14001 Environment Management System



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N

0 100 m 200 m
Approximate Scale Only

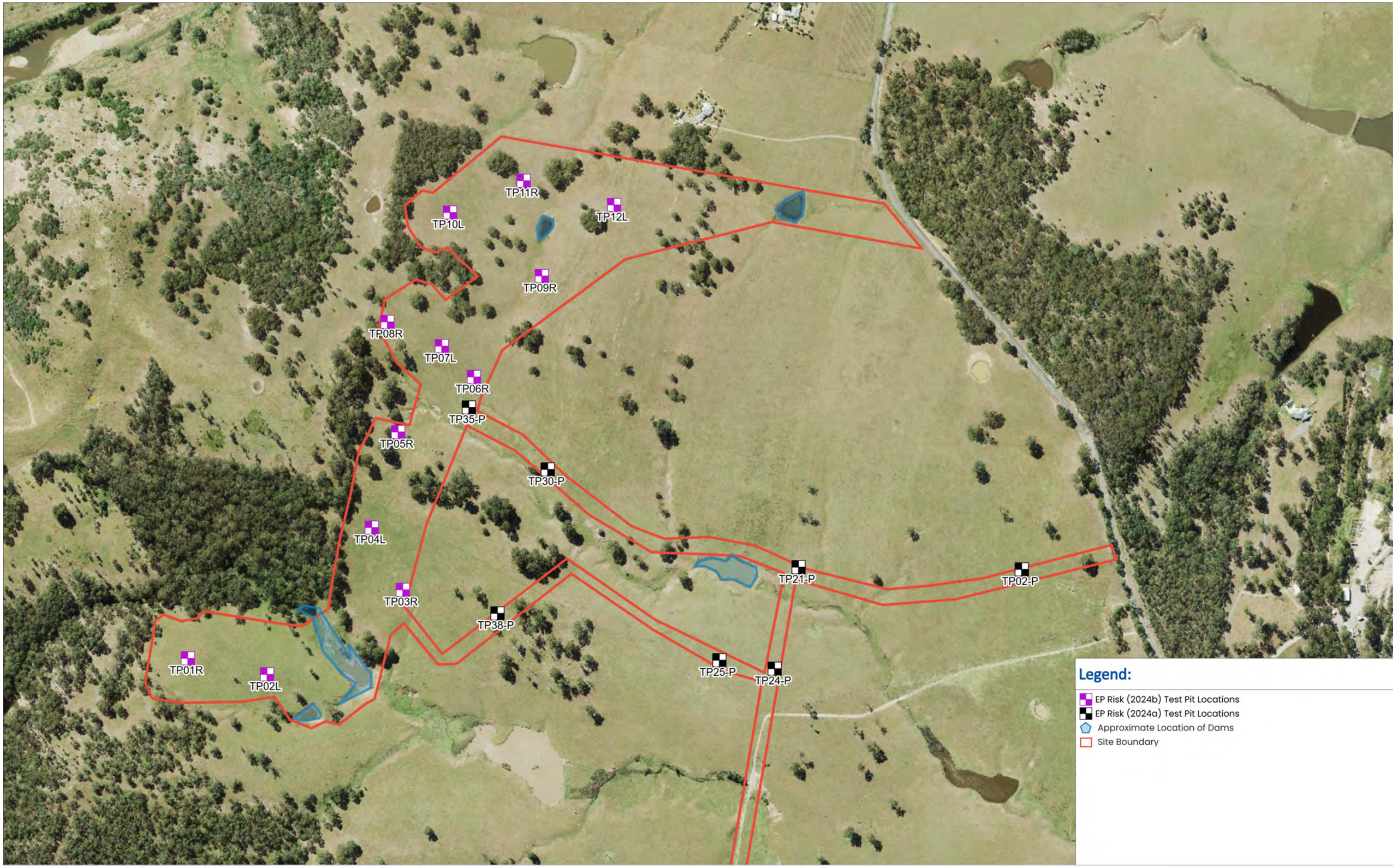
Figure 2b - Site Layout (River Road/Southern Portion)

Coordinate System: WGS 84

Drawn By: HE **Checked By: NM**

Scale of regional map not shown

ISO 9001 Quality management system
ISO 45001 OH&S management system
ISO 14001 Environment management system



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N

0 50 m 100 m
Approximate Scale Only

Figure 3 - Sampling Locations

Coordinate System: WGS 84

Drawn By: HE **Checked By: NM**

Scale of regional map not shown

ISO 9001 Quality management system
ISO 45001 OH&S management system
ISO 14001 Environment management system

Analytical Tables

Table 1 - Summary Analytical Results

	TRH							TPH					BTEXN							
	C6 - C10 Fraction	C6 - C10 Fraction minus BTEX (F1)	TRH >C10-C16	TRH >C10-C16 less Naphthalene (F2)*	TRH >C16-C34	TRH >C34-C40	TRH >C10-C40 (total)*	C6 - C9 Fraction	TRH C10-C14	C15 - C28 Fraction	C29 - C36 Fraction	TRH C10-C36 (Total)	Benzene	Toluene	Ethylbenzene	m&p-Xylenes	o-Xylene	Xylenes - Total*	Sum of BTEX	Naphthalene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	10	10	50	50	100	100	100	10	20	100	100	50	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.5
NEMP 2013 Human Health, HIL A (Residential with garden/access)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 Human Health, HSL A & B (Low - High Density Residential) Sand 0-1 m	-	45	-	110	-	-	-	-	-	-	-	-	0.5	160	55	-	-	40	-	-
NEPM 2013 Human Health, HSL A & B (Low - High Density Residential) Clay 0-1 m		50		280									0.7	480	NL			110		
NEPM 2013 EILS Ecological, Urban Residential & Public Open Space	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170
NEPM 2013 ESLS Ecological, Urban Residential and Public Open Space	-	180	-	120	300	2,800	-	-	-	-	-	-	50	85	70	-	-	45	-	-
NEPM 2013 Management Limits Human Health, Residential, parkland and public open space	700	-	1,000	-	2,500	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field ID	**Depth**	**Sampled Date**																		
TP01R	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP02L	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP03R	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP04L	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP05R	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP06R	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP07L	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP08R	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP09R	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP10L	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP11R	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP12L	0.1m	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP02-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21-P	0.1m	24-04-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP24-P	0.1m	24-04-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TP25-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP30-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP35-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP38-P	0.1m	24-04-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1

Notes:
This table does not represent the full analytical results, please refer to the laboratory results for full details.
Assumes soil pH of 5 for Cadmium.
Total Chromium includes Chromium III and Chromium VI, where exceedances were identified Chromium VI speciation testing was undertaken

Table 1 - Summary Analytical Results

	Heavy Metals									PCBs	PAH																			
	Arsenic	Cadmium	Total Chromium (III + VI)	Hexavalent Chromium (VI)	Copper	Lead	Mercury	Nickel	Zinc	Total PCB*	Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo[a]pyrene	Benzo[b&j]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene	Total PAH*	Benzo(a)pyrene TEQ (upper bound) *	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Dibenz[a,h]anthracene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	**2**	**0.4**	**2**	**0.5**	**5**	**5**	**0.1**	**2**	**5**	**0.1**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**0.5**
NEMP 2013 Human Health, HIL A (Residential with garden/access)	100	20	100	100	6,000	300	40	400	7,400	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	3	3	3	-
NEPM 2013 Human Health, HSL A & B (Low - High Density Residential) Sand 0-1 m	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
NEPM 2013 Human Health, HSL A & B (Low - High Density Residential) Clay 0-1 m																							5							
NEPM 2013 EILS Ecological, Urban Residential & Public Open Space	50	-	270	-	50	270	-	110	110	-	-	-	-	-	-	-	-	-	-	-	-	-	170	-	-	-	-	-	-	-
NEPM 2013 ESLS Ecological, Urban Residential and Public Open Space	-	-	-		-	-	-	-	-	-	-	-	-	-	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 Management Limits Human Health, Residential, parkland and public open space	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field ID	**Depth**	**Sampled Date**																												
TP01R	0.1m	12-09-2024	< 5	< 1	87	-	36	11	< 0.1	51	64	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP02L	0.1m	12-09-2024	< 5	< 1	143	< 0.5	39	6	< 0.1	55	36	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP03R	0.1m	12-09-2024	5	< 1	4	-	< 5	5	< 0.1	< 2	6	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP04L	0.1m	12-09-2024	< 5	< 1	4	-	< 5	6	< 0.1	< 2	10	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP05R	0.1m	12-09-2024	< 5	< 1	4	-	< 5	5	< 0.1	< 2	9	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP06R	0.1m	12-09-2024	< 5	< 1	57	-	17	11	< 0.1	25	43	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP07L	0.1m	12-09-2024	< 5	< 1	6	-	< 5	7	< 0.1	4	23	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP08R	0.1m	12-09-2024	5	< 1	7	-	< 5	6	< 0.1	< 2	8	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP09R	0.1m	12-09-2024	14	< 1	24	-	12	14	< 0.1	9	41	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP10L	0.1m	12-09-2024	10	< 1	23	-	< 5	10	< 0.1	4	8	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP11R	0.1m	12-09-2024	8	< 1	35	-	7	9	< 0.1	12	18	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP12L	0.1m	12-09-2024	6	< 1	22	-	< 5	11	< 0.1	6	21	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP02-P	0.1m	24-04-2024	8	< 1	28	-	< 5	11	< 0.1	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP21-P	0.1m	24-04-2024	< 5	< 1	118	-	36	9	< 0.1	43	40	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP24-P	0.1m	24-04-2024	10	< 1	71	-	17	10	< 0.1	21	29	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5
TP25-P	0.1m	24-04-2024	7	< 1	90	-	26	10	< 0.1	32	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP30-P	0.1m	24-04-2024	< 5	< 1	10	-	< 5	20	< 0.1	4	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP35-P	0.1m	24-04-2024	< 5	< 1	50	-	19	13	< 0.1	27	38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP38-P	0.1m	24-04-2024	8	< 1	16	-	< 5	13	< 0.1	4	11	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5

Notes:

This table does not represent the full analytical results, please refer to the laboratory results for full details.

Assumes soil pH of 5 for Cadmium.

Total Chromium includes Chromium III and Chromium VI, where exceedances were identified Chromium VI speciation testing was undertaken

Table 1 - Summary Analytical Results

				Organochlorine Pesticides																										
				Aldrin + Dieldrin	Endrin ketone	Sum of Aldrin + Dieldrin	Aldrin and Dieldrin (Total)*	alpha-Endosulfan	Heptachlor	4,4'-DDE	4,4'-DDD	Endrin	Dieldrin	gamma-BHC	Heptachlor epoxide	4,4'-DDT	beta-Endosulfan	delta-BHC	beta-BHC	alpha-BHC	Aldrin	Hexachlorobenzene (HCB)	Endosulfan sulfate	Endosulfan (sum)	cis-Chlordane	trans-Chlordane	Total Chlordane (sum)	Sum of DDD + DDE + DDT	Endrin aldehyde	Methoxychlor
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NEMP 2013 Human Health, HIL A (Residential with garden/access)				-		6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	270			50	240	-	300
NEMP 2013 Human Health, HSL A & B (Low - High Density Residential) Sand 0-1 m				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP 2013 Human Health, HSL A & B (Low - High Density Residential) Clay 0-1 m																														
NEMP 2013 EILS Ecological, Urban Residential & Public Open Space				-	-	-	-	-	-	180	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP 2013 ESLS Ecological, Urban Residential and Public Open Space				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEMP 2013 Management Limits Human Health, Residential, parkland and public open space				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field ID	**Depth**	**Sampled Date**																												
TP01R	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP02L	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP03R	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP04L	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP05R	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP06R	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP07L	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP08R	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP09R	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP10L	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP11R	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP12L	0.1m	12-09-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP02-P	0.1m	24-04-2024		< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP21-P	0.1m	24-04-2024		-	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP24-P	0.1m	24-04-2024		-	< 0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP25-P	0.1m	24-04-2024		-	< 0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP30-P	0.1m	24-04-2024		-	< 0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP35-P	0.1m	24-04-2024		-	< 0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
TP38-P	0.1m	24-04-2024		-	< 0.05	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2

Notes:

This table does not represent the full analytical results, please refer to the laboratory results for full details.

Assumes soil pH of 5 for Cadmium.

Total Chromium includes Chromium III and Chromium VI, where exceedances were identified Chromium VI speciation testing was undertaken

Table 1 - Summary Analytical Results

												Organophosphorus pesticides									
		Azinphos Methyl	Demeton-S-methyl	Dimethoate	Ethion	Fenamiphos	Fenthion	Malathion	Parathion	Parathion-methyl	Pirimphos-ethyl	Monocrotophos	Prothiofos	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos-methyl	Chlorpyrifos	Diazinon	Dichlorvos
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.5	0.4
NEMP 2013 Human Health, HIL A (Residential with garden/access)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160	-	-
NEPM 2013 Human Health, HSL A & B (Low - High Density Residential) Sand 0-1 m		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 Human Health, HSL A & B (Low - High Density Residential) Clay 0-1 m																				
NEPM 2013 EILS Ecological, Urban Residential & Public Open Space		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 ESLS Ecological, Urban Residential and Public Open Space		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 Management Limits Human Health, Residential, parkland and public open space		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Field ID	**Depth**	**Sampled Date**																			
TP01R	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP02L	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP03R	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP04L	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP05R	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP06R	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP07L	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP08R	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP09R	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP10L	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP11R	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP12L	0.1m	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP02-P	0.1m	24-04-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP21-P	0.1m	24-04-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP24-P	0.1m	24-04-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP25-P	0.1m	24-04-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP30-P	0.1m	24-04-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP35-P	0.1m	24-04-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
TP38-P	0.1m	24-04-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Notes:
This table does not represent the full analytical results, please refer to the laboratory results for full details.
Assumes soil pH of 5 for Cadmium.
Total Chromium includes Chromium III and Chromium VI, where exceedances were identified Chromium VI speciation testing was undertaken

Table 1 - Summary Analytical Results

	Phenols													Other
	2,4-Dimethylphenol	3&4-Methylphenol (m&p-Cresol)	Phenol	2,4-Dichlorophenol	4-Chloro-3-methylphenol	Pentachlorophenol	2,4,6-Trichlorophenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	2-Chlorophenol	2,4,5-Trichlorophenol	2,6-Dichlorophenol	Moisture Content
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%
EQL	0.5	0.5	0.5	1	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5	0.1
NEMP 2013 Human Health, HIL A (Residential with garden/access)	-	-	3000	-	-	100	-	-	-	-	-	-	-
NEPM 2013 Human Health, HSL A & B (Low - High Density Residential) Sand 0-1 m	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 Human Health, HSL A & B (Low - High Density Residential) Clay 0-1 m													
NEPM 2013 EILS Ecological, Urban Residential & Public Open Space	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 ESLS Ecological, Urban Residential and Public Open Space	-	-	-	-	-	-	-	-	-	-	-	-	-
NEPM 2013 Management Limits Human Health, Residential, parkland and public open space	-	-	-	-	-	-	-	-	-	-	-	-	-
Field ID	Depth	Sampled Date												
TP01R	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	40.8
TP02L	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	29.8
TP03R	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	17.6
TP04L	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	14.6
TP05R	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	27.1
TP06R	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	17.6
TP07L	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	14.5
TP08R	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	10.5
TP09R	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	8.5
TP10L	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	16.6
TP11R	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	17.8
TP12L	0.1m	12-09-2024	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	10
TP02-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	12
TP21-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	30
TP24-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	26.8
TP25-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	25.9
TP30-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	23.5
TP35-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	26.7
TP38-P	0.1m	24-04-2024	-	-	-	-	-	-	-	-	-	-	-	-	20

Notes:
This table does not represent the full analytical results, please refer to the laboratory results for full details.
Assumes soil pH of 5 for Cadmium.
Total Chromium includes Chromium III and Chromium VI, where exceedances were identified Chromium VI speciation testing was undertaken

Table 2a - Asbestos Analytical Results

					Asbestos									
					Organic Fibre	Synthetic Mineral Fibre	Asbestos (Trace)	Asbestos Type	Asbestos (Fines and Fibrous FA+AF)	Fibrous Asbestos >7mm	Asbestos (Fines and Fibrous <7mm)	Sample weight (dry)	Asbestos Detected	Weight Used for % Calculation
							-	-	% w/w	g	g	g	g/kg	kg
EQL									0.001	0.0004	0.0004	0.01	0.1	0.0001
NEPM 2013 Table 7 Res A HSL for Asbestos in Soil					-	-	-	-	0.001	-	-	-	-	-
Field ID	Depth	Sampled Date												
TP01R	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	185	No	0.185
TP02L	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	243	No	0.243
TP03R	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	450	No	0.45
TP04L	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	372	No	0.372
TP05R	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	326	No	0.326
TP06R	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	335	No	0.335
TP07L	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	401	No	0.401
TP08R	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	235	No	0.235
TP09R	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	376	No	0.376
TP10L	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	332	No	0.332
TP11R	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	331	No	0.331
TP12L	0.1m	12-09-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	353	No	0.353
TP02-P	0.1m	24-04-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	315	No	0.315
TP24-P	0.1m	24-04-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	177	No	0.177
TP30-P	0.1m	24-04-2024			No	No	No	N/A	< 0.001	< 0.0004	< 0.0004	229	No	0.229

Notes:
This table does not represent the full analytical results, please refer to the laboratory results for full details.

Job Number: EP3864.001 **Client:** Thirdi Group

Site Location: 559 Anambah Road, Gosforth
Date: 8/01/2025

Table 2b - Bonded Asbestos in Soil Summary

Location	Profile	Litres of Soil	Soil (kg)	ACM (kg)	Asbestos Content (kg)	% w/w Asbestos	Variables	Adopted Factors
TP01R_0.1	Natural	10	18	0	0	0.000	**Specific gravity**	1.8
TP02L_0.1	Natural	10	18	0	0	0.000	**Asbestos content**	15.00%
TP03R_0.1	Natural	10	18	0	0	0.000		
TP04L_0.1	Natural	10	18	0	0	0.000		
TP05R_0.1	Natural	10	18	0	0	0.000		
TP06R_0.1	Natural	10	18	0	0	0.000		
TP07L_0.1	Natural	10	18	0	0	0.000		
TP08R_0.1	Natural	10	18	0	0	0.000		
TP09R_0.1	Natural	10	18	0	0	0.000		
TP10L_0.1	Natural	10	18	0	0	0.000		
TP11R_0.1	Natural	10	18	0	0	0.000		
TP12L_0.1	Natural	10	18	0	0	0.000		
TP02-P_0.1	Topsoil	10	18	0	0	0.000		
TP24-P_0.1	Topsoil	10	18	0	0	0.000		
TP30-P_0.1	Topsoil	10	18	0	0	0.000		

Table 3a - QA/QC Summary

		TRH							TPH					BTEXN								Heavy Metals							
		C6 - C10 Fraction	C6 - C10 Fraction minus BTEX (F1)	TRH >C10-C16	TRH >C10-C16 less Naphthalene (F2)	TRH >C16-C34	TRH >C34-C40	TRH >C10-C40 (total)*	C6 - C9 Fraction	TRH C10-C14	C15 - C28 Fraction	C29 - C36 Fraction	TRH C10-C36 (Total)	Benzene	Toluene	Ethylbenzene	m&p-Xylenes	o-Xylene	Xylenes - Total*	Sum of BTEX	Naphthalene	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		10	10	50	50	100	100	100	10	20	100	100	50	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.5	2	0.4	2	5	5	0.1	2	5
Field ID	**Sampled Date**																												
TP08R (parent)	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1	5	< 1	7	< 5	6	< 0.1	< 2	8
QC01 (duplicate)	12-09-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1	< 5	< 1	4	< 5	6	< 0.1	< 2	9
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	54.55%	0%	0%	0%	0%	11.76%
QC02 (triplicate)	12-09-2024	< 20	< 20	< 50	< 50	< 100	< 100	< 100	< 20	< 20	< 50	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.3	-	< 0.5	3.6	< 0.4	< 5	< 5	5.4	< 0.1	< 5	8
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	32.56%	0%	-	0%	10.53%	0%	0%	0%
TP24-P (parent)	24-04-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1	10	< 1	71	17	10	< 0.1	21	29
QA03 (duplicate)	24-04-2024	< 10	< 10	< 50	< 50	< 100	< 100	< 50	< 10	< 50	< 100	< 100	< 50	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1	6	< 1	70	15	10	< 0.1	21	26
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	1.42%	12.5%	0%	0%	0%	10.91%
QA04 (triplicate)	24-04-2024	< 20	< 20	< 50	< 50	< 100	< 100	< 100	< 20	< 20	< 50	< 50	< 50	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1	< 0.3	-	< 0.5	6.6	< 0.4	54	11	8.2	< 0.1	14	18
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	40.96%	0%	27.2%	42.86%	19.78%	0%	40%	46.81%

Notes:

This table does not represent the full analytical results, please refer to the laboratory results for full details.

Assumes soil pH of 5 for Cadmium.

Table 3a - QA/QC Summary

		PCB	Organochlorine Pesticides																												
		Total PCB*	Aldrin + Dieldrin	Endrin ketone	Sum of Aldrin + Dieldrin	Aldrin and Dieldrin (Total)*	Endosulfan I	Heptachlor	4,4'-DDE	4,4'-DDD	Endrin	Dieldrin	g-HCH (Lindane)	Heptachlor epoxide	4,4'-DDT	Endosulfan II	d-HCH	b-HCH	a-HCH	Aldrin	Hexachlorobenzene	Endosulfan sulphate	Endosulfan (sum)	cis-Chlordane	trans-Chlordane	Total Chlordane (sum)	DDT + DDE + DDD (Total)*	Endrin aldehyde	Methoxychlor	
		mg/kg	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
		0.1		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Field ID	Sampled Date																														
TP08R (parent)	12-09-2024	< 0.1	< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
QC01 (duplicate)	12-09-2024	< 0.1	< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
QC02 (triplicate)	12-09-2024	< 0.1	< 0.1	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-	-	< 0.1	< 0.05	< 0.05	< 0.05	
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	0%	0%	0%	0%	
TP24-P (parent)	24-04-2024	< 0.1	-	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
QA03 (duplicate)	24-04-2024	< 0.1	-	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2
RPD		0%	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
QA04 (triplicate)	24-04-2024	< 0.1	-	< 0.05	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-	-	< 0.1	< 0.05	< 0.05	< 0.05	
RPD		0%	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	0%	0%	0%	0%	

Notes:

This table does not represent the full analytical results, please r

Assumes soil pH of 5 for Cadmium.

Table 3a - QA/QC Summary

		Organophosphorus pesticides																			
		Azinphos Methyl	Demeton-S-methyl	Dimethoate	Ethion	Fenamiphos	Fenthion	Malathion	Ethyl parathion	Methyl parathion	Pirimphos-ethyl	Monocrotophos	Prothiofos	Bromophos-ethyl	Carbophenothion	Chlorfenvinphos	Chlorpyrifos-methyl	Chlorpyrifos	Diazinon	Dichlorvos
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Field ID	**Sampled Date**																			
TP08R (parent)	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
QC01 (duplicate)	12-09-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
QC02 (triplicate)	12-09-2024	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	-	< 2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
RPD		0%	-	0%	0%	-	0%	0%	0%	0%	-	0%	-	-	-	0%	0%	0%	0%	0%
TP24-P (parent)	24-04-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
QA03 (duplicate)	24-04-2024	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.2	< 0.2	< 0.05	< 0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
QA04 (triplicate)	24-04-2024	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	< 0.2	< 0.2	-	< 2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
RPD		0%	-	0%	0%	-	0%	0%	0%	0%	-	0%	-	-	-	0%	0%	0%	0%	0%

Notes:

This table does not represent the full analytical results, please r

Assumes soil pH of 5 for Cadmium.

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Table 3a - QA/QC Summary

		PAH																				Phenols													Other
		Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b&j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Total PAH*	Benzo(a)pyrene TEQ (upper bound) *	Benzo(a)pyrene TEQ (lower bound) *	Benzo(a)pyrene TEQ (medium bound) *	Dibenz(a,h)anthracene	2,4-Dimethylphenol	3&4-Methylphenol (m&p-Cresol)	Phenol	2,4-Dichlorophenol	4-Chloro-3-methylphenol	Pentachlorophenol	2,4,6-Trichlorophenol	2-Nitrophenol	2-Methylphenol (o-Cresol)	2-Chlorophenol	2,4,5-Trichlorophenol	2,6-Dichlorophenol	Moisture Content
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	1	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.1
Field ID	**Sampled Date**																																		
TP08R (parent)	12-09-2024	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	10.5
QC01 (duplicate)	12-09-2024	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5	< 0.5	< 1	< 0.5	< 0.5	< 0.5	< 2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	12.3
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15.79%
QC02 (triplicate)	12-09-2024	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5	< 0.5	< 0.4	< 0.5	< 0.5	< 1	< 1	< 1	< 1	< 0.2	< 0.5	< 1	< 0.5	-
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-
TP24-P (parent)	24-04-2024	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	26.8
QA03 (duplicate)	24-04-2024	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	24.2
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	10.2%
QA04 (triplicate)	24-04-2024	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	0.6	< 0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPD		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

This table does not represent the full analytical results, please r

Assumes soil pH of 5 for Cadmium.

Table 3b - Trip Spike and Blank Summary

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8/01/2025

		TRH		TPH	BTEXN							
		C6 - C10 Fraction	C6 - C10 Fraction minus BTEX (F1)	C6 - C9 Fraction	Benzene	Toluene	Ethylbenzene	m&p-Xylenes	o-Xylene	Xylenes - Total*	Sum of BTEX	Naphthalene
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		10	10	10	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.5
Field ID	**Sampled Date**											
TB01	6/09/2024	< 10	< 10	< 10	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 1
TS01	5/09/2024	-	-	-	< 0.2	**4.3**	**4.9**	**5.4**	**2**	**7.4**	**16.6**	< 1
TSC	5/09/2024	-	-	-	< 0.2	**4.7**	**5.7**	**6.4**	**2.5**	**8.9**	**19.3**	< 1
TRIP SPIKE	15/04/2024	<10	<10	<10	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.2	<1
TSC	15/04/2024	-	-	-	<0.2	**4.3**	**5.2**	**5.7**	**2.4**	**8.1**	**17.6**	<1
TRIP BLANK	15/04/2024	-	-	-	<0.2	**4.5**	**5.4**	**5.9**	**2.6**	**8.5**	**18.4**	<1

Notes:

This table does not represent the full analytical results, please refer to the laboratory results for full details.

Assumes soil pH of 5 for Cadmium.

Table 3c - Rinsate Summary

		TRH							TPH					BTEXN								Heavy Metals							
		C6 - C10 Fraction	C6 - C10 Fraction minus BTEX (F1)	>C10 - C16 Fraction	>C10 - C16 Fraction minus Naphthalene (F2)	>C16 - C34 Fraction	>C34 - C40 Fraction	>C10 - C40 Fraction (sum)	C6 - C9 Fraction	C10 - C14 Fraction	C15 - C28 Fraction	C29 - C36 Fraction	C10 - C36 Fraction (sum)	Benzene	Toluene	Ethylbenzene	meta- & para-Xylene	ortho-Xylene	Total Xylenes	Sum of BTEX	Naphthalene	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
		20	20	100	100	100	100	100	20	50	100	50	50	1	2	2	2	2	2	1	5	0.001	0.0001	0.001	0.001	0.001	0.0001	0.001	0.005
Field ID	**Sampled Date**																												
RW	12-09-2024	< 20	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 50	< 100	< 50	< 50	< 1	< 2	< 2	< 2	< 2	< 2	< 1	< 5	< 0.001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.005
RW01	24-04-2024	< 20	< 20	< 100	< 100	< 100	< 100	< 100	< 20	< 50	< 100	< 50	< 50	< 1	< 2	< 2	< 2	< 2	< 2	< 1	< 5	< 0.001	< 0.0001	< 0.001	< 0.001	< 0.001	< 0.0001	< 0.001	< 0.005

Notes:

This table does not represent the full analytical results, please refer to the laboratory results for full details.

EP3864

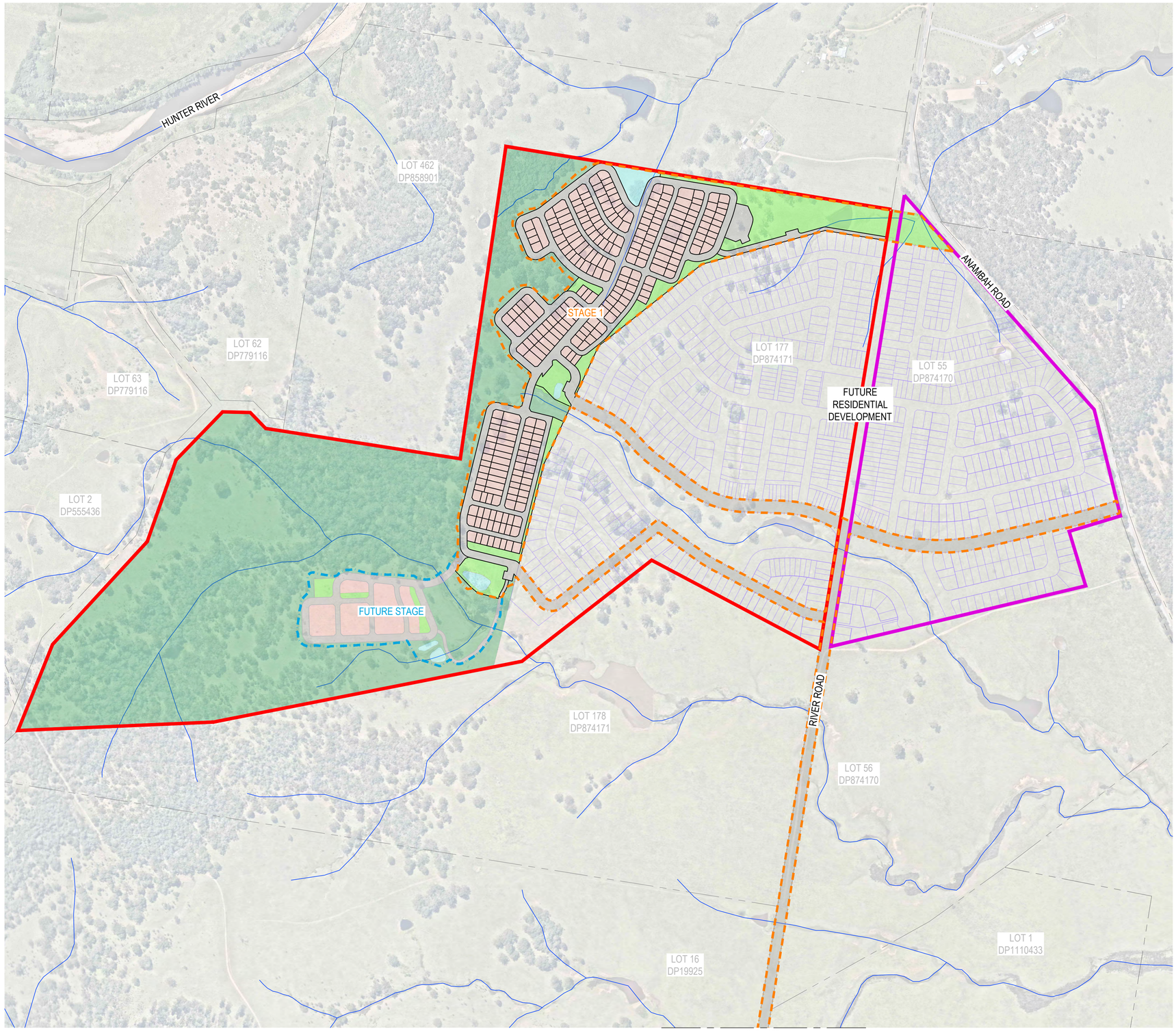
Table 3c - Rinsate Summary

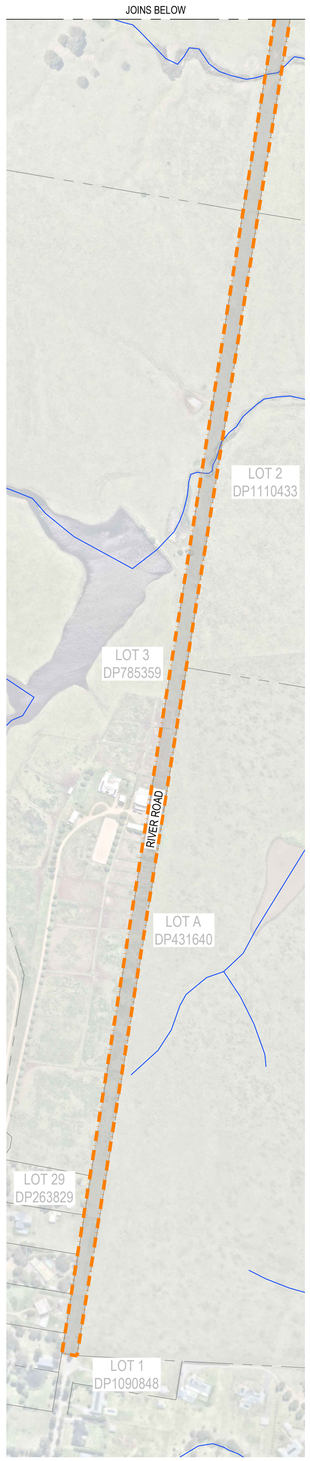
	PAH																		
	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b+j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Fluorene	Indeno(1,2,3,cd)pyrene	Naphthalene (Ex SVOC)	Phenanthrene	Pyrene	Sum of polycyclic aromatic hydrocarbons	Benzo(a)pyrene TEQ (zero)	Dibenz(a,h)anthracene
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	1	1	1	1	0.5	1	1	1	1	1	1	1	1	1	1	0.5	0.5	1
Field ID	**Sampled Date**																		
RW	12-09-2024	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.5	< 0.5	< 1
RW01	24-04-2024	< 1	< 1	< 1	< 1	< 0.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.5	< 0.5	< 1

Notes:

This table does not represent the full analytical results, please r

Appendix A
PROPOSED CONCEPT PLANS





INSET A
SCALE 1:4000

LEGEND

LOT 117 DP 874171
LOT 55 DP 874170

PROPOSED
- LOT BOUNDARY
- MANUFACTURED HOME ESTATE
- ROAD RESERVE
- DRAINAGE RESERVE
- OPEN SPACE / COMMUNITY FACILITIES
- RETAINED BUSHLAND

STAGING
- STAGE 1 - SUBJECT DETAILED DA
- FUTURE STAGE - CONCEPT DA

EXISTING
- LOT BOUNDARY
- WATER COURSE

FUTURE DEVELOPMENT
- LOT BOUNDARY

REV	DATE	DESCRIPTION	AMD BY	APP BY
1	06.12.24	ISSUE FOR APPROVAL	MAJP	TJH

0 40 80 120 160 200m
SCALE 1:4000 AT ORIGINAL SIZE

Third.i COMMUNITIES

MAKER ENG SURVEY DESIGN DELIVER

DRAWN: M.PHILLIPS	DESIGNED: M.PHILLIPS
DRAFT CHECK: -	DESIGN CHECK: -
APPROVED: T.HOWE	
NOT FOR CONSTRUCTION	

559 ANAMBAH ROAD GOSFORTH
CONCEPT & STAGE 1 DEVELOPMENT APPLICATION
SKETCHES
NOTIFICATION PLAN

DRAWING NUMBER	SHEET No.	ORIG. SIZE	REVISION
MKR00884-00-SK020		A1	1

Matthew Phillips, 6/12/2024, 4:14 PM

C:\12dS\data\12DSYNERGY\MKR00884 Thirdi_Anambah_280\02 Design\Drawings\00 SK\MKR00884-00-SK020.dwg

Appendix B
SITE PHOTOGRAPHS

	**Plate 1** **Description:** Dense bushland west the Site **Date:** 12.09.2024
	**Plate 2** **Description:** Bushland south west of the Site **Date:** 12.09.2024

	**Plate 3** **Description:** Dam located in the south western portion of the Site **Date:** 12.09.2024
	**Plate 4** **Description:** Dam and watercourse located in the south western portion of the Site **Date:** 12.09.2024

	**Plate 5** **Description:** Facing south from TP04 **Date:** 12.09.2024
	**Plate 6** **Description:** Dense bushland west of the Site. **Date:** 12.09.2024

	**Plate 7** **Description:** Mostly cleared undulating hills on Site **Date:** 12.09.2024
	**Plate 8** **Description:** Gully on Site – no anthropogenic material observed on surface soils **Date:** 12.09.2024

	**Plate 9** **Description:** Dam north of TP09R **Date:** 12.09.2024
	**Plate 10** **Description:** North east portion of the Site **Date:** 12.09.2024

	**Plate 11** **Description:** Dam located in the north of the Site. **Date:** 23.04.2024
	**Plate 12** **Description:** Eastern portion of the Site, proposed access road. Dam located on boundary of the Site. **Date:** 23.04.2024

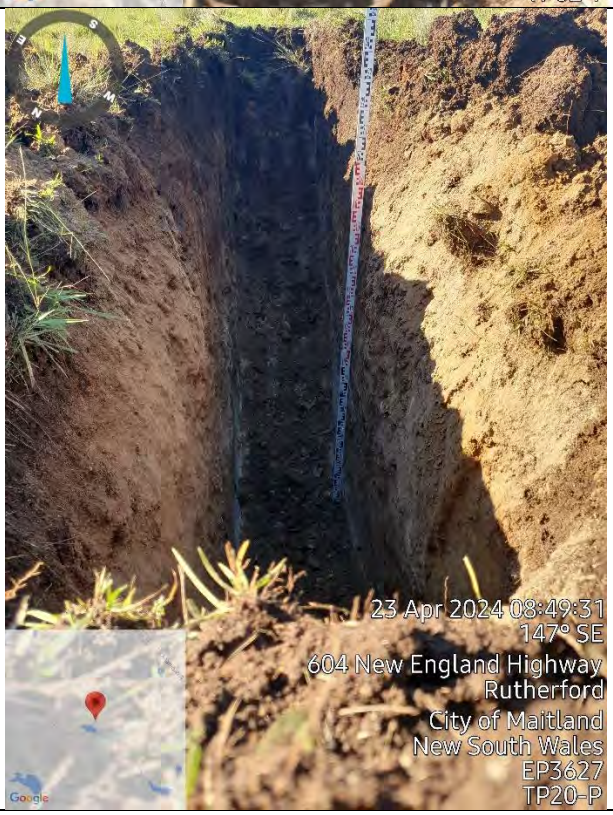
	**Plate 13** **Description:** Soil encountered at test pit TP02-P **Date:** 23.04.2024
	**Plate 14** **Description:** Soil encountered at test pit TP20-P **Date:** 23.04.2024

		**Plate 15** **Description:** Soil encountered at test pit TP21-P **Date:** 23.04.2024
		**Plate 16** **Description:** Soil encountered at test pit TP24-P **Date:** 23.04.2024

	**Plate 17** **Description:** Soil encountered at test pit TP25-P **Date:** 23.04.2024
	**Plate 18** **Description:** Soil encountered at test pit TP30-P **Date:** 24.04.2024

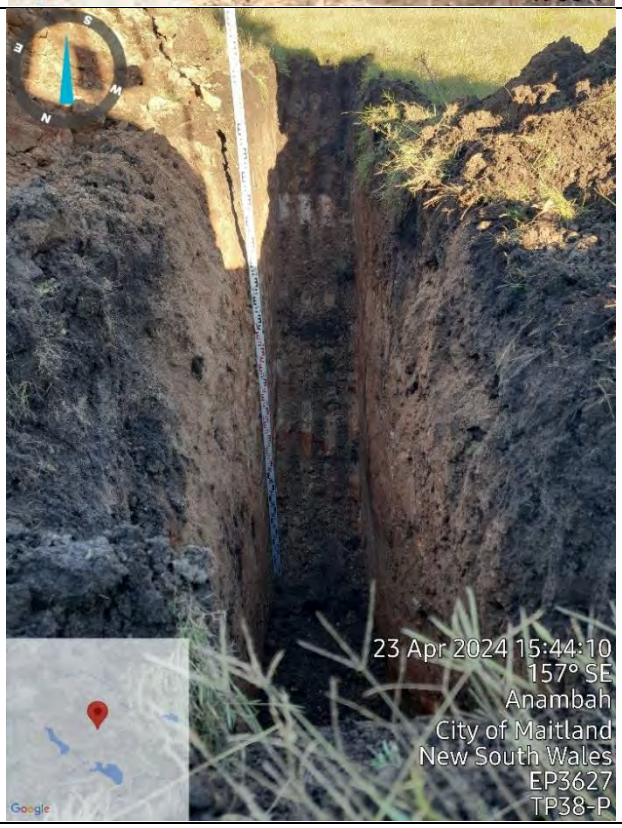
		**Plate 19** **Description:** Soil encountered at test pit TP35-P **Date:** 24.04.2024
		**Plate 20** **Description:** Soil encountered at test pit TP38-P **Date:** 23.04.2024

		**Plate 21** **Description:** Soil encountered at testpit TP04L **Date:** 12.09.2024
		**Plate 22** **Description:** Soil encountered at test pit TP05R **Date:** 12.09.2024

		**Plate 23** **Description:** Soil encountered at test pit TP06R **Date:** 12.09.2024
		**Plate 24** **Description:** Soil encountered at test pit TP07L **Date:** 12.09.2024

		**Plate 25** **Description:** Soil encountered at test pit TP08R **Date:** 12.09.2024
		**Plate 26** **Description:** Soil encountered at test pit TP09R **Date:** 12.09.2024

		**Plate 27** **Description:** Soil encountered at test pit TP10L **Date:** 12.09.2024
		**Plate 28** **Description:** Soil encountered at test pit TP11R **Date:** 12.09.2024



Plate 29

Description:

Soil encountered at test pit TP12L

Date:

12.09.2024



Plate 30

Description:

Northern portion of river road.

Date:
25.09.2024

	**Plate 31** **Description:** Looking south along River Road. **Date:** 25.09.2024
	**Plate 32** **Description:** Concrete culvert and potential fill material along River Road **Date:** 25.09.2024

	**Plate 33** **Description:** Looking north along River Road **Date:** 25.09.2024
	**Plate 34** **Description:** Looking north along River Road **Date:** 25.09.2024

	**Plate 35** **Description:** Looking south along River Road **Date:** 25.09.2024
	**Plate 36** **Description:** Concrete culvert and potential fill material along River Road **Date:** 25.09.2024

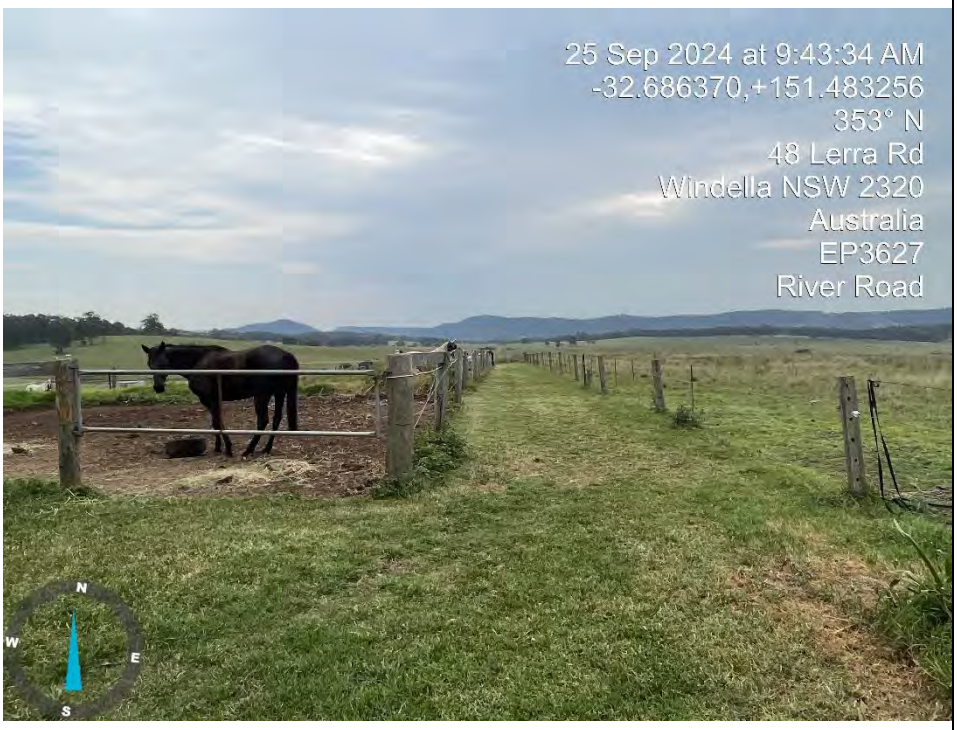
	**Plate 37** **Description:** Looking north along River Road – fenced areas with horses **Date:** 25.09.2024
	**Plate 38** **Description:** Horse round yard and bathtubs within River Road boundaries **Date:** 25.09.2024

	**Plate 39** **Description:** Trailer floats within River Road Boundaries **Date:** 25.09.2024
	**Plate 40** **Description:** Straw/hay material on ground surface between two horse round yards within River Road boundaries **Date:** 25.09.2024

	**Plate 41** **Description:** Trailer, existing track of bare soil and gravel material and rainwater tank within River Road Boundaries and metal stables structure outside of Boundary **Date:** 25.09.2024
	**Plate 42** **Description:** Pile of manure, hay/straw and soil **Date:** 25.09.2024

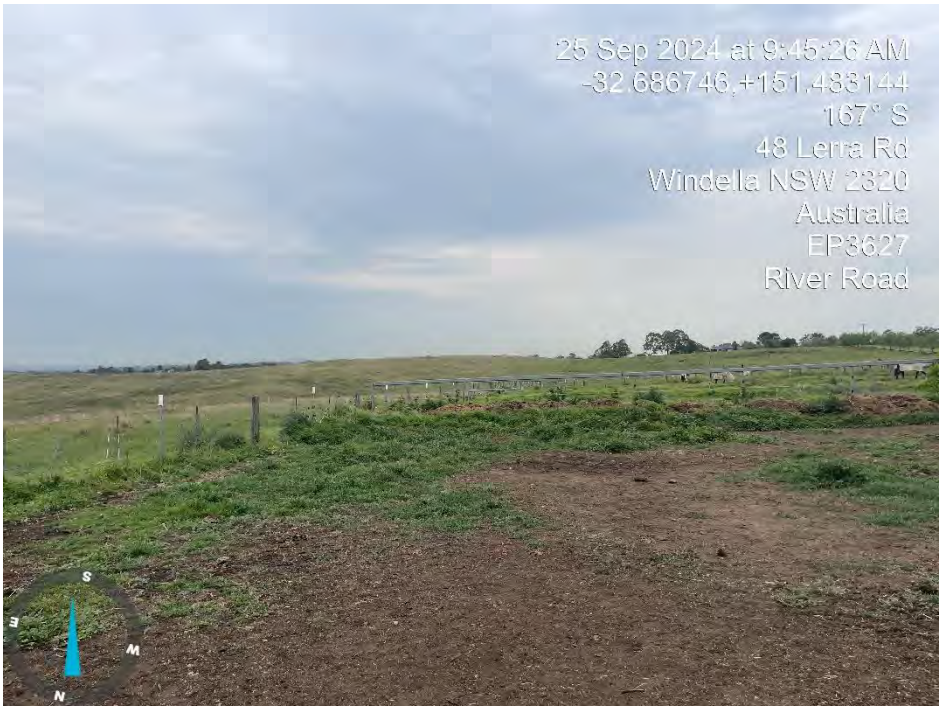
	**Plate 43** **Description:** Horse paddocks within boundary of River Road **Date:** 25.09.2024
	**Plate 44** **Description:** Metal and timber structure used as stables just outside boundary of River Road. **Date:** 25.09.2024

	**Plate 45** **Description:** Horse paddocks within boundaries of River Road **Date:** 25.09.2024
	**Plate 46** **Description:** Stockpile of green waste, with cardboard and plastic within boundaries of River Road **Date:** 25.09.2024

	**Plate 47** **Description:** Structure made of tin within boundaries of River Road. **Date:** 25.09.2024
	**Plate 48** **Description:** Looking north along River Road **Date:** 25.09.2024

	**Plate 49** **Description:** Burnt area within River Road boundaries **Date:** 25.09.2024
	**Plate 50** **Description:** Burnt area within River Road boundaries **Date:** 25.09.2024

Appendix C
SOIL LOGS

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP01R

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	35,736.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,256.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP01R_0.1	PID: <1		TS	Topsoil Silty CLAY: low to medium plasticity, dark brown, organic, dry.	
0.50	TP01R_0.5	PID: <1		CI-CH	Residual Silty CLAY: medium to high plasticity, brown, dry.	
1	TP01R_1.0	PID: <1		MDST	Extremely weathered Mudstone: medium to high plasticity, red, fine to coarse grained sand, recovered as Sandy CLAY	
1.50						
2					**TP01R refusal at 1.9m**	
2.50						

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP02L

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,269.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,217.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP02L_0.1	PID: <1		TS	Topsoil Silty CLAY: low plasticity, dark brown, organic, dry.	
0.50	TP02L_0.5	PID: <1		CI-CH	Residual Silty CLAY: medium to high plasticity, brown, dry.	
1	TP02L_1.0	PID: <1		MDST	Extremely weathered Mudstone, medium plasticity, grey, red, orange, medium to coarse grained sand, recovered as Sandy CLAY	
1.50						
2	TP02L_2.0	PID: <1				
2.50					**TP02L Terminated at 2.7m**	

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP03R

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,473.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,384.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP03R_0.1	PID: <1		CL-CI	Topsoil Sandy CLAY: low to medium plasticity, grey, fine to medium grained sand, organic, dry.	
				SC	Natural Clayey SAND: low plasticity clay, grey, fine to medium grained.	
0.50	TP03R_0.5	PID: <1		CI-CH	Residual Sandy CLAY: medium to high plasticity, grey, brown, fine to coarse grained sand, dry.	
1	TP03R_1.0	PID: <1		SST	Extremely weathered Sandstone/Mudstone, medium to high plasticity, grey, brown, red, recovered as Sandy CLAY.	
1.50						
	TP03R_2.0				**TP03R refusal at 2m**	
2.50						

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP04L

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,429.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,459.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP04L_0.1	PID: <1		TS	Topsoil Clayey SAND: grey, fine grained, dry	
				CL-CI	Silty CLAY: low to medium plasticity, light grey, dry.	
0.50	TP04L_0.5	PID: <1		CI-CH	Residual Silty CLAY: medium to high plasticity, grey, orange, with fine to medium grained sand, dry.	
				SST	Extremely weathered sandstone, grey, orange, fine to coarse grained sand, recovered as Clayey SAND.	
1	TP04L_1.0	PID: <1		MDST	Extremely weathered mudstone, low plasticity clay, pale brown ,orange, fine to coarse grained sand, recovered as Clayey SAND.	
1.50						
2	TP04L_2.0					
2.50						
					TP04L Terminated at 2.7m	

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP05R

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,471.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,621.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP05R_0.1	PID: <1		TS	Topsoil Clayey SAND: grey, fine grained.	
				SW	SAND pale grey, fine to medium grained.	
0.50	TP05R_0.5	PID: <1		CI-CH	Residual Silty CLAY: medium to high plasticity, brown, with fine to medium grained sand, dry.	
1	TP05R_1.0	PID: <1		SST	Extremely weathered sandstone, medium to high plasticity clay, brown, orange, fine to coarse grained sand, recovered as Clayey SAND.	
1.50						
2						
2.50					**TP05R Terminated at 2.7m**	

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP06R

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,593.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,711.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP06R_0.1	PID: <1		TS	Topsoil Clayey SAND: grey, fine grained, dry.	
				CI-CH	Silty CLAY: medium to high plasticity, grey, moist to dry.	
0.50	TP06R_0.5	PID: <1		CI-CH	Silty CLAY: medium to high plasticity, grey, orange, dry.	
				CL-SC	Residual Sandy CLAY: medium to high plasticity, orange, medium to coarse grained sand, dry.	
1	TP06R_1.0	PID: <1				
1.50				SST	Extremely weathered sandstone, high plasticity clay, grey, orange, medium to coarse grained sand, recovered as Clayey SAND	
2	TP06R_2.0					
2.50					**TP06R Terminated at 2.7m**	

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP07L

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,531.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,765.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP07L_0.1	PID: 1.6		TS	Topsoil Clayey SAND: grey, fine grained, dry.	
				SP	SAND: pale grey, fine to medium grained, dry.	
0.50	TP07L_0.5	PID: <1		CI-CH	Silty CLAY: medium to high plasticity, grey, orange, dry to moist.	
				SST	Extremely weathered sandstone, orange, fine to medium grained sand recovered as Clayey SAND.	
1	TP07L_1.0	PID: <1				
1.50				SST	Extremely weathered sandstone, orange, medium to coarse grained sand, recovered as SAND	Boulders of sandstone
2						
2.50					**TP07L Terminated at 2.7m**	

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP08R

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,454.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,805.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP08R_0.1	PID: <1		TS	Topsoil Clayey SAND: grey, fine grained, dry.	
				SW	SAND pale grey, fine grained, dry.	
0.50	TP08R_0.5	PID: <1		CI-CH	Residual Silty CLAY: medium to high plasticity, grey, brown, dry.	
1	TP08R_1.0	PID: <1		SST	Extremely weathered sandstone, medium to high plasticity, pale grey, brown, fine to coarse grained sand, dry to moist, recovered as Sandy CLAY.	
1.50						
2						
2.50					**TP08R Terminated at 2.7m**	

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP09R

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,703.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,870.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP09R_0.1	PID: 1.1		TS	Topsoil Clayey SAND: grey, fine grained, dry.	
0.50	TP09R_0.5	PID: <1		MDST	Weathered Mudstone, grey, brown, fine to coarse sized, medium to high plasticity clay recovered as Sandy GRAVEL/Sandy CLAY.	
1	TP09R_1.0	PID: <1				
1.50						
2						
2.50					**TP09R Terminated at 2.7m**	

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP10L

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,548.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,982.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP10L_0.1	PID: <1		TS	Topsoil Sandy CLAY: medium to high plasticity, grey, brown, fine grained sand, organic, dry.	
				SC	Residual Clayey SAND: pale brown, fine grained, dry.	
0.50	TP10L_0.5	PID: <1		CI-CH	Residual Silty CLAY: medium to high plasticity, brown, orange, with fine grained sand, dry.	
1	TP10L_1.0	PID: <1				
1.50				SST	Extremely weathered sandstone, medium to high plasticity, brown, orange, fine to coarse grained sand, recovered as Sandy CLAY	
2						
2.50					**TP10L Terminated at 2.3m**	

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP11R

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,669.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,385,028.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
	TP11R_0.1	PID: <1		TS	Topsoil Sandy CLAY: medium to high plasticity, brown, organic, dry.	
0.50	TP11R_0.5	PID: <1		CI-CH	Residual Silty CLAY: medium to high plasticity, pale brown, dry.	
1	TP11R_1.0	PID: <1		SST	Extremely weathered sandstone/mudstone, medium to high plasticity, grey, brown, recovered as Silty CLAY with fine grained sand.	
1.50						
2					**TP11R Terminated at 2.5m**	

EP RISK
Anambah Road, Gosforth NSW
ph: (02) 9922 5021
e: EPRisk@tablogs.com

REPORT OF TEST PIT No: TP12L

Project:	Anambah PSI	**RL Datum:**	AHD	**Easting:**	357,808.00	**Client:**	Thirdi Group
Job No:	EP3864	**Contractor:**	Lovetts Earthmoving	**Northing:**	6,384,985.00	**Logged By:**	HE
Location:	Anambah Road, Gosforth NSW	**Operator:**		**Surface RL:**	Not Surveyed	**Checked By:**	NM
Loc Comment:		**Equipment:**	15 T Kobelco	**Date:**	12/09/2024		

Depth (m)	Samples	PID (ppm)	Graphic Log	Classification Code	Material Description	Remarks
				TS	Topsoil SAND: brown, fine to medium grained, dry.	
	TP12L_0.1	PID: <1			SANDSTONE: brown.	
0.50	TP12L_0.5	PID: <1				
				SST		
1						
2					**TP12L Terminated at 1.5m**	
2.50						

ENVIRONMENTAL LOG: TP02-P

PROJECT NO.: EP3627
PROJECT NAME: Thirdi Gosforth
CLIENT: Thirdi
ADDRESS: Anamabah Rd, Gosforth

DRILLING DATE: 04-22-2024
DRILLING CO.: Lovetts
DRILL METHOD:
DRILLER:
LOGGED BY: MC

TOTAL DEPTH: 2.2
COORDINATES: 358463, 6384408
COORD. SYSTEM:
GROUND ELEV.:
CHECKED BY: NM

NOTES:

Depth	Samples	PID READING (ppm)	Graphic	Soil Classification	Material Description	Additional Observations
					Ground Surface at	
0	TP02-P_0.1				TOPSOIL TOPSOIL: Sandy CLAY: Low to medium plasticity, dark grey, fine to medium grained sand, moist.	
					Silty CLAY Silty CLAY: Medium to high plasticity, grey-brown, moist.	
1						
					Extremely Weathered SANDSTONE Extremely weathered sandstone recovered as Sandy CLAY, medium to high plasticity, grey to pale brown and red, fine to coarse grained sand.	
2						
					Terminated at 2.2 m BGL.	
3						
4						

RSLog / EP Risk Environmental Soil Logging Template without well -NM Edit / ep-risk-management-pty-ltd / admin / May 23, 2024 11:06 pm

Disclaimer: This log is intended for environmental not geotechnical purposes.

ENVIRONMENTAL LOG: TP21-P

PROJECT NO.: EP3627
PROJECT NAME: Thirdi Gosforth
CLIENT: Thirdi
ADDRESS: Anamabah Rd, Gosforth

DRILLING DATE: 04-22-2024
DRILLING CO.: Lovetts
DRILL METHOD:
DRILLER:
LOGGED BY: MC

TOTAL DEPTH: 3.2
COORDINATES: 358132, 6384398
COORD. SYSTEM:
GROUND ELEV.:
CHECKED BY: NM

NOTES:

Depth	Samples	PID READING (ppm)	Graphic	Soil Classification	Material Description	Additional Observations
					Ground Surface at	
0	TP21-P_0.1				TOPSOIL TOPSOIL: Silty CLAY: Low to medium plasticity, dark grey, moist.	
					Silty CLAY Silty CLAY: Medium to high plasticity, brown, moist.	
					Sandy CLAY Sandy CLAY: medium to high plasticity, brown, fine to coarse, slightly moist.	
1					Extremely Weathered SANDSTONE Extremely weathered sandstone recovered as Sandy CLAY, medium to high plasticity,brown, fine to coarse grained sand, dry.	
2						
3					Terminated at 3.2 m BGL.	
4						

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Disclaimer: This log is intended for environmental not geotechnical purposes.

ENVIRONMENTAL LOG: TP24-P

PROJECT NO.: EP3627
PROJECT NAME: Thirdi Gosforth
CLIENT: Thirdi
ADDRESS: Anamabah Rd, Gosforth

DRILLING DATE: 04-23-2024
DRILLING CO.: Lovetts
DRILL METHOD:
DRILLER:
LOGGED BY: MC

TOTAL DEPTH: 3.2
COORDINATES: 358092, 6384221
COORD. SYSTEM:
GROUND ELEV.:
CHECKED BY: NM

NOTES:

Depth	Samples	PID READING (ppm)	Graphic	Soil Classification	Material Description	Additional Observations
					Ground Surface at	
0	TP24-P_0.1				TOPSOIL TOPSOIL: Silty CLAY: Low to medium plasticity, dark grey, moist.	
					Silty CLAY Silty CLAY: Medium to high plasticity, brown, grey, moist.	
	TP24-P_0.5					
1	TP24-P_1.0				Silty CLAY Silty CLAY: medium to high plasticity, brown, grey, moist.	
					Extremely Weathered SANDSTONE Extremely weathered Sandston interbedded with Mudstone (MARL), recovered as Sandy CLAY, medium to high plasticity, brown, fine to coarse grained sand, very dry.	
2	TP24-P_2.0					
3	TP24-P_3.0				Terminated at 3.2 m BGL.	
4						

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Disclaimer: This log is intended for environmental not geotechnical purposes.

ENVIRONMENTAL LOG: TP25-P

PROJECT NO.: EP3627
PROJECT NAME: Thirdi Gosforth
CLIENT: Thirdi
ADDRESS: Anamabah Rd, Gosforth

DRILLING DATE: 04-23-2024
DRILLING CO.: Lovetts
DRILL METHOD:
DRILLER:
LOGGED BY: MC

TOTAL DEPTH: 3
COORDINATES: 358009, 6384248
COORD. SYSTEM:
GROUND ELEV.:
CHECKED BY: NM

NOTES:

Depth	Samples	PID READING (ppm)	Graphic	Soil Classification	Material Description	Additional Observations
					Ground Surface at	
0	TP25-P_0.1				TOPSOIL TOPSOIL: Silty CLAY: Low to medium plasticity, dark grey, moist.	
					Silty CLAY Silty CLAY: Medium to high plasticity, brown, moist.	
	TP25-P_0.5					
					Gravelly CLAY Gravelly CLAY: medium to high plasticity, brown, fine to coarse grained, angular to subangular gravels, moist.	
1	TP25-P_1.0				Extremely Weathered SANDSTONE Extremely weathered Sandstone, recovered as Clayey Sandy GRAVEL, fine to coarse grained, sub-angular, brown to dark brown, fine to coarse grained sand, dry.	
2	TP25-P_2.0					
3	TP25-P_3.0				Terminated at 3.0 m BGL.	
4						

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Disclaimer: This log is intended for environmental not geotechnical purposes.

ENVIRONMENTAL LOG: TP30-P

PROJECT NO.: EP3627
PROJECT NAME: Thirdi Gosforth
CLIENT: Thirdi
ADDRESS: Anamabah Rd, Gosforth

DRILLING DATE: 04-23-2024
DRILLING CO.: Lovetts
DRILL METHOD:
DRILLER:
LOGGED BY: MC

TOTAL DEPTH: 3.2
COORDINATES: 357708, 6384571
COORD. SYSTEM:
GROUND ELEV.:
CHECKED BY: NM

NOTES:

Depth	Samples	PID READING (ppm)	Graphic	Soil Classification	Material Description	Additional Observations
					Ground Surface at	
0	TP30-P_0.1				TOPSOIL TOPSOIL: Silty CLAY: Low to medium plasticity, dark grey, moist. Silty Gravelly CLAY Silty Gravelly CLAY: Medium to high plasticity, brown, grey, fine to coarse grained, angular to subangular, moist.	
	TP30-P_0.5				Extremely Weathered MUDSTONE Extremely weathered Mudstone, recovered as Silty CLAY, medium to hight plasticity, brown, grey, dry.	
1	TP30-P_1.0					
2	TP30-P_2.0					
3	TP30-P_3.0				Termination at 3.20 m BGL.	
4						

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Disclaimer: This log is intended for environmental not geotechnical purposes.

ENVIRONMENTAL LOG: TP35-P

PROJECT NO.: EP3627
PROJECT NAME: Thirdi Gosforth
CLIENT: Thirdi
ADDRESS: Anamabah Rd, Gosforth

DRILLING DATE: 04-23-2024
DRILLING CO.: Lovetts
DRILL METHOD:
DRILLER:
LOGGED BY: MC

TOTAL DEPTH: 3
COORDINATES: 357584, 6384677
COORD. SYSTEM:
GROUND ELEV.:
CHECKED BY: NM

NOTES:

Depth	Samples	PID READING (ppm)	Graphic	Soil Classification	Material Description	Additional Observations
					Ground Surface at	
0	TP35-P_0.1				TOPSOIL TOPSOIL: Silty CLAY: Low to medium plasticity, dark grey, moist.	
	TP35-P_0.5				Silty CLAY Silty CLAY: Medium to high plasticity, grey, red, moist.	
1	TP35-P_1.0				Extremely Weathered SANDSTONE Extremely weathered Sandstone, recovered as Clayey Gravelly SAND, fine to coarse grained, brown to grey, fine to coarse grained, subangular to angular gravels, dry.	
2	TP35-P_2.0					
3	TP35-P_3.0				Termination at 3.0 m BGL.	
4						

Disclaimer: This log is intended for environmental not geotechnical purposes.

SHEET: 1 of 1

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ENVIRONMENTAL LOG: TP38-P

PROJECT NO.: EP3627
PROJECT NAME: Thirdi Gosforth
CLIENT: Thirdi
ADDRESS: Anamabah Rd, Gosforth

DRILLING DATE: 04-23-2024
DRILLING CO.: Lovetts
DRILL METHOD:
DRILLER:
LOGGED BY: MC

TOTAL DEPTH: 3
COORDINATES: 357610, 6384336
COORD. SYSTEM:
GROUND ELEV.:
CHECKED BY: NM

NOTES:

Depth	Samples	PID READING (ppm)	Graphic	Soil Classification	Material Description	Additional Observations
					Ground Surface at	
0	TP38-P_0.1				TOPSOIL TOPSOIL: Silty CLAY: Low to medium plasticity, dark grey, moist.	
					Silty CLAY Silty CLAY: medium to high plasticity, brown, moist.	
	TP38-P_0.5				Sandy CLAY Sandy CLAY: Medium to high plasticity, grey, fine to medium grained sand, moist.	
					Extremely Weathered SANDSTONE Extremely weathered Sandstone, recovered as Clayey SAND, fine to coarse, grey, red and brown, low plasticity, dry.	
1	TP38-P_1.0					
2	TP38-P_2.0					
3					Termination at 3.0 m BGL.	
4						

RSLog / EP Risk Environmental Soil Logging Template without well -NM Edit / ep-risk-management-pty-ltd / admin / May 23, 2024 11:06 pm

Disclaimer: This log is intended for environmental not geotechnical purposes.

Appendix D

LOTSEARCH REPORT (2024)

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 24 Sep 2024 11:30:00

Reference: LS062161 EP

Address: 559 Anambah Road, Gosforth, NSW 2320

Disclaimer:
The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features.
You should obtain independent advice before you make any decision based on the information within the report.
The detailed terms applicable to use of this report are set out at the end of this report.

Dataset Listing

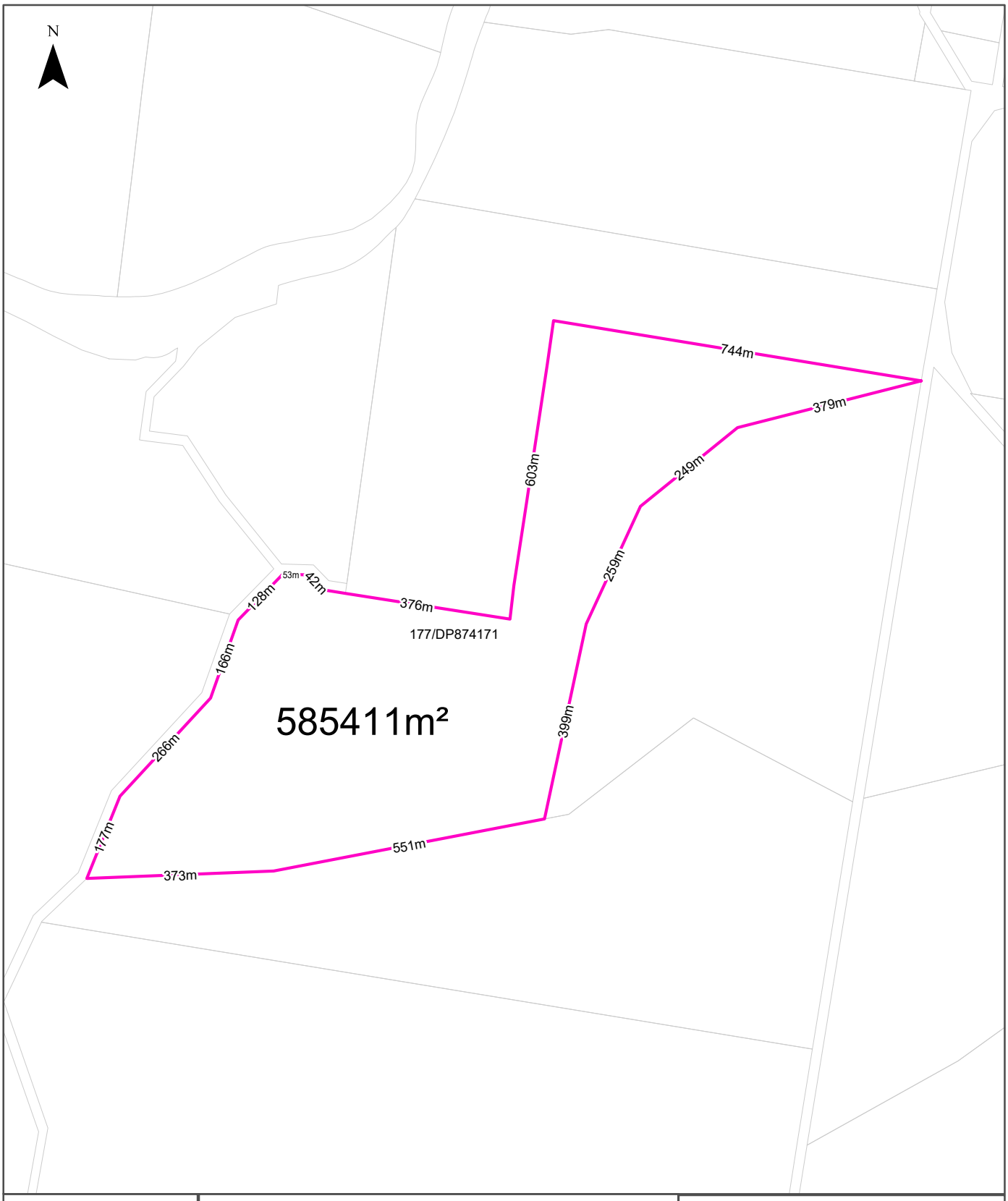
Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Customer Service - Spatial Services	24/07/2024	24/07/2024	Quarterly	-	-	-	-
Topographic Data	NSW Department of Customer Service - Spatial Services	21/05/2024	21/05/2024	Annually	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority NSW	02/09/2024	13/08/2024	Monthly	1000m	0	0	0
Contaminated Land Records of Notice	Environment Protection Authority NSW	02/09/2024	02/09/2024	Monthly	1000m	0	0	0
Former Gasworks	Environment Protection Authority NSW	06/08/2024	14/07/2021	Quarterly	1000m	0	0	0
Notices under the POEO Act 1997	Environment Protection Authority NSW	03/09/2024	03/09/2024	Monthly	1000m	0	0	0
National Waste Management Facilities Database	Geoscience Australia	29/04/2024	29/11/2022	Annually	1000m	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	20/09/2023	07/09/2020	Annually	1000m	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority NSW	24/09/2024	14/06/2024	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Australian Department of Defence	24/09/2024	24/09/2024	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Australian Department of Defence	24/09/2024	24/09/2024	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	24/09/2024	24/09/2024	Monthly	2000m	0	0	0
Defence Controlled Areas	Australian Department of Defence	17/07/2024	17/07/2024	Quarterly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Australian Department of Defence	05/08/2024	02/09/2022	Quarterly	2000m	0	0	0
National Unexploded Ordnance (UXO)	Australian Department of Defence	17/07/2024	17/07/2024	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority NSW	13/11/2023	15/12/2022	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority NSW	26/08/2024	26/08/2024	Monthly	1000m	1	1	2
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority NSW	26/08/2024	26/08/2024	Monthly	1000m	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority NSW	26/08/2024	26/08/2024	Monthly	1000m	3	3	4
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	0	0	0
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	0	0
Points of Interest	NSW Department of Customer Service - Spatial Services	18/07/2024	18/07/2024	Quarterly	1000m	0	0	4
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	18/07/2024	18/07/2024	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	18/07/2024	18/07/2024	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Customer Service - Spatial Services	09/08/2024	09/08/2024	Quarterly	1000m	0	1	4
State Forest	Forestry Corporation of NSW	12/12/2023	11/12/2023	Annually	1000m	0	0	0
Hydrogeology Map of Australia	Geoscience Australia	17/04/2024	19/08/2019	Annually	1000m	1	1	1

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Climate Change, Energy, the Environment and Water	28/05/2024	23/02/2018	Quarterly	1000m	0	0	0
National Groundwater Information System (NGIS) Boreholes	Bureau of Meteorology; Water NSW	28/05/2024	20/06/2023	Annually	2000m	0	0	2
NSW Seamless Geology Single Layer: Rock Units	NSW Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	3	4	11
NSW Seamless Geology Single Layer: Trendlines	NSW Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	0	0	0
NSW Seamless Geology Single Layer: Geological Boundaries and Faults	NSW Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	4	7	17
Naturally Occurring Asbestos Potential	NSW Department of Regional NSW	26/04/2024	14/03/2024	Annually	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	12/01/2024	17/02/2011	Annually	1000m	1	1	1
Soil Landscapes of Central and Eastern NSW	NSW Department of Climate Change, Energy, the Environment and Water	12/12/2023	27/07/2020	Annually	1000m	2	2	4
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Housing and Infrastructure	13/09/2024	16/08/2024	Monthly	500m	1	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	12/01/2024	21/02/2013	Annually	1000m	1	1	2
Dryland Salinity - National Assessment	Australian Bureau of Agricultural and Resource Economics and Sciences	03/06/2024	24/05/2024	Annually	1000m	1	1	1
Mining Subsidence Districts	NSW Department of Customer Service	06/08/2024	06/08/2024	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Regional NSW	26/08/2024	26/08/2024	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Regional NSW	26/08/2024	26/08/2024	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Regional NSW	26/08/2024	26/08/2024	Monthly	1000m	7	7	7
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Housing and Infrastructure	13/09/2024	08/09/2023	Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Housing and Infrastructure	13/09/2024	30/08/2024	Monthly	1000m	2	4	7
Commonwealth Heritage List	Australian Department of Climate Change, Energy, the Environment and Water	20/10/2023	13/04/2022	Annually	1000m	0	0	0
National Heritage List	Australian Department of Climate Change, Energy, the Environment and Water	20/10/2023	13/04/2022	Annually	1000m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	29/07/2024	05/07/2024	Quarterly	1000m	0	0	0
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Housing and Infrastructure	13/09/2024	30/08/2024	Monthly	1000m	0	0	0
Bush Fire Prone Land	NSW Rural Fire Service	26/08/2024	19/07/2024	Monthly	1000m	4	4	4
NSW Native Vegetation Type Map	NSW Department of Climate Change, Energy, the Environment and Water	02/09/2024	30/11/2023	Quarterly	1000m	44	79	454
Ramsar Wetlands of Australia	Australian Department of Climate Change, Energy, the Environment and Water	16/05/2024	11/04/2024	Annually	1000m	0	0	0
Collaborative Australian Protected Areas Database (CAPAD) 2022 - Terrestrial	Australian Department of Climate Change, Energy, The Environment and Water	04/03/2024	30/06/2022	Annually	1000m	0	0	0
Collaborative Australian Protected Areas Database (CAPAD) 2022 - Marine	Australian Department of Climate Change, Energy, The Environment and Water	04/03/2024	30/06/2022	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	28/05/2024	28/05/2024	Annually	1000m	3	3	5
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	28/05/2024	28/05/2024	Annually	1000m	2	5	8
NSW BioNet Species Sightings	NSW Department of Climate Change, Energy, the Environment and Water	10/09/2024	10/09/2024	Monthly	10000m	-	-	-

Site Diagram

559 Anambah Road, Gosforth, NSW 2320



Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 585411m²

Total Perimeter: 4.76km

Disclaimers:

Measurements are approximate only and may have been simplified or smaller lengths removed for readability.

Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Scale: 0 50 100 200 300 400 500 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2024

Coordinate System: GDA 1994 MGA Zone 56

Date: 23 September 2024

Contaminated Land

559 Anambah Road, Gosforth, NSW 2320

List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist	Direction
N/A	No records in buffer								

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Contaminated Land

559 Anambah Road, Gosforth, NSW 2320

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
N/A	No records in buffer							

Contaminated Land Records of Notice Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority
Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit
http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm

Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
N/A	No records in buffer					

Former Gasworks Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Contaminated Land

559 Anambah Road, Gosforth, NSW 2320

EPA Notices

Penalty Notices, s.91 & s.92 Clean up Notices and s.96 Prevention Notices within the dataset buffer:

Map ID	Number	Type	Name	Address	Status	Issued Date	Act	Offence	Offence Date	Loc Conf	Dist	Dir
N/A												

NSW EPA Notice Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Waste Management & Liquid Fuel Facilities

559 Anambah Road, Gosforth, NSW 2320

National Waste Management Facilities Database

Sites on the National Waste Management Facilities Database within the dataset buffer:

Map ID	Owner	Name	Address	Management Type	Facility Type	Status	Loc Conf	Dist	Dir
N/A	No records in buffer								

Source: Waste Management Facilities Database
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National Liquid Fuel Facilities

National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
N/A	No records in buffer										

National Liquid Fuel Facilities Data Source: Geoscience Australia
Creative Commons 4.0 © Commonwealth of Australia

PFAS Investigation & Management Programs

559 Anambah Road, Gosforth, NSW 2320

EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Map ID	Site	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

EPA PFAS Investigation Program: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Defence PFAS Investigation Program

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Investigation Program Data Custodian: Department of Defence, Australian Government

Defence PFAS Management Program

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Management Program Data Custodian: Department of Defence, Australian Government

Airservices Australia National PFAS Management Program

Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

Map ID	Site Name	Impacts	Loc Conf	Dist	Dir
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites and Unexploded Ordnance

559 Anambah Road, Gosforth, NSW 2320

Defence Controlled Areas (DCA)

Defence Controlled Areas provided by the Department of Defence within the dataset buffer:

Site ID	Location Name	Loc Conf	Dist	Dir
N/A	No records in buffer			

Defence Controlled Areas, Data Custodian: Department of Defence, Australian Government

Defence 3 Year Regional Contamination Investigation Program (RCIP)

Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

Property ID	Base Name	Address	Known Contamination	Loc Conf	Dist	Dir
N/A	No records in buffer					

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

National Unexploded Ordnance (UXO)

Sites which have been assessed by the Department of Defence for the potential presence of unexploded ordnance within the dataset buffer:

Site ID	Location Name	Category	Area Description	Additional Information	Commonwealth	Loc Conf	Dist	Dir
N/A	No records in buffer							

National Unexploded Ordnance (UXO), Data Custodian: Department of Defence, Australian Government

EPA Other Sites with Contamination Issues

559 Anambah Road, Gosforth, NSW 2320

EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill
- Pasminco Lead Abatement Strategy Area

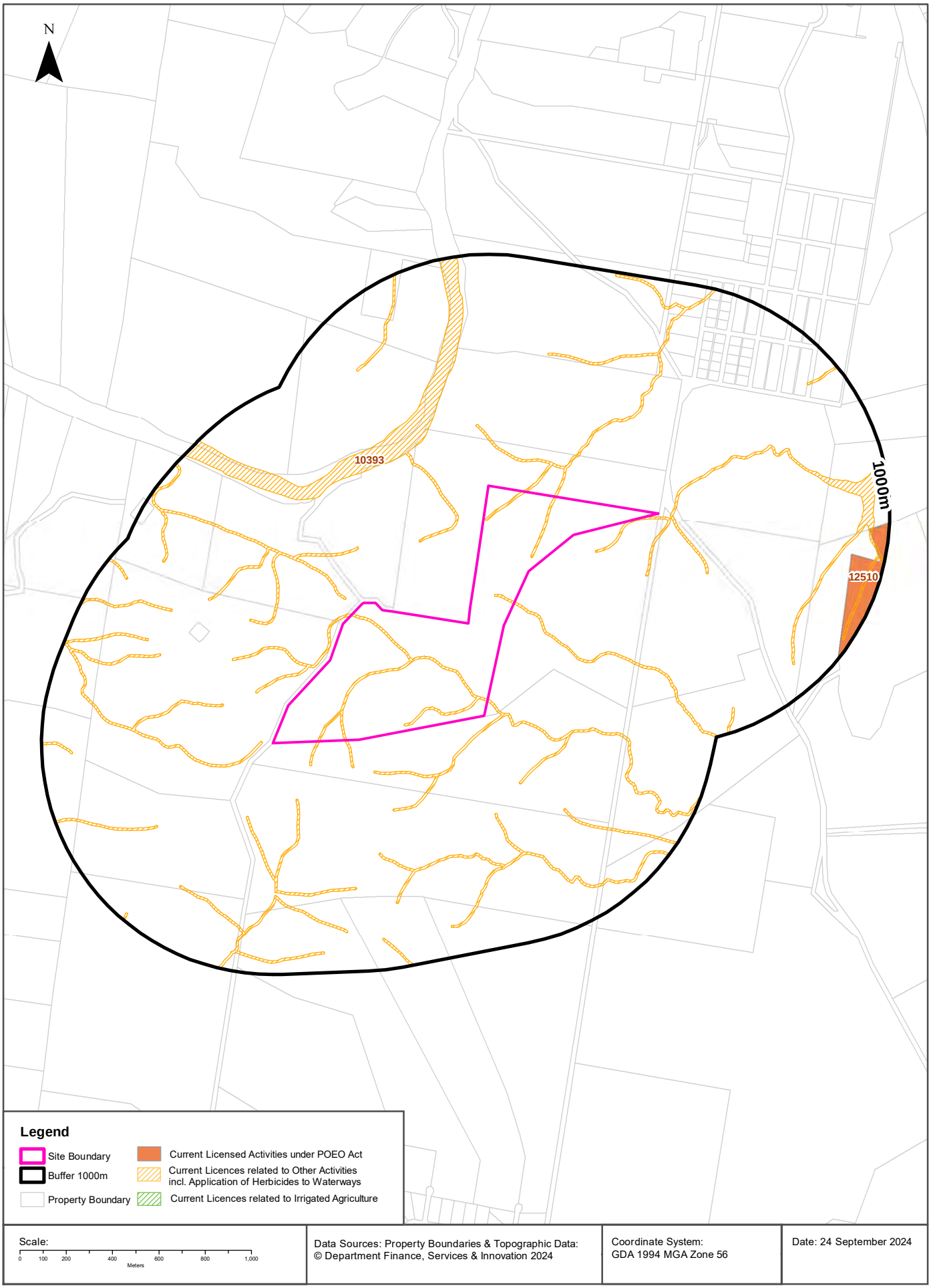
Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

EPA Other Sites with Contamination Issues: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Current EPA Licensed Activities

559 Anambah Road, Gosforth, NSW 2320



EPA Activities

559 Anambah Road, Gosforth, NSW 2320

Licensed Activities under the POEO Act 1997

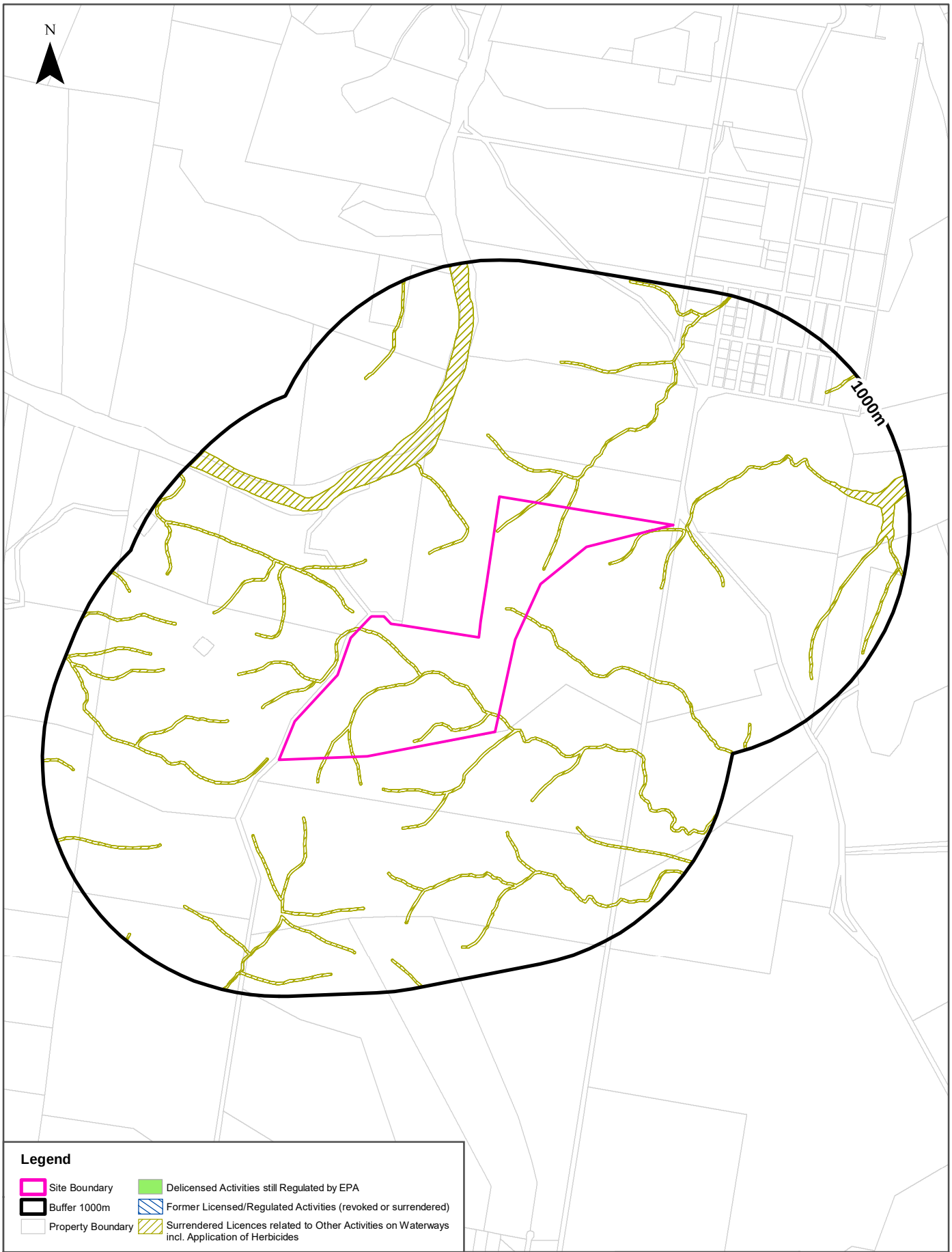
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
10393	MAITLAND CITY COUNCIL	ALL WATERBODIES IN THE MAITLAND LOCAL GOVERNMENT AREA	.	MAITLAND	Other activities	Network of Features	0m	On-site
12510	DITTON PROPERTIES PTY LIMITED	DITTON PROPERTIES PTY LIMITED	442 Anambah Road	GOSFORTH	Land-based extractive activity	Premise Match	850m	East

POEO Licence Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

559 Anambah Road, Gosforth, NSW 2320



EPA Activities

559 Anambah Road, Gosforth, NSW 2320

Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

Delicensed Activities Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
12439	STATE OF NEW SOUTH WALES (Department of Primary Industries - Lands)	Soil Conservation Service, Waterways within the Hunter Valley Flood Mitigation Scheme, MAITLAND	Surrendered	13/02/2007	Other Activities - Application of Herbicides	Network of Features	142m	North

Former Licensed Activities Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Historical Business Directories

559 Anambah Road, Gosforth, NSW 2320

Business Directory Records 1950-1991
Premise or Road Intersection Matches

Potentially contaminative business activities extracted from Universal Business Directories from years 1991, 1982, 1970, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

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Business Directory Records 1950-1991
Road or Area Matches

Potentially contaminative business activities extracted from Universal Business Directories from years 1991, 1982, 1970, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer					

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Historical Business Directories

559 Anambah Road, Gosforth, NSW 2320

Dry Cleaners, Motor Garages & Service Stations Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a premise or road intersection, within the dataset buffer.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

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Dry Cleaners, Motor Garages & Service Stations Road or Area Matches

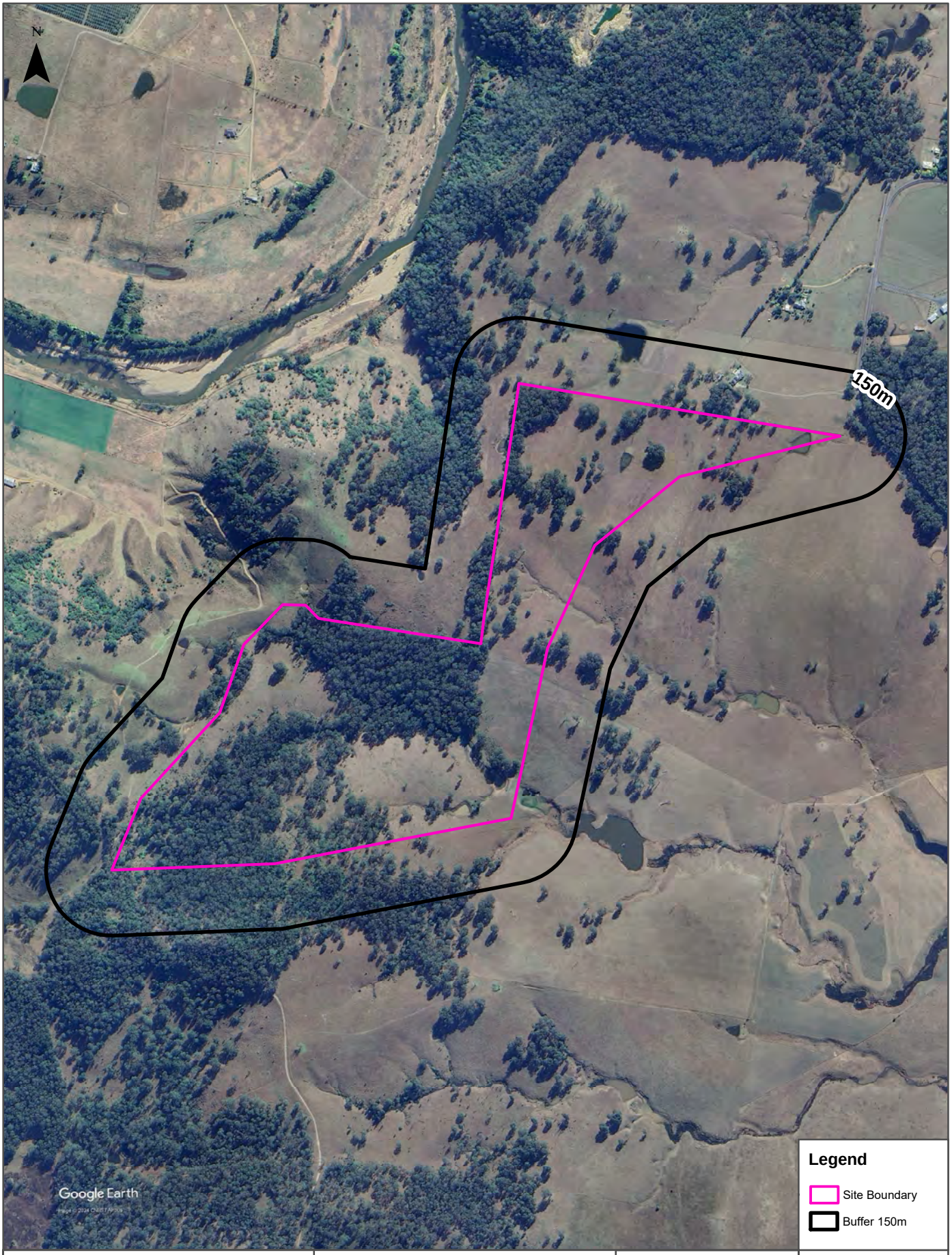
Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer					

Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

Aerial Imagery 2023

559 Anambah Road, Gosforth, NSW 2320



Scale:
0 140 280 420 560
Meters

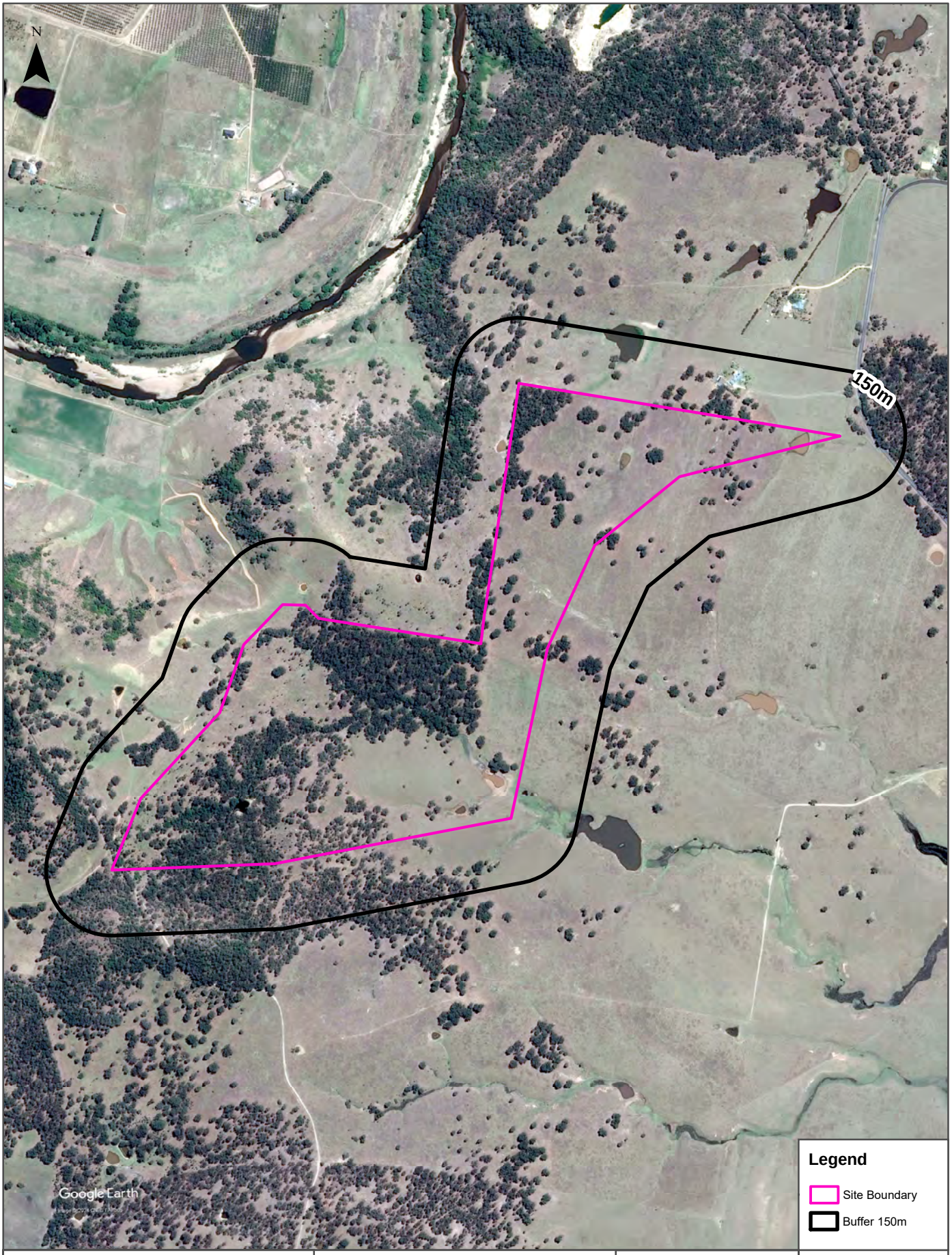
Data Source Aerial Imagery: © 2024 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 56

Date: 24 September 2024

Aerial Imagery 2013

559 Anambah Road, Gosforth, NSW 2320



Scale:
0 140 280 420 560
Meters

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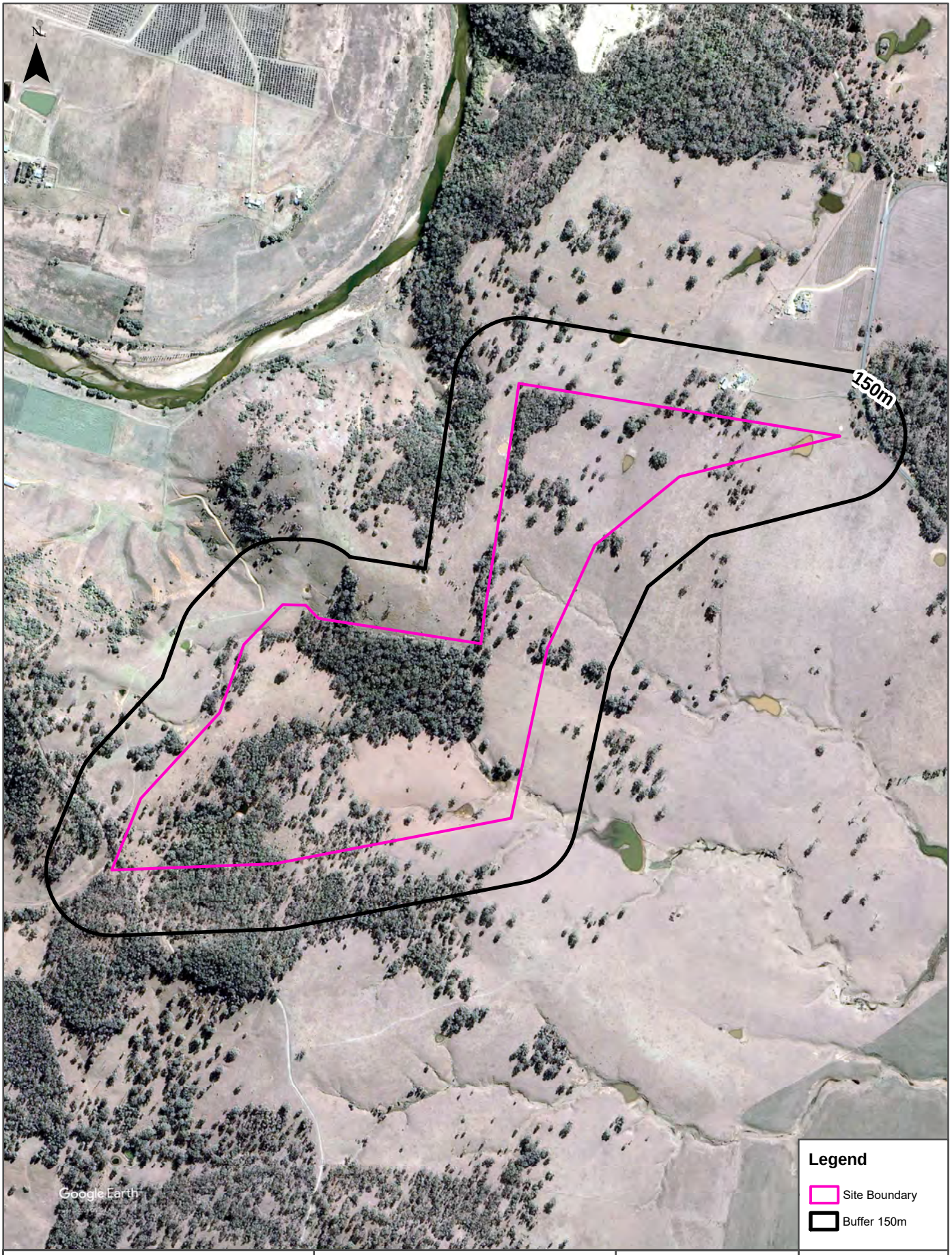
Coordinate System:
GDA 1994 MGA Zone 56

Date: 24 September 2024

Aerial Imagery 2004

559 Anambah Road, Gosforth, NSW 2320



Scale:
0 140 280 420 560
Meters

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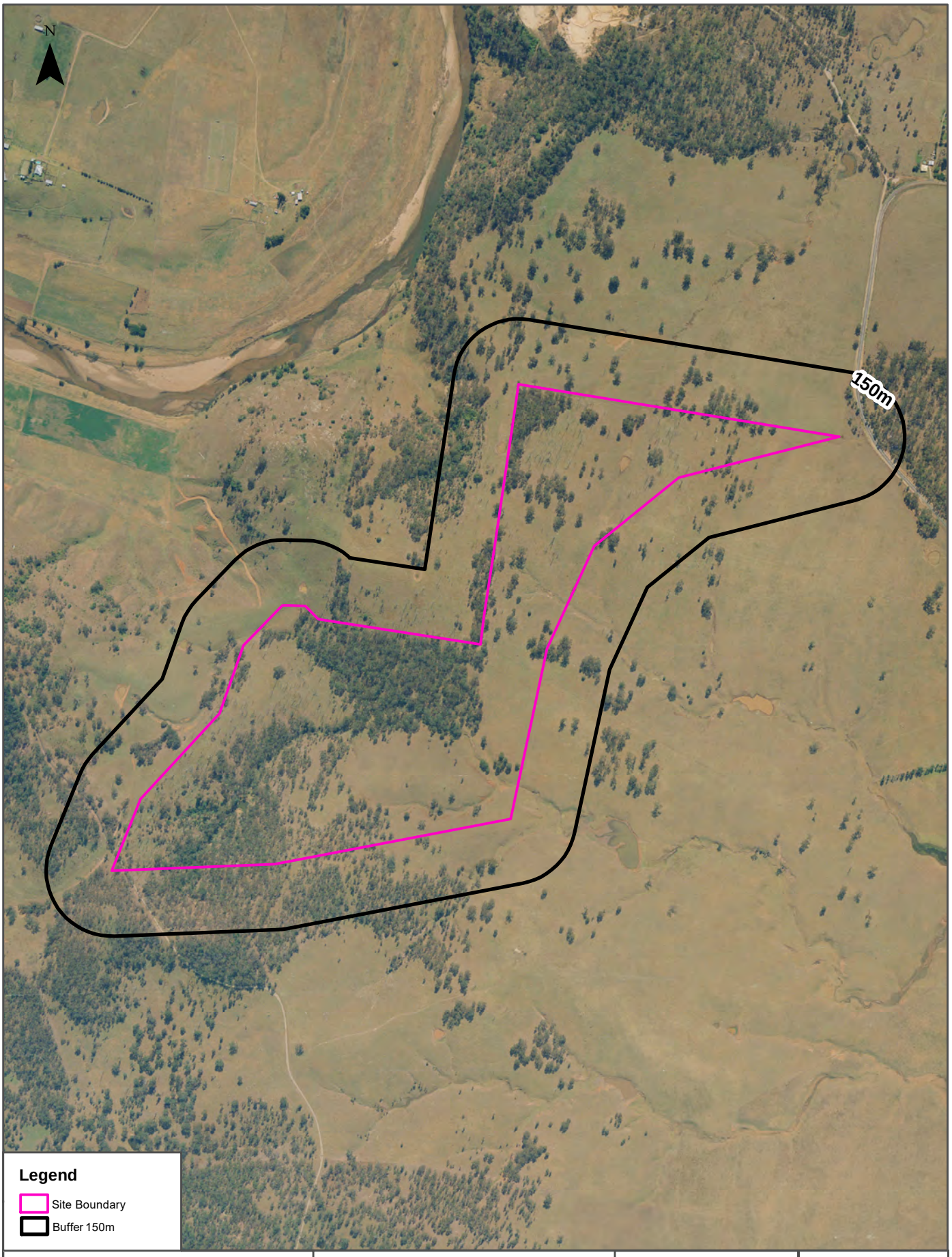
Coordinate System:
GDA 1994 MGA Zone 56

Date: 24 September 2024

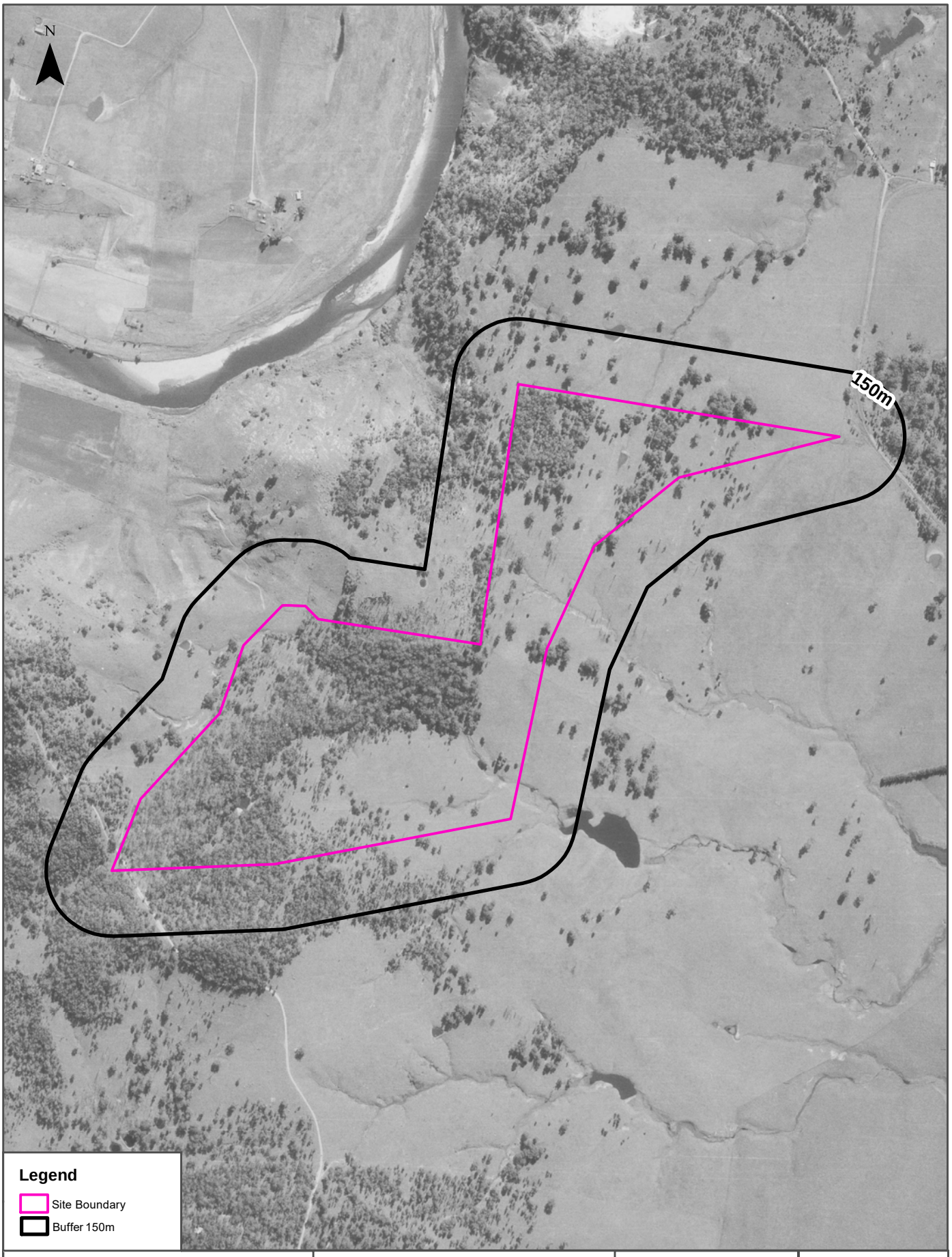
Aerial Imagery 1994

559 Anambah Road, Gosforth, NSW 2320



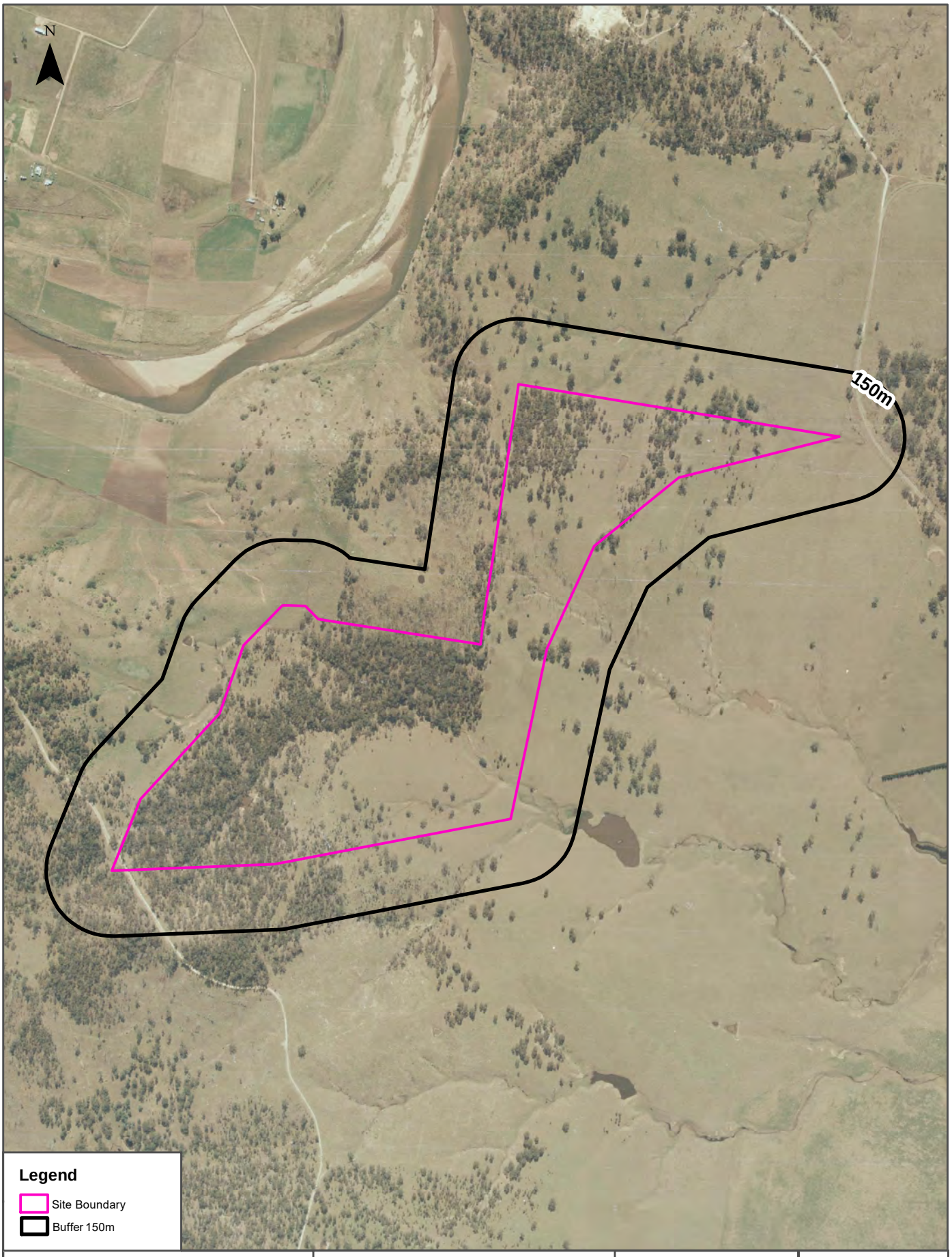
Aerial Imagery 1984

559 Anambah Road, Gosforth, NSW 2320



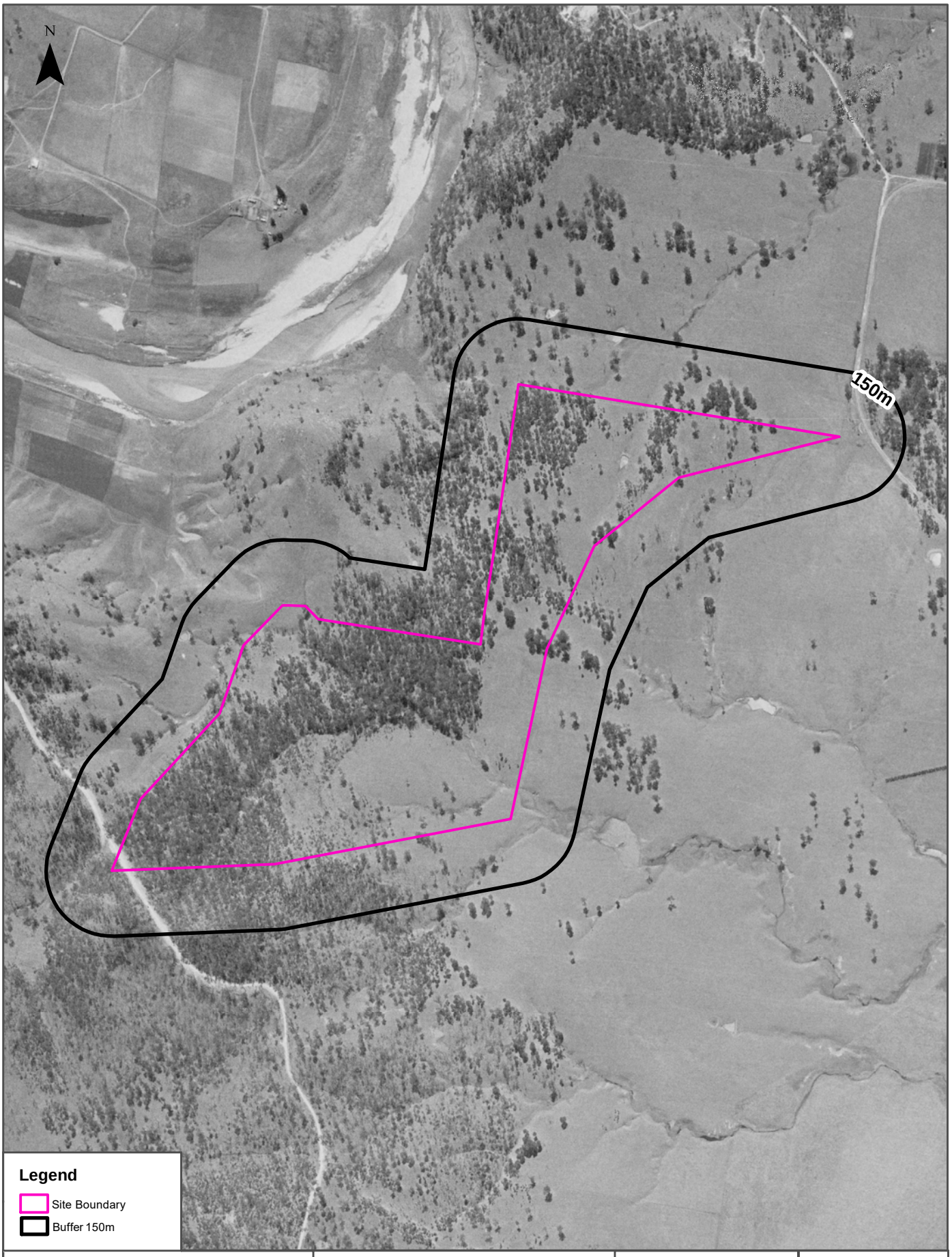
Aerial Imagery 1976

559 Anambah Road, Gosforth, NSW 2320



Aerial Imagery 1971

559 Anambah Road, Gosforth, NSW 2320



Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 24 September 2024
0 140 280 420 560 Meters	© NSW Department of Customer Service	GDA 1994 MGA Zone 56	

Aerial Imagery 1961

559 Anambah Road, Gosforth, NSW 2320



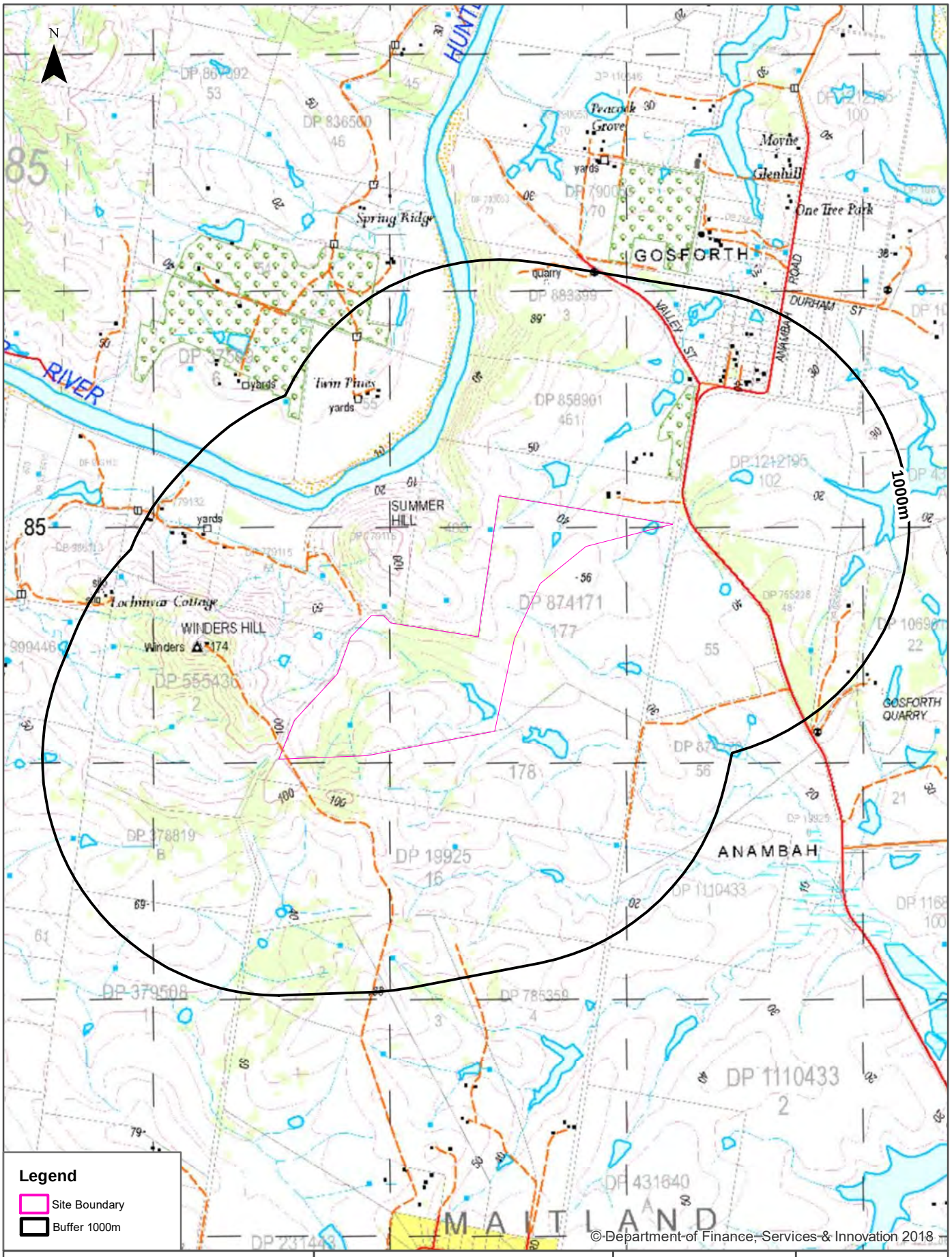
Aerial Imagery 1950

559 Anambah Road, Gosforth, NSW 2320



Topographic Map 2015

559 Anambah Road, Gosforth, NSW 2320



©-Department-of-Finance,-Services-& Innovation 2018

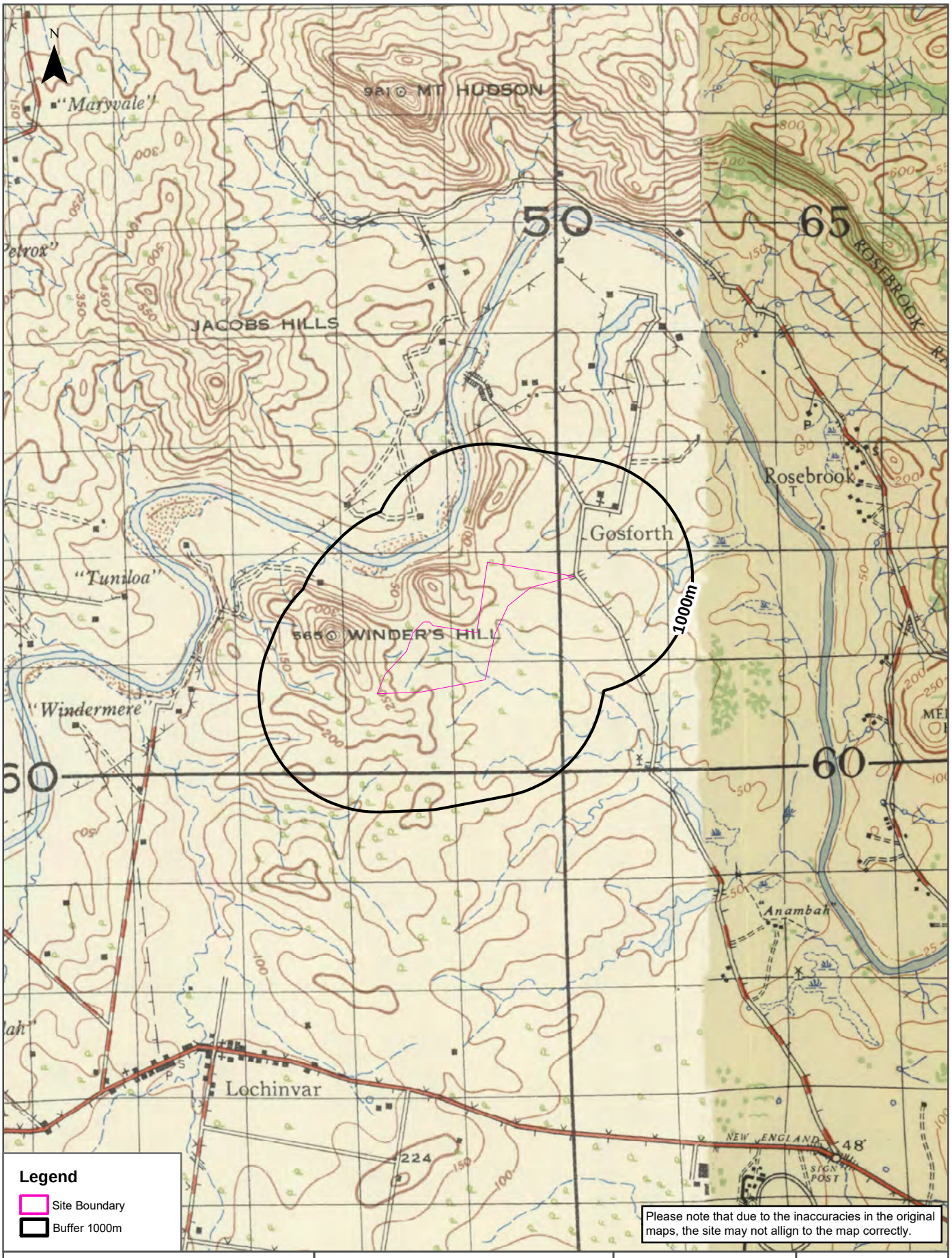
Historical Map 1981 - 1982

559 Anambah Road, Gosforth, NSW 2320



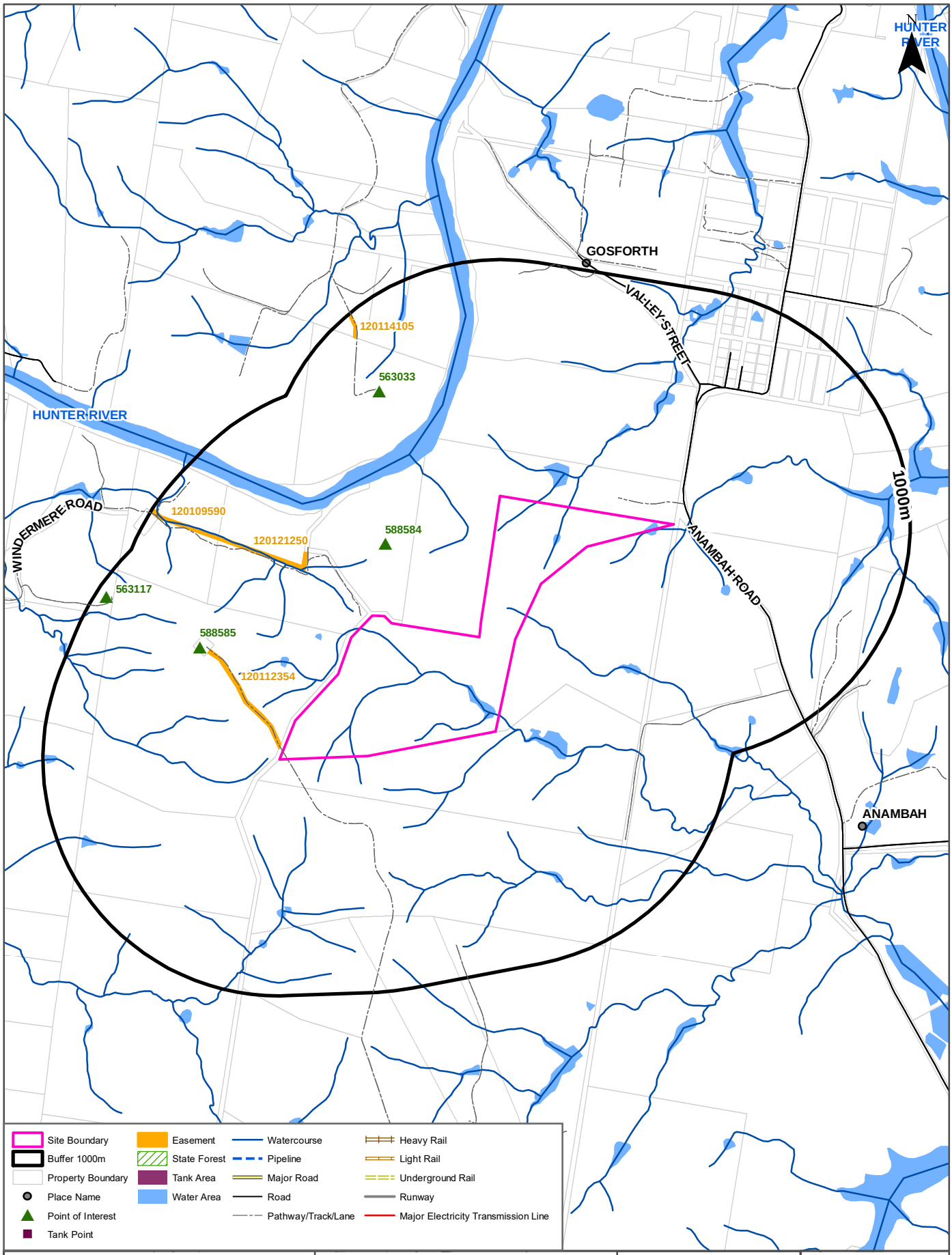
Historical Map 1942 - 1955

559 Anambah Road, Gosforth, NSW 2320



Topographic Features

559 Anambah Road, Gosforth, NSW 2320



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2024

Coordinate System: GDA 1994 MGA Zone 56

Date: 24 September 2024

Topographic Features

559 Anambah Road, Gosforth, NSW 2320

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
588584	Mountain Like	SUMMER HILL	306m	North West
588585	Mountain Like	WINDERS HILL	509m	West
563033	Homestead	TWIN PINES	677m	North
563117	Homestead	LOCHINVAR COTTAGE	956m	West

Topographic Data Source: © Land and Property Information (2015)
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Topographic Features

559 Anambah Road, Gosforth, NSW 2320

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks (Points)

What are the Tank Points located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
N/A	No records in buffer					

Tanks Data Source: © Land and Property Information (2015)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Major Easements

What Major Easements exist within the dataset buffer?
Note. Easements provided by LPI are not at the detail of local governments. They are limited to major easements such as Right of Carriageway, Electrical Lines (66kVa etc.), Easement to drain water & Significant subterranean pipelines (gas, water etc.).

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120112354	Primary	Undefined		20m	West
120121250	Primary	Undefined		337m	North West
120109590	Primary	Undefined		697m	North West
120114105	Primary	Undefined		904m	North

Easements Data Source: © Land and Property Information (2015)
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Topographic Features

559 Anambah Road, Gosforth, NSW 2320

State Forest

What State Forest exist within the dataset buffer?

State Forest Number	State Forest Name	Distance	Direction
N/A	No records in buffer		

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)
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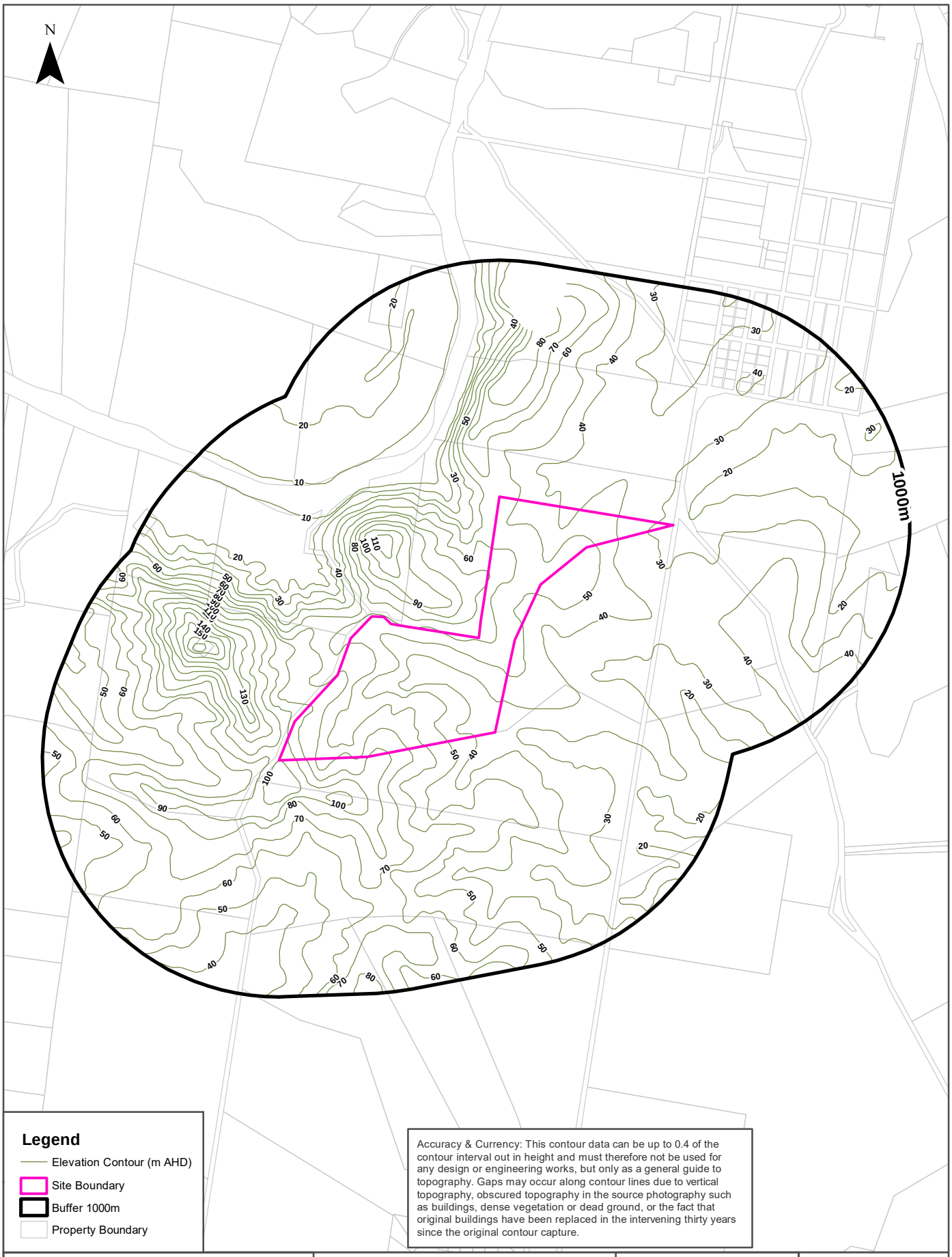
Elevation Contours (m AHD)

559 Anambah Road, Gosforth, NSW 2320



Hydrogeology & Groundwater

559 Anambah Road, Gosforth, NSW 2320

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive highly productive aquifers	0m	On-site

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

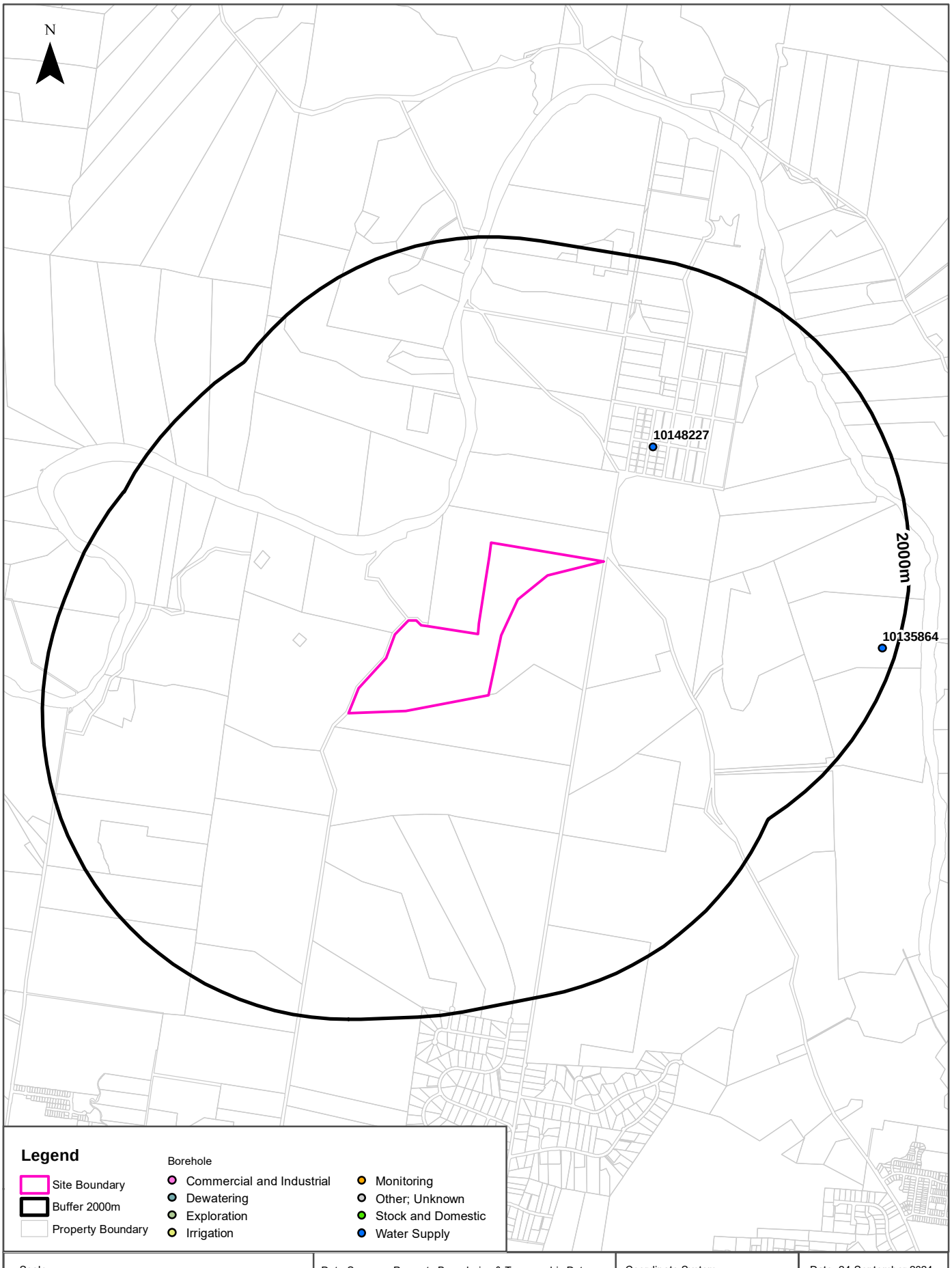
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

Prohibition Area No.	Prohibition	Distance	Direction
N/A	No records in buffer		

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018 Data Source : NSW Department of Primary Industries

Groundwater Boreholes

559 Anambah Road, Gosforth, NSW 2320



Hydrogeology & Groundwater

559 Anambah Road, Gosforth, NSW 2320

Groundwater Boreholes

Boreholes within the dataset buffer:

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10148227	GW061253	Water Supply	Unknown	01/10/1985	25.00		AHD	3001-7000 ppm			813m	North East
10135864	GW080640	Water Supply	Unknown	11/03/2004			AHD				1910m	East

Borehole Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Hydrogeology & Groundwater

559 Anambah Road, Gosforth, NSW 2320

Driller's Logs

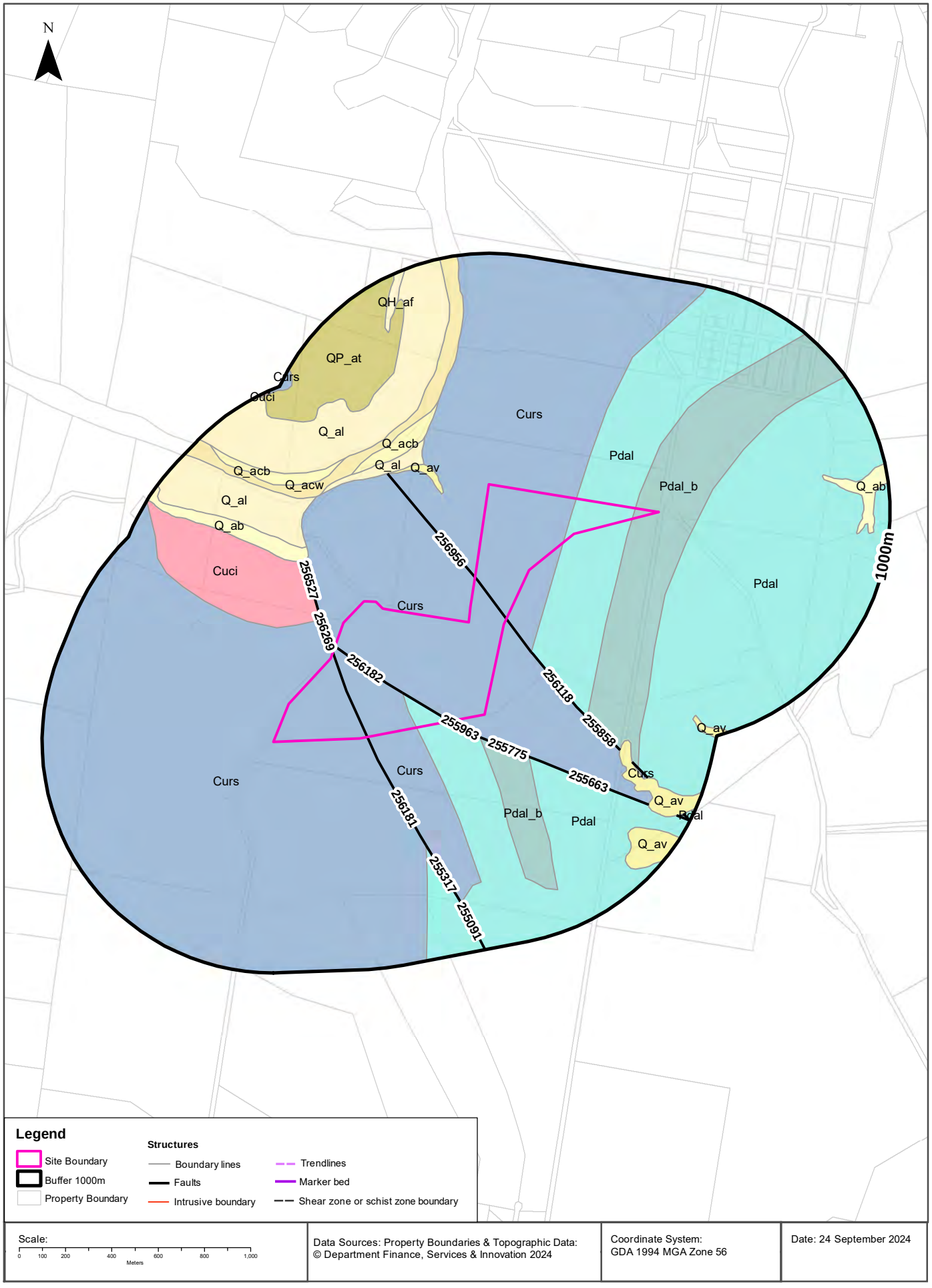
Drill log data relevant to the boreholes within the dataset buffer:

NGIS Bore ID	Drillers Log	Distance	Direction
10148227	0.00m-6.09m Clay 6.09m-19.20m Sandstone 19.20m-20.20m Sandstone Weathered Water Supply 20.20m-24.99m Sandstone	813m	North East

Drill Log Data Source: Bureau of Meteorology; Water NSW. Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Geology

559 Anambah Road, Gosforth, NSW 2320



Geology

559 Anambah Road, Gosforth, NSW 2320

Geological Units

What are the Geological Units within the dataset buffer?

Unit Code	Unit Name	Description	Unit Stratigraphy	Age	Dominant Lithology	Distance
Curs	Seaham Formation	Tillite, varved siltstone, tuff, red and green zeolitic mudstone with dropstones interbedded in thick-bedded lithic sandstone and conglomerate.	\Ungrouped Rouchel Block units\\Seaham Formation\\	Serpukhovian (base) to Kasimovian (top)	Siliciclastic sedimentary rock	0m
Pdal	Lochinvar Formation	Basalt, siltstone, sandstone.	\Dalwood Group\ \Lochinvar Formation\\	Permian (base) to Permian (top)	Basalt	0m
Pdal_b	Lochinvar Formation - basalt	Amygdaloidal basalt.	\Dalwood Group\ \Lochinvar Formation \Lochinvar Formation - basalt\	Permian (base) to Permian (top)	Basalt	0m
Cuci	Winders Hill Granodiorite	Granodiorite, diorite, andersite.	\Unassigned Carboniferous intrusions\ \Winders Hill Granodiorite\\	Carboniferous (base) to Carboniferous (top)	Granodiorite	93m
Q_av	Alluvial valley deposits	Silt, clay, (fluvially deposited) lithic to quartz-lithic sand, gravel.	\Alluvium\\Alluvial valley deposits\\	Quaternary (base) to Now (top)	Clastic sediment	190m
Q_al	Alluvial levee/overbank deposits	Fluvially deposited fine- to medium-grained lithic to quartz-rich sand, silt, clay.	\Alluvium\\Alluvial levee \overbank deposits\\	Quaternary (base) to Now (top)	Clastic sediment	294m
Q_ab	Alluvial backswamp deposits	Organic-rich mud, peat, silt, clay.	\Alluvium\\Alluvial backswamp deposits\\	Quaternary (base) to Now (top)	Organic rich sediment	305m
Q_acb	Alluvial channel deposits - in-channel bar	Polymictic to lithic to quartz-rich sand and gravel; silt and clay; polymictic pebble- to cobble- in-channel imbricated lag and bar deposits with interstitial sand, silt and clay.	\Alluvium\\Alluvial channel deposits\Alluvial channel deposits - in-channel bar\	Quaternary (base) to Now (top)	Clastic sediment	345m
Q_acw	Alluvial channel deposits - subaqueous	Fluvially deposited sand, gravel, silt, clay.	\Alluvium\\Alluvial channel deposits\Alluvial channel deposits - subaqueous\	Quaternary (base) to Now (top)	Clastic sediment	402m
QP_at	Alluvial terrace deposits	Silt, clay, (fluvially-deposited) fine- to medium-grained quartz-lithic sand, polymictic gravel.	\Alluvium\\Alluvial terrace deposits\\	Quaternary (base) to Now (top)	Clastic sediment	624m
QH_af	Alluvial floodplain deposits	Silt, very fine- to medium-grained lithic to quartz-rich sand, clay.	\Alluvium\\Alluvial floodplain deposits\\	Holocene (base) to Now (top)	Clastic sediment	788m

Linear Geological Structures

What are the Dyke, Sill, Fracture, Lineament and Vein trendlines within the dataset buffer?

Map ID	Feature Description	Map Sheet Name	Distance
No Features			

What are the Faults, Shear zones or Schist zones, Intrusive boundaries & Marker beds within the dataset buffer?

Linear Geological Structures

What are the Dyke, Sill, Fracture, Lineament and Vein trendlines within the dataset buffer?

Map ID	Feature Description	Map Sheet Name	Distance
No Features			

What are the Faults, Shear zones or Schist zones, Intrusive boundaries & Marker beds within the dataset buffer?

Map ID	Boundary Type	Description	Map Sheet Name	Distance
255963	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	0m
256181	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	0m
256182	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	0m
256956	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	0m
256269	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	29m
256527	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	93m
255775	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	94m
256118	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	140m
255663	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	266m
255858	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	437m
255317	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	508m
255632	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	669m
255606	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	703m
255091	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	782m
255415	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	939m
255420	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	961m
257458	Faulted boundary	Fault, position approximate	Newcastle Coalfield 1:100,000 Regional Geology	987m

Geological Data Source: Statewide Seamless Geology v2.1, Department of Regional NSW
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Naturally Occurring Asbestos Potential

559 Anambah Road, Gosforth, NSW 2320

Naturally Occurring Asbestos Potential

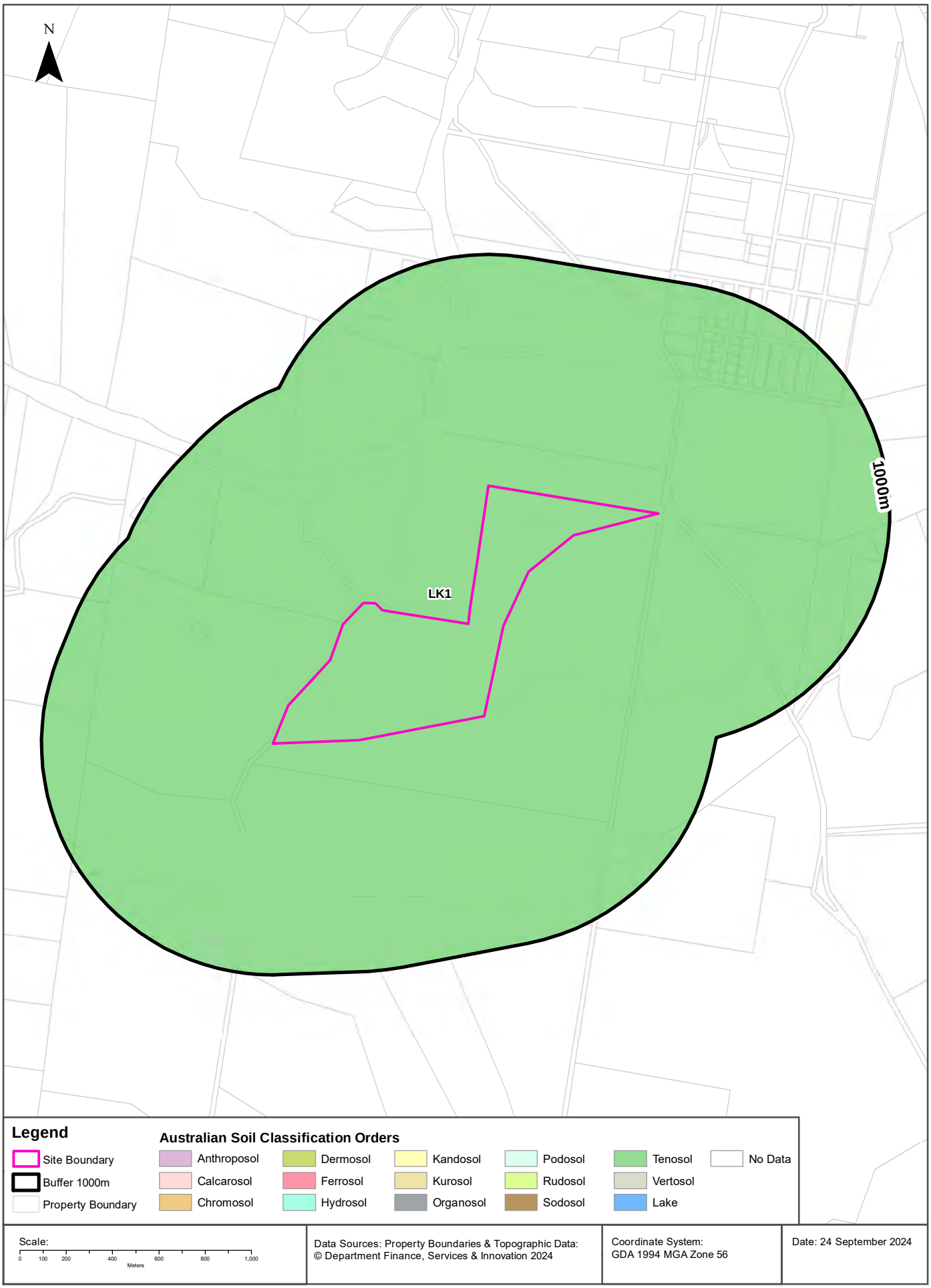
Naturally Occurring Asbestos Potential within the dataset buffer:

Potential	Sym	Strat Name	Group	Formation	Scale	Min Age	Max Age	Rock Type	Dom Lith	Description	Dist	Dir
No records in buffer												

Naturally Occurring Asbestos Potential Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

Atlas of Australian Soils

559 Anambah Road, Gosforth, NSW 2320



Soils

559 Anambah Road, Gosforth, NSW 2320

Atlas of Australian Soils

Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
LK1	Tenosol	Hilly to steep hilly terrain with some very rugged portions, cliffs, ridges, or steep domes, rock outcrops common: chief soils are shallow loamy soils (Um4.1), (Um4.2), and (Um6), shallow sand soils (Uc4.1), and shallow clay soils (Uf). Associated are small areas of a wide range of soils including (Ug5.12), (Ug5.3), (Gn3.42), (Db3.12), (Dr2), (Dy), and (Gn2.1) soils. As mapped, small flat to undulating areas of unit Ke12 are included.	0m	On-site

Atlas of Australian Soils Data Source: CSIRO
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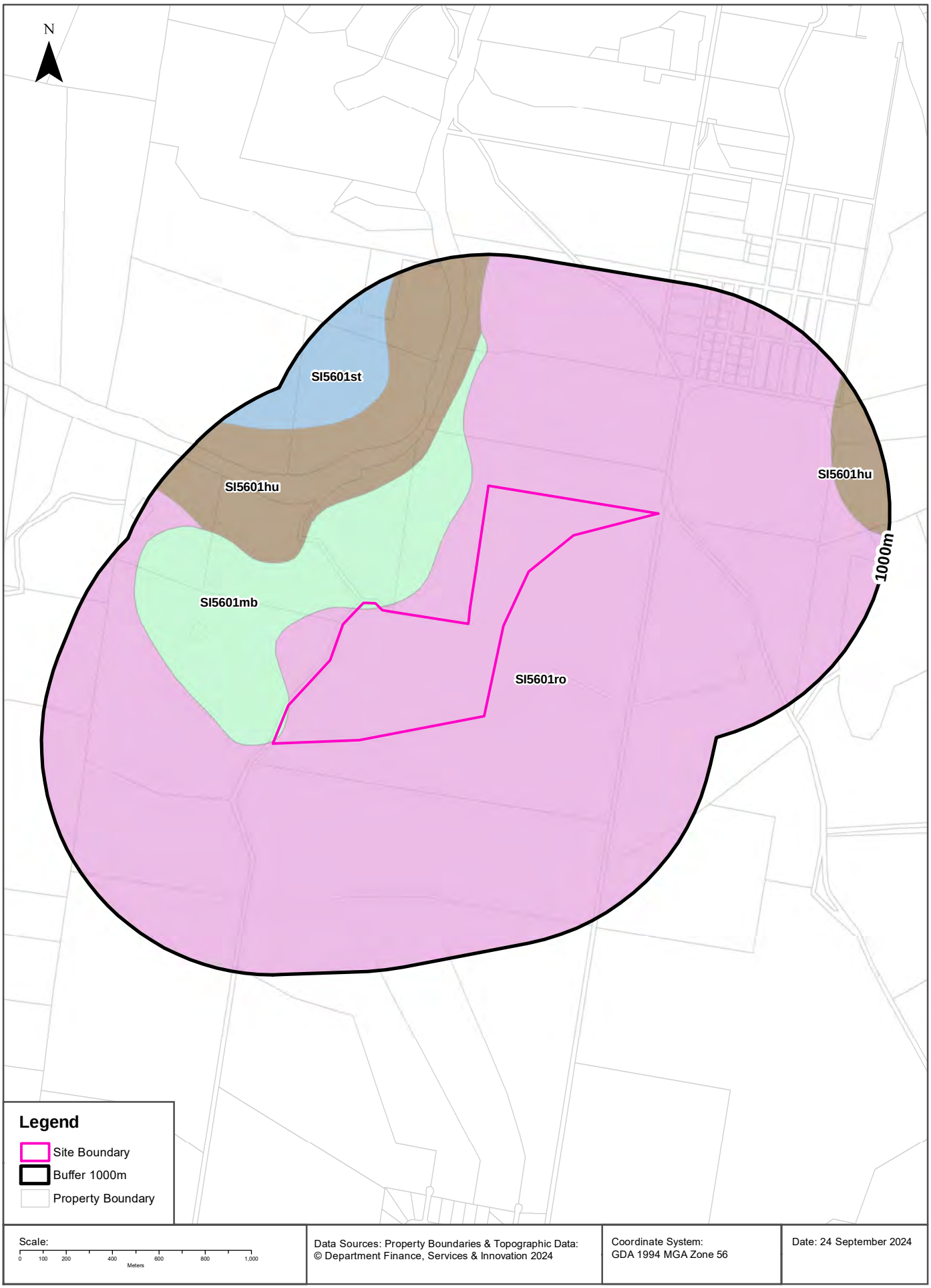
Soil Landscapes of Central and Eastern NSW

559 Anambah Road, Gosforth, NSW 2320



Soils

559 Anambah Road, Gosforth, NSW 2320

Soil Landscapes of Central and Eastern NSW

Soil Landscapes of Central and Eastern NSW within the dataset buffer:

Soil Code	Name	Distance	Direction
SI5601ro	Rothbury	0m	On-site
SI5601mb	Moonabung	0m	On-site
SI5601hu	Hunter	305m	North
SI5601st	Stanhope	612m	North West

Soil Landscapes of Central and Eastern NSW: NSW Department of Planning, Industry and Environment
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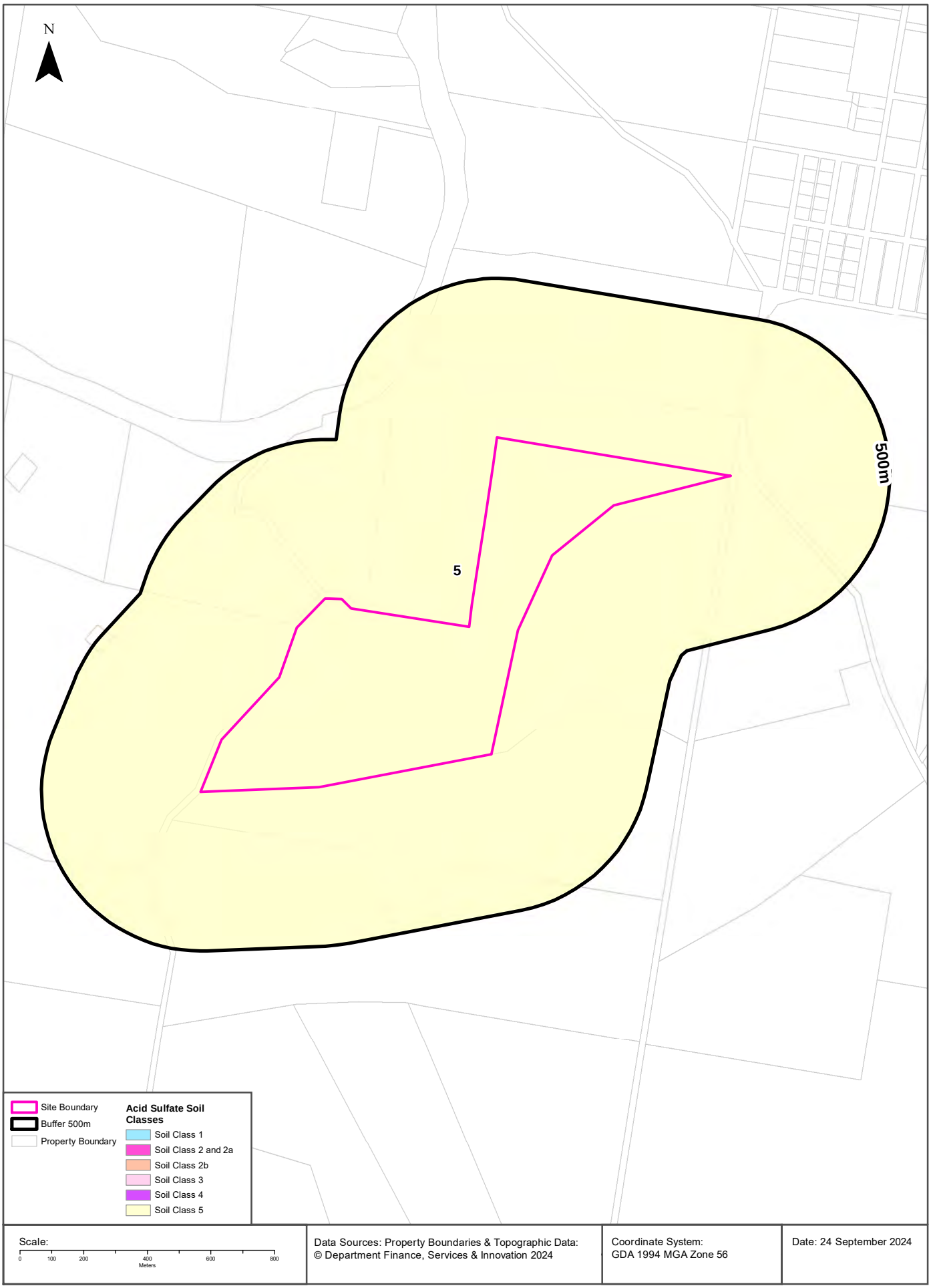
Acid Sulfate Soils

559 Anambah Road, Gosforth, NSW 2320



Acid Sulfate Soils

559 Anambah Road, Gosforth, NSW 2320

Environmental Planning Instrument - Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description	EPI Name
5	Works within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metre AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk	Maitland Local Environmental Plan 2011

If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	EPI Name	Distance	Direction
None				

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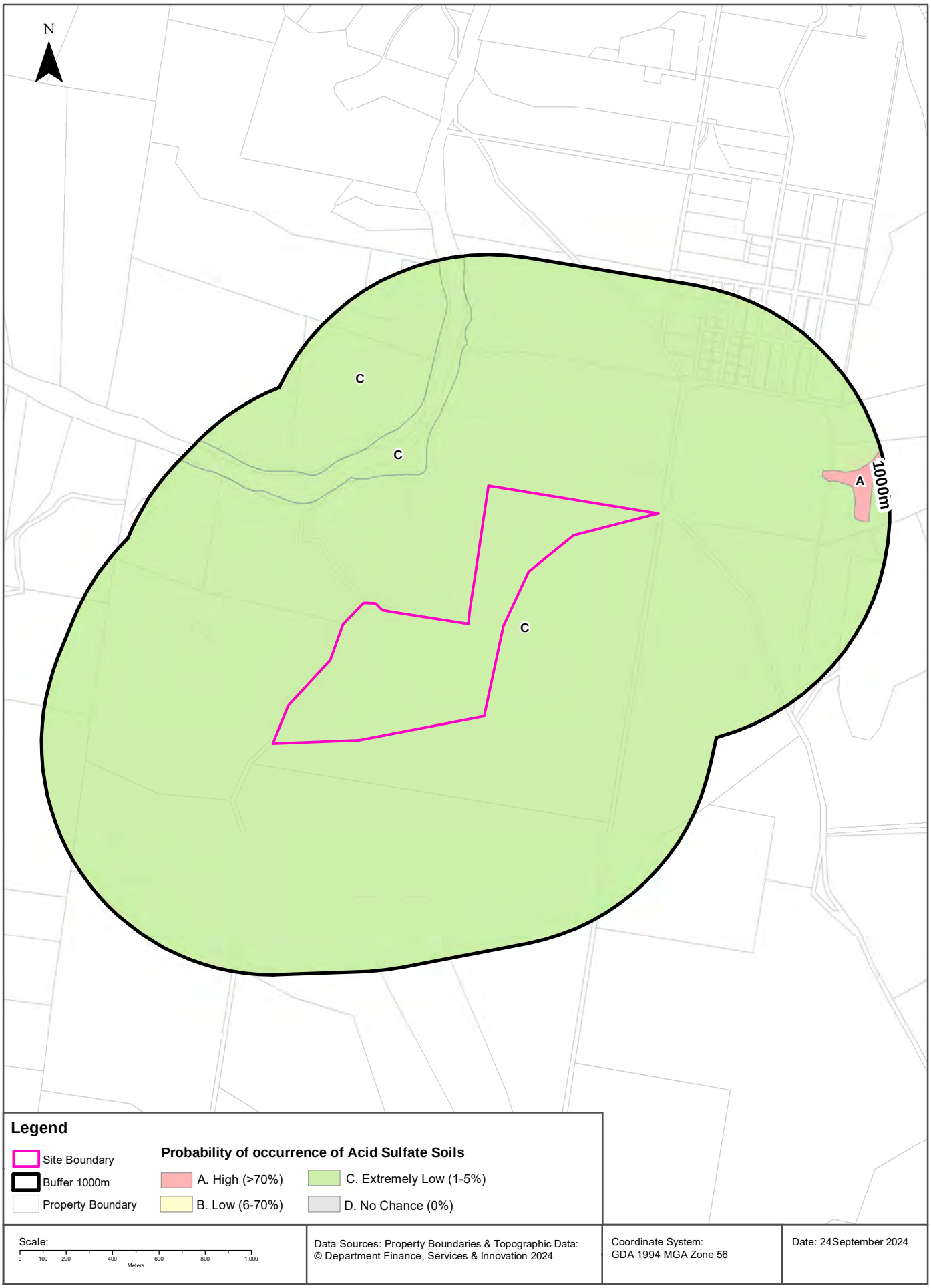
Atlas of Australian Acid Sulfate Soils

559 Anambah Road, Gosforth, NSW 2320



Acid Sulfate Soils

559 Anambah Road, Gosforth, NSW 2320

Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance	Direction
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m	On-site
A	High Probability of occurrence. >70% chance of occurrence.	724m	East

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO
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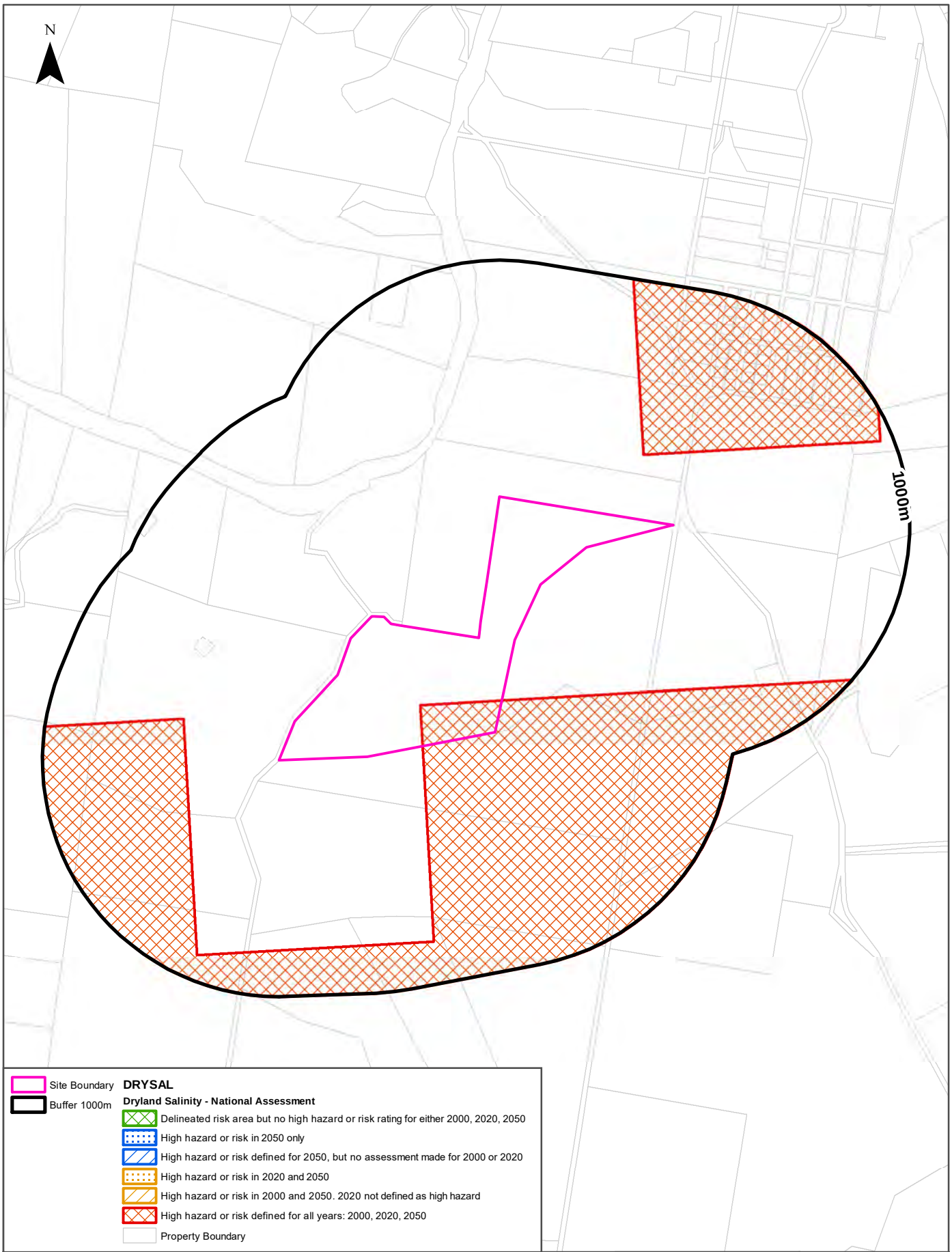
Dryland Salinity

559 Anambah Road, Gosforth, NSW 2320



Scale:
0 100 200 400 600 800 1,000
Meters

Data Sources: Property Boundaries & Topographic Data:
© Department Finance, Services & Innovation 2024

Coordinate System:
GDA 1994 MGA Zone 56

Date: 24 September 2024

Dryland Salinity

559 Anambah Road, Gosforth, NSW 2320

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

Yes

Is there Dryland Salinity - National Assessment data within the dataset buffer?

Yes

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
High hazard or risk	High hazard or risk	High hazard or risk	0m	On-site

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Mining

559 Anambah Road, Gosforth, NSW 2320

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

Mining Subsidence District Data Source: © Land and Property Information (2016)
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Mining & Exploration Titles

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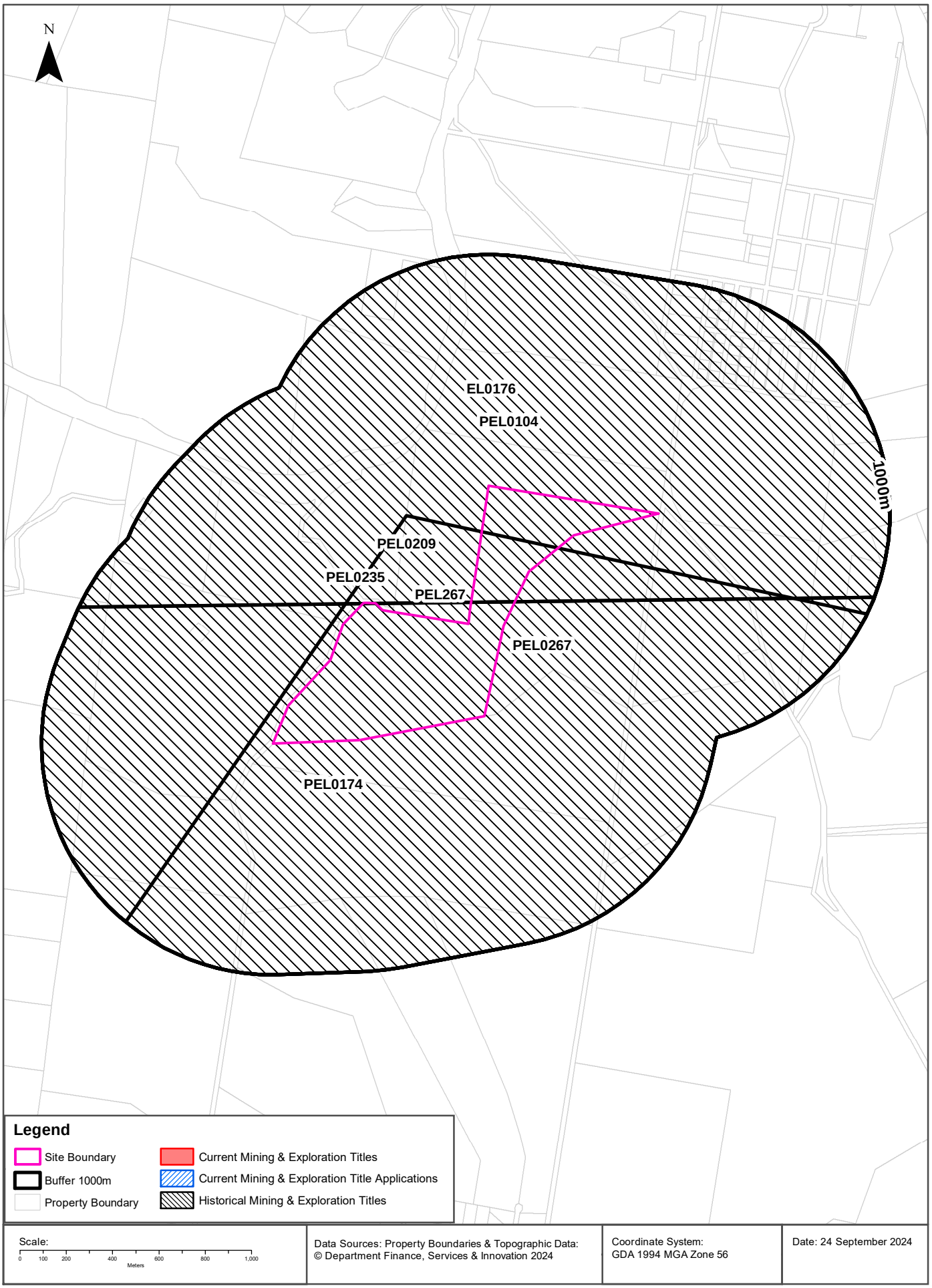

Mining

559 Anambah Road, Gosforth, NSW 2320

Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Grant Date	Expiry Date	Last Renewed	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer								

Current Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

Application Ref	Applicant	Application Date	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer						

Current Mining & Exploration Title Applications Data Source: © State of New South Wales through NSW Department of Industry

Mining

559 Anambah Road, Gosforth, NSW 2320

Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PEL0104	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
EL0176	LEFTWICH, R W	19690501	19700501	MINERALS	Cu Pb Zn Ag	0m	On-site
PEL0174	NSW OIL AND GAS COMPANY NL			PETROLEUM	Petroleum	0m	On-site
PEL267	AGL UPSTREAM INVESTMENTS PTY LIMITED	19930413	19991205	MINERALS		0m	On-site
PEL0235	EASTMET LTD	19810504		PETROLEUM	Petroleum	0m	On-site
PEL0267	SYDNEY OIL CO (NSW) PTY LTD, MANVANE PTY LTD AUSTRALIA NL, BASE RESOURCES LTD, SEAHAWK OIL AUSTRALIA NL, READING & BATES	19850801	20150607	PETROLEUM	Petroleum	0m	On-site
PEL0209	EARTH RESOURCES AUSTRALIA PTY LTD			PETROLEUM	Petroleum	0m	On-site

Historical Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

State Environmental Planning Policy

559 Anambah Road, Gosforth, NSW 2320

State Significant Precincts

What SEPP State Significant Precincts exist within the dataset buffer?

Map Id	Precinct	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
N/A	No records in buffer							

State Environment Planning Policy Data Source: NSW Crown Copyright - Planning & Environment
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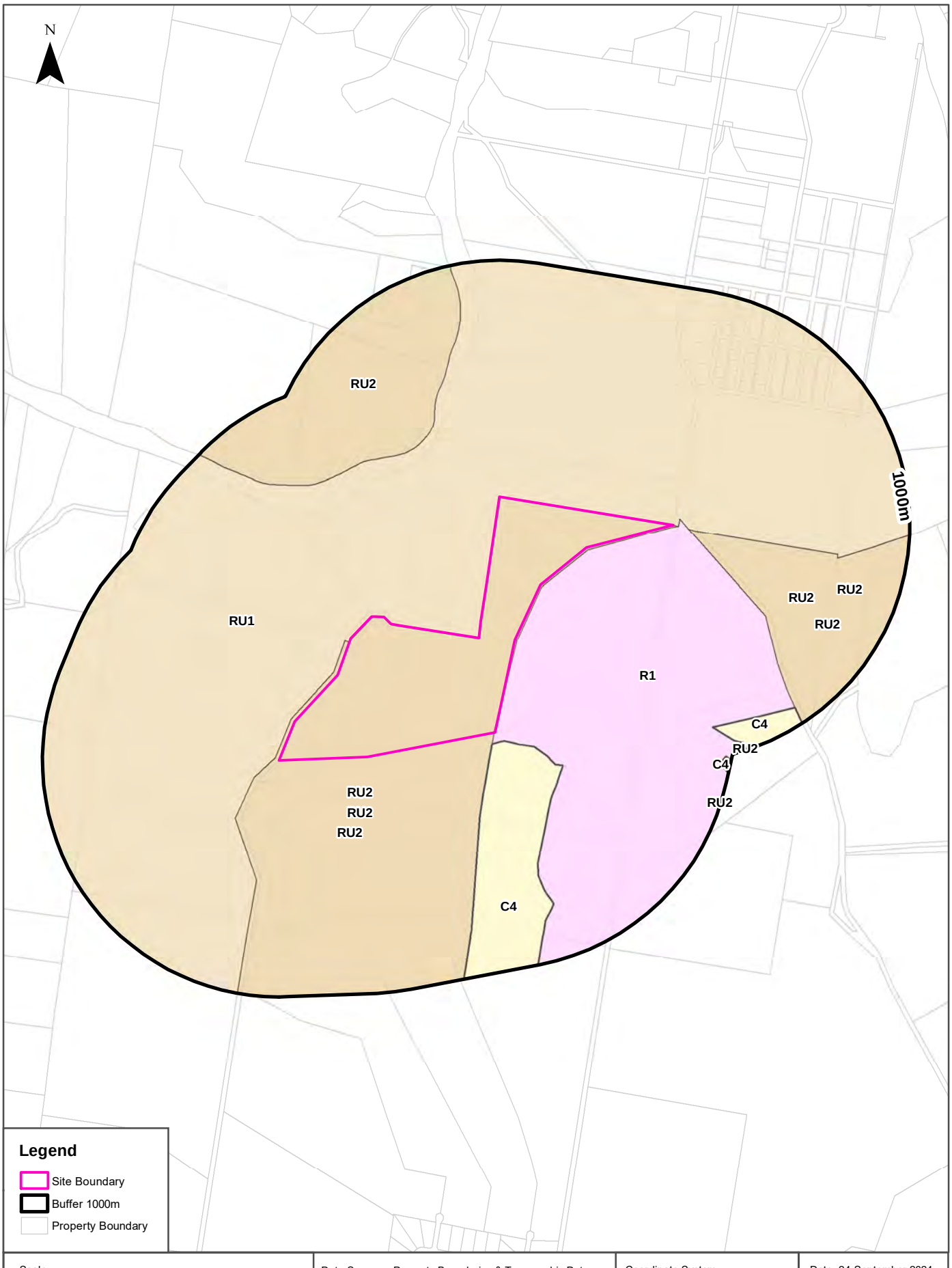
EPI Planning Zones

559 Anambah Road, Gosforth, NSW 2320



Environmental Planning Instrument

559 Anambah Road, Gosforth, NSW 2320

Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RU2	Rural Landscape		Maitland Local Environmental Plan 2011	21/04/2023	26/04/2023	15/12/2023	Map Amendment No 4	0m	On-site
R1	General Residential		Maitland Local Environmental Plan 2011	21/04/2023	26/04/2023	15/12/2023	Map Amendment No 4	0m	On-site
RU1	Primary Production		Maitland Local Environmental Plan 2011	21/04/2023	26/04/2023	15/12/2023	Map Amendment No 4	0m	North
C4	Environmental Living		Maitland Local Environmental Plan 2011	21/04/2023	26/04/2023	15/12/2023	Map Amendment No 4	44m	South
RU2	Rural Landscape		Maitland Local Environmental Plan 2011	21/04/2023	26/04/2023	15/12/2023	Map Amendment No 4	400m	North
C4	Environmental Living		Maitland Local Environmental Plan 2011	21/04/2023	26/04/2023	15/12/2023	Map Amendment No 4	868m	East
C4	Environmental Living		Maitland Local Environmental Plan 2011	21/04/2023	26/04/2023	15/12/2023	Map Amendment No 4	954m	South East

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Heritage

559 Anambah Road, Gosforth, NSW 2320

Commonwealth Heritage List

What are the Commonwealth Heritage List Items located within the dataset buffer?

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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National Heritage List

What are the National Heritage List Items located within the dataset buffer?
Note. Please click on Place Id to activate a hyperlink to online website.

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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State Heritage Register - Curtilages

What are the State Heritage Register Items located within the dataset buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: NSW Crown Copyright - Office of Environment & Heritage
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Environmental Planning Instrument - Heritage

What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
N/A	No records in buffer								

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Natural Hazards - Bush Fire Prone Land

559 Anambah Road, Gosforth, NSW 2320



Natural Hazards

559 Anambah Road, Gosforth, NSW 2320

Bush Fire Prone Land

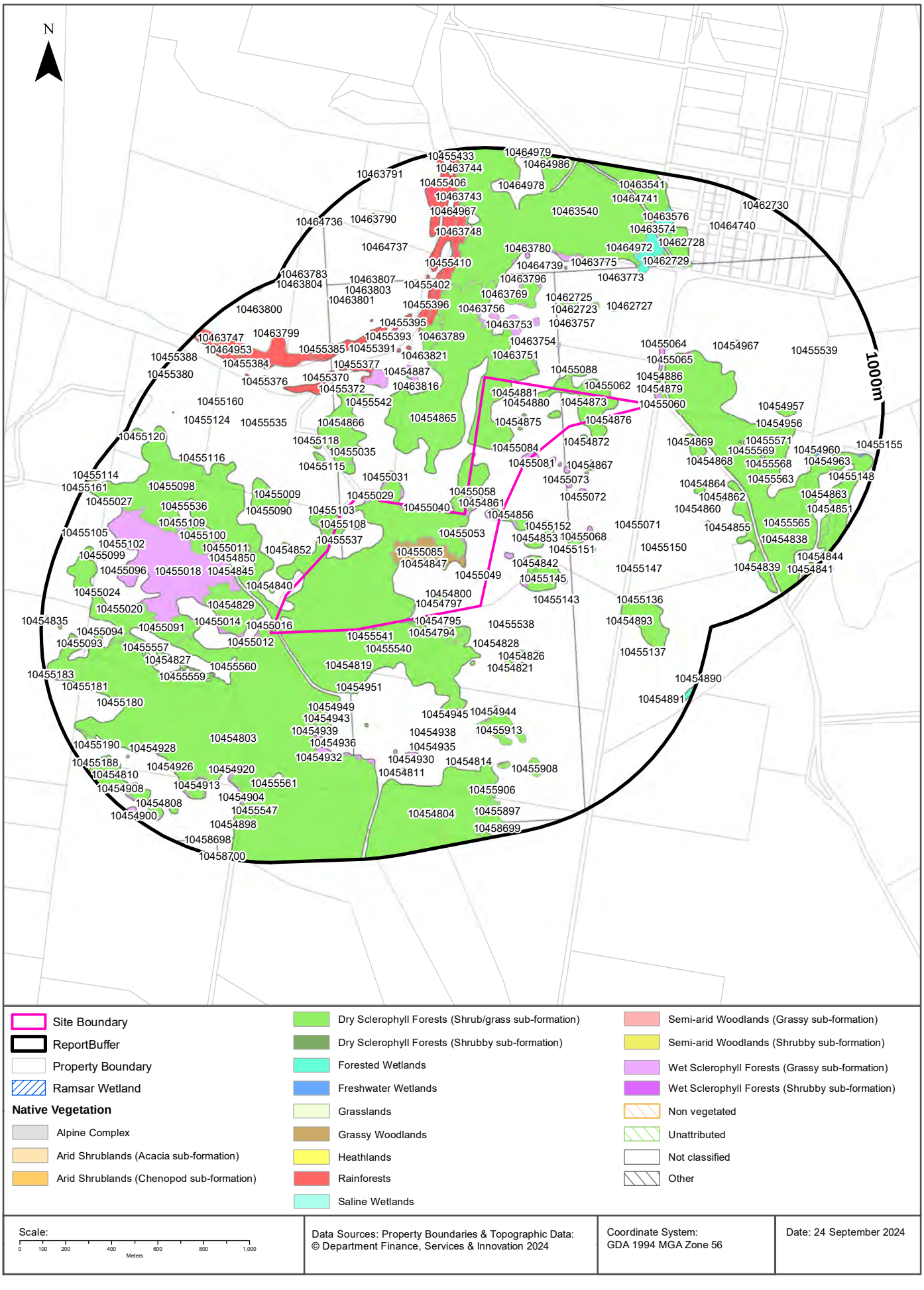
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Category 1	0m	On-site
Vegetation Category 3	0m	On-site
Vegetation Category 2	0m	On-site
Vegetation Buffer	0m	On-site

NSW Bush Fire Prone Land - © NSW Rural Fire Service under Creative Commons 4.0 International Licence

Ecological Constraints - Vegetation & Ramsar Wetlands

559 Anambah Road, Gosforth, NSW 2320



Ecological Constraints

559 Anambah Road, Gosforth, NSW 2320

Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
10454795	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454796	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454797	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454798	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454799	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454800	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454819	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454843	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454847	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454856	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454858	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454859	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454861	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454865	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454873	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454874	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454875	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454877	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454878	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10454880	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
10454881	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10455029	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455038	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455040	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455041	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455049	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455053	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455057	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455058	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455059	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455081	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455083	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455084	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	0m	On-site
10455085	Grassy Woodlands	(Grassy Woodlands) Lower Hunter Red Gum-Paperbark Riverflat Forest	Coastal Valley Grassy Woodlands	0m	On-site
10455086	Grassy Woodlands	(Grassy Woodlands) Lower Hunter Red Gum-Paperbark Riverflat Forest	Coastal Valley Grassy Woodlands	0m	On-site
10455087	Grassy Woodlands	(Grassy Woodlands) Lower Hunter Red Gum-Paperbark Riverflat Forest	Coastal Valley Grassy Woodlands	0m	On-site
10455107	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10455108	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10455110	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	On-site
10455535	Not classified	(Not classified) Not classified	Not classified	0m	On-site
10455537	Not classified	(Not classified) Not classified	Not classified	0m	On-site
10455538	Not classified	(Not classified) Not classified	Not classified	0m	On-site
10455539	Not classified	(Not classified) Not classified	Not classified	0m	On-site
10455544	Not classified	(Not classified) Not classified	Not classified	0m	On-site
10454803	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	South West
10455103	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	0m	West
10455536	Not classified	(Not classified) Not classified	Not classified	0m	South West

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
10455030	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	1m	North West
10455016	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	4m	South West
10455039	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	4m	North East
10454794	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	10m	South
10454876	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	10m	North East
10455541	Not classified	(Not classified) Not classified	Not classified	11m	South West
10454833	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	14m	South
10455043	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	16m	North West
10455042	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	20m	North East
10455031	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	22m	North West
10455061	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	29m	North East
10454879	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	35m	North East
10455088	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	35m	North East
10455060	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	37m	North East
10455062	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	45m	North East
10455545	Not classified	(Not classified) Not classified	Not classified	49m	South West
10454872	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	52m	North East
10455012	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	52m	South West
10455054	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	54m	South East
10455056	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	54m	East
10454829	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	55m	West
10455015	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	55m	South West
10454840	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	56m	West
10455078	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	56m	North East
10455089	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	57m	North East

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
10454838	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	73m	East
10455017	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	83m	South West
10455540	Not classified	(Not classified) Not classified	Not classified	85m	South
10454866	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	95m	North West
10455032	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	98m	North West
10455079	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	98m	North East
10454886	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	100m	North East
10454852	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	109m	West
10455013	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	109m	South West
10455063	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	109m	North East
10463751	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	112m	North East
10454853	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	125m	East
10455076	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	125m	North East
10455033	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	131m	North West
10455101	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	132m	West
10455055	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	136m	East
10455052	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	137m	East
10455047	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	145m	South East
10454842	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	146m	East
10455145	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	146m	South East
10455064	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	151m	North East
10455050	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	159m	South East
10455051	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	163m	South East
10455073	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	165m	East
10455044	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	166m	South East

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10455082	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	167m	East
10455034	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	168m	North West
10454828	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	169m	South East
10454867	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	169m	East
10455080	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	171m	East
10463753	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	171m	North
10455014	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	172m	South West
10455035	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	172m	North West
10455036	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	174m	North West
10463752	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	177m	North East
10455077	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	183m	East
10455037	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	184m	North West
10455152	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	185m	East
10455560	Not classified	(Not classified) Not classified	Not classified	186m	South West
10463754	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	187m	North East
10455115	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	188m	North West
10455065	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	190m	North East
10463755	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	191m	North
10454869	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	194m	East
10455018	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	194m	West
10455075	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	198m	East
10455046	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	204m	South East
10455074	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	209m	East
10454870	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	211m	North West

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10463756	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	211m	North
10455098	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	219m	West
10463789	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	222m	North
10455090	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	228m	West
10454824	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	231m	South
10455010	Rainforests	(Rainforests) Hunter Valley Whalebone Dry Rainforest	Dry Rainforests	233m	West
10454854	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	234m	West
10454951	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	234m	South West
10455072	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	242m	East
10463818	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	243m	North
10455573	Not classified	(Not classified) Not classified	Not classified	244m	North East
10463819	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	244m	North
10455546	Not classified	(Not classified) Not classified	Not classified	250m	West
10454845	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	252m	West
10463758	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	252m	North East
10463759	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	252m	North
10455066	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	253m	North East
10454846	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	254m	East
10454826	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	255m	South East
10455914	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	255m	South East
10455067	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	256m	North East
10454821	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	261m	South East
10454871	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	264m	North West
10455117	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	268m	North West
10455009	Rainforests	(Rainforests) Hunter Valley Whalebone Dry Rainforest	Dry Rainforests	273m	West
10455151	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	274m	East

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10463816	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	274m	North
10454884	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	275m	North
10455118	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	275m	North West
10463821	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	275m	North
10454848	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	279m	West
10463757	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	280m	North East
10454850	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	283m	West
10455045	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	295m	South East
10455011	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	297m	West
10455143	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	297m	South East
10454849	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	303m	West
10455915	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	305m	South East
10454823	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	306m	South East
10463764	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	306m	North
10455091	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	308m	West
10455554	Not classified	(Not classified) Not classified	Not classified	310m	South West
10455122	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	315m	North West
10454887	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	316m	North
10455019	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	318m	West
10455070	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	322m	East
10463766	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	322m	North
10455048	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	323m	South East
10455068	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	323m	East
10463748	Rainforests	(Rainforests) Hunter Valley Whalebone Dry Rainforest	Dry Rainforests	323m	North
10455558	Not classified	(Not classified) Not classified	Not classified	330m	South West

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
10463796	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	330m	North
10454868	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	331m	East
10454949	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	331m	South West
10463762	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	331m	North
10463768	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	336m	North
10463763	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	338m	North East
10454943	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	341m	South West
10462722	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	343m	North East
10455396	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	344m	North
10455025	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	346m	West
10455390	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	346m	North
10462723	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	348m	North East
10463760	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	351m	North East
10463761	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	357m	North East
10455549	Not classified	(Not classified) Not classified	Not classified	358m	South West
10463769	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	358m	North
10455550	Not classified	(Not classified) Not classified	Not classified	367m	South West
10463767	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	367m	North East
10463569	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	369m	North East
10463765	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	370m	North East
10455100	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	371m	West
10455559	Not classified	(Not classified) Not classified	Not classified	372m	South West
10462724	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	373m	North East
10454820	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	375m	South West
10455555	Not classified	(Not classified) Not classified	Not classified	379m	South West
10455389	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	384m	North

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
10462727	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	385m	North East
10463770	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	385m	North
10454822	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	386m	South West
10463540	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	387m	North
10463570	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	389m	North East
10454950	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	391m	South
10463571	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	391m	North East
10454864	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	395m	East
10454946	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	395m	South
10455542	Not classified	(Not classified) Not classified	Not classified	396m	North West
10455575	Not classified	(Not classified) Not classified	Not classified	403m	East
10462725	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	403m	North East
10463771	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	404m	North East
10454939	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	408m	South West
10454818	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	412m	South
10455395	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	414m	North
10455149	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	415m	East
10455562	Not classified	(Not classified) Not classified	Not classified	415m	South West
10454945	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	417m	South
10463817	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	417m	North
10463572	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	420m	North East
10463815	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	420m	North East
10454967	Freshwater Wetlands	(Freshwater Wetlands) Southern Lower Floodplain Freshwater Wetland	Coastal Freshwater Lagoons	421m	North East
10455566	Not classified	(Not classified) Not classified	Not classified	422m	East
10463573	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	423m	North East
10463772	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	424m	North East
10463822	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	428m	North East

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10454827	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	433m	South West
10454948	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	440m	South
10455069	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	441m	East
10455153	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	441m	East
10454885	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	443m	North
10455913	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	445m	South
10454932	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	448m	South West
10455393	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	448m	North
10464739	Not classified	(Not classified) Not classified	Not classified	454m	North East
10455372	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	455m	North West
10463750	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	455m	North
10462750	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	456m	North East
10454944	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	457m	South
10455373	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	461m	North West
10455569	Not classified	(Not classified) Not classified	Not classified	465m	East
10454839	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	467m	East
10454882	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	469m	North West
10455402	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	469m	North
10455370	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	470m	North West
10454947	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	475m	South
10454883	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	476m	North West
10454860	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	477m	East
10455385	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	477m	North West
10454862	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	480m	East
10455071	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	480m	East
10455377	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	481m	North West
10464737	Not classified	(Not classified) Not classified	Not classified	481m	North

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10454936	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	484m	South West
10454942	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	485m	South
10455391	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	492m	North
10454941	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	497m	South
10454938	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	498m	South
10454940	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	499m	South
10463820	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	500m	North
10463776	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	506m	North
10455406	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	513m	North
10455409	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	513m	North
10454825	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	514m	South West
10455570	Not classified	(Not classified) Not classified	Not classified	516m	East
10455410	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	519m	North
10463774	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	521m	North East
10455571	Not classified	(Not classified) Not classified	Not classified	522m	East
10463773	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	523m	North East
10454956	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	527m	East
10462726	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	530m	North East
10454937	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	531m	South
10454957	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	531m	East
10455109	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	531m	West
10463778	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	532m	North
10454931	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	535m	South
10463777	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	539m	North
10463779	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	540m	North
10455557	Not classified	(Not classified) Not classified	Not classified	543m	South West

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10454933	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	546m	South
10455092	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	546m	West
10455399	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	548m	North
10454935	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	552m	South
10463574	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	555m	North East
10463775	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	555m	North East
10455568	Not classified	(Not classified) Not classified	Not classified	556m	East
10454857	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	558m	East
10463780	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	565m	North
10454929	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	568m	South
10454930	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	569m	South
10454934	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	577m	South
10464742	Not classified	(Not classified) Not classified	Not classified	580m	North East
10463781	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	586m	North
10464743	Not classified	(Not classified) Not classified	Not classified	592m	North East
10455150	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	600m	East
10463747	Rainforests	(Rainforests) Hunter Valley Whalebone Dry Rainforest	Dry Rainforests	600m	North West
10455136	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	601m	South East
10462729	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	602m	North East
10455563	Not classified	(Not classified) Not classified	Not classified	603m	East
10454895	Forested Wetlands	(Forested Wetlands) Coastal Valleys Riparian Forest	Coastal Floodplain Wetlands	604m	South East
10454815	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	605m	South
10454855	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	606m	East
10454920	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	610m	South West
10455561	Not classified	(Not classified) Not classified	Not classified	611m	South West
10462728	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	613m	North East
10454894	Forested Wetlands	(Forested Wetlands) Coastal Valleys Riparian Forest	Coastal Floodplain Wetlands	614m	South East

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10464741	Not classified	(Not classified) Not classified	Not classified	617m	North East
10455376	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	624m	North West
10454925	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	626m	South West
10455116	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	629m	West
10454893	Forested Wetlands	(Forested Wetlands) Coastal Valleys Riparian Forest	Coastal Floodplain Wetlands	630m	South East
10463803	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	630m	North
10455147	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	632m	East
10454813	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	633m	South
10454811	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	634m	South
10455020	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	634m	West
10464740	Not classified	(Not classified) Not classified	Not classified	636m	North East
10463807	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	641m	North
10454814	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	646m	South
10463802	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	646m	North
10454892	Forested Wetlands	(Forested Wetlands) Coastal Valleys Riparian Forest	Coastal Floodplain Wetlands	652m	South East
10464972	Not classified	(Not classified) Not classified	Not classified	653m	North East
10463801	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	661m	North
10454804	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	663m	South
10464985	Not classified	(Not classified) Not classified	Not classified	665m	North
10454915	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	667m	South West
10454923	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	668m	South West
10454918	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	671m	South West
10463809	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	673m	North
10455383	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	675m	North West
10455096	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	682m	West
10454904	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	683m	South West
10455097	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	684m	West
10454812	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	689m	South

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
10455910	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	691m	South
10454922	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	692m	South West
10454928	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	696m	South West
10454921	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	698m	South West
10455379	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	698m	North West
10454916	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	699m	South West
10455908	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	702m	South
10455160	Freshwater Wetlands	(Freshwater Wetlands) Southern Lower Floodplain Freshwater Wetland	Coastal Freshwater Lagoons	704m	North West
10463575	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	707m	North East
10455124	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	711m	North West
10455180	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	711m	South West
10455368	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	713m	North West
10454926	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	714m	South West
10454927	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	714m	South West
10464967	Not classified	(Not classified) Not classified	Not classified	716m	North
10455159	Freshwater Wetlands	(Freshwater Wetlands) Southern Lower Floodplain Freshwater Wetland	Coastal Freshwater Lagoons	718m	North West
10454919	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	719m	South West
10455021	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	720m	West
10454817	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	722m	South West
10454960	Freshwater Wetlands	(Freshwater Wetlands) Southern Lower Floodplain Freshwater Wetland	Coastal Freshwater Lagoons	724m	East
10455022	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	725m	West
10455384	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	727m	North West
10454913	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	729m	South West
10455023	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	729m	West
10455137	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	730m	South East
10455369	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	731m	North West
10455909	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	734m	South

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10455094	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	735m	West
10454830	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	736m	West
10454914	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	737m	South West
10455024	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	737m	West
10455102	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	740m	West
10463576	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	740m	North East
10464978	Not classified	(Not classified) Not classified	Not classified	741m	North
10454910	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	742m	South West
10454924	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	743m	South West
10454917	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	757m	South West
10455173	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	758m	West
10455907	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	759m	South
10455565	Not classified	(Not classified) Not classified	Not classified	761m	East
10455547	Not classified	(Not classified) Not classified	Not classified	764m	South West
10463743	Rainforests	(Rainforests) Hunter Valley Whalebone Dry Rainforest	Dry Rainforests	769m	North
10454911	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	771m	South West
10454961	Freshwater Wetlands	(Freshwater Wetlands) Southern Lower Floodplain Freshwater Wetland	Coastal Freshwater Lagoons	771m	East
10454831	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	774m	West
10463541	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	774m	North East
10463799	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	774m	North West
10455906	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	777m	South
10454962	Freshwater Wetlands	(Freshwater Wetlands) Southern Lower Floodplain Freshwater Wetland	Coastal Freshwater Lagoons	778m	East
10455099	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	785m	West
10464966	Not classified	(Not classified) Not classified	Not classified	787m	North
10454963	Freshwater Wetlands	(Freshwater Wetlands) Southern Lower Floodplain Freshwater Wetland	Coastal Freshwater Lagoons	788m	East
10454909	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	793m	South West
10455148	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	797m	East

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10455905	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	808m	South
10454901	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	810m	South West
10455904	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	817m	South
10454816	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	818m	South West
10455181	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	818m	South West
10454898	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	821m	South West
10463790	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	822m	North
10455897	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	824m	South
10454863	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	827m	East
10455093	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	833m	West
10454966	Freshwater Wetlands	(Freshwater Wetlands) Southern Lower Floodplain Freshwater Wetland	Coastal Freshwater Lagoons	835m	East
10454906	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	844m	South West
10464953	Not classified	(Not classified) Not classified	Not classified	847m	North West
10454809	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	850m	South West
10455125	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	851m	North West
10454851	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	853m	East
10454810	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	864m	South West
10455027	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	867m	West
10463804	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	868m	North West
10454891	Forested Wetlands	(Forested Wetlands) Coastal Valleys Riparian Forest	Coastal Floodplain Wetlands	870m	South East
10458699	Not classified	(Not classified) Not classified	Not classified	875m	South
10454808	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	876m	South West
10454907	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	876m	South West
10454905	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	880m	South West
10454965	Freshwater Wetlands	(Freshwater Wetlands) Southern Lower Floodplain Freshwater Wetland	Coastal Freshwater Lagoons	889m	East
10455190	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	890m	South West

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10463783	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	892m	North West
10463744	Rainforests	(Rainforests) Hunter Valley Whalebone Dry Rainforest	Dry Rainforests	894m	North
10455028	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	898m	West
10455105	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	898m	West
10455026	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	907m	West
10458700	Not classified	(Not classified) Not classified	Not classified	907m	South West
10463800	Forested Wetlands	(Forested Wetlands) Lower North Riverflat Eucalypt-Paperbark Forest	Coastal Floodplain Wetlands	908m	North West
10455095	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	911m	West
10463788	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	911m	North
10455120	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	923m	West
10458698	Not classified	(Not classified) Not classified	Not classified	928m	South West
10454899	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	930m	South West
10455433	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	931m	North
10454908	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	932m	South West
10455188	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	938m	South West
10455182	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	945m	West
10455380	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	952m	North West
10454835	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	953m	West
10454903	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	956m	South West
10464986	Not classified	(Not classified) Not classified	Not classified	956m	North
10455114	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	960m	West
10454890	Forested Wetlands	(Forested Wetlands) Coastal Valleys Riparian Forest	Coastal Floodplain Wetlands	962m	South East
10454900	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	963m	South West
10463745	Rainforests	(Rainforests) Hunter Valley Whalebone Dry Rainforest	Dry Rainforests	964m	North
10454841	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	965m	East
10464736	Not classified	(Not classified) Not classified	Not classified	965m	North
10454844	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Lower North Foothills Ironbark-Box-Gum Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	974m	East

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
10455183	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	975m	West
10454964	Freshwater Wetlands	(Freshwater Wetlands) Southern Lower Floodplain Freshwater Wetland	Coastal Freshwater Lagoons	977m	East
10464987	Not classified	(Not classified) Not classified	Not classified	978m	North
10455121	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	989m	West
10463782	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	989m	North West
10455164	Wet Sclerophyll Forests (Grassy sub-formation)	(Wet Sclerophyll Forests (Grassy sub-formation)) Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest	Northern Hinterland Wet Sclerophyll Forests	990m	West
10455388	Rainforests	(Rainforests) Lower Hunter Tuckeroo Riparian Rainforest	Dry Rainforests	990m	North West
10455161	Rainforests	(Rainforests) Hunter Valley Whalebone Dry Rainforest	Dry Rainforests	991m	West
10463791	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	991m	North
10455155	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	995m	East
10462730	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	998m	North East
10464979	Not classified	(Not classified) Not classified	Not classified	998m	North
10455187	Dry Sclerophyll Forests (Shrub/grass sub-formation)	(Dry Sclerophyll Forests (Shrub/grass sub-formation)) Hunter Coast Foothills Spotted Gum-Ironbark Grassy Forest	Hunter-Macleay Dry Sclerophyll Forests	999m	South West
10464982	Not classified	(Not classified) Not classified	Not classified	1000m	North

Native Vegetation Type Map : NSW Department of Planning and Environment 2022
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Ecological Constraints

559 Anambah Road, Gosforth, NSW 2320

Ramsar Wetlands

What Ramsar Wetland areas exist within the dataset buffer?

Map ID	Ramsar Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

Ramsar Wetlands Data Source: © Commonwealth of Australia - Department of Agriculture, Water and the Environment

Ecological Constraints

559 Anambah Road, Gosforth, NSW 2320

Collaborative Australian Protected Areas Database - Terrestrial

Protected areas in terrestrial environments identified by the CAPAD within the dataset buffer:

Map ID	Area Name	Area Details	Management Category	Authority	Jurisdiction	Dist	Dir
N/A	No records in buffer						

Collaborative Australian Protected Areas Database - Marine

Protected areas in marine environments identified by the CAPAD within the dataset buffer:

Map ID	Area Name	Area Details	Management Category	Authority	Jurisdiction	Dist	Dir
N/A	No records in buffer						

Source: Collaborative Australian Protected Areas Database (CAPAD) 2022
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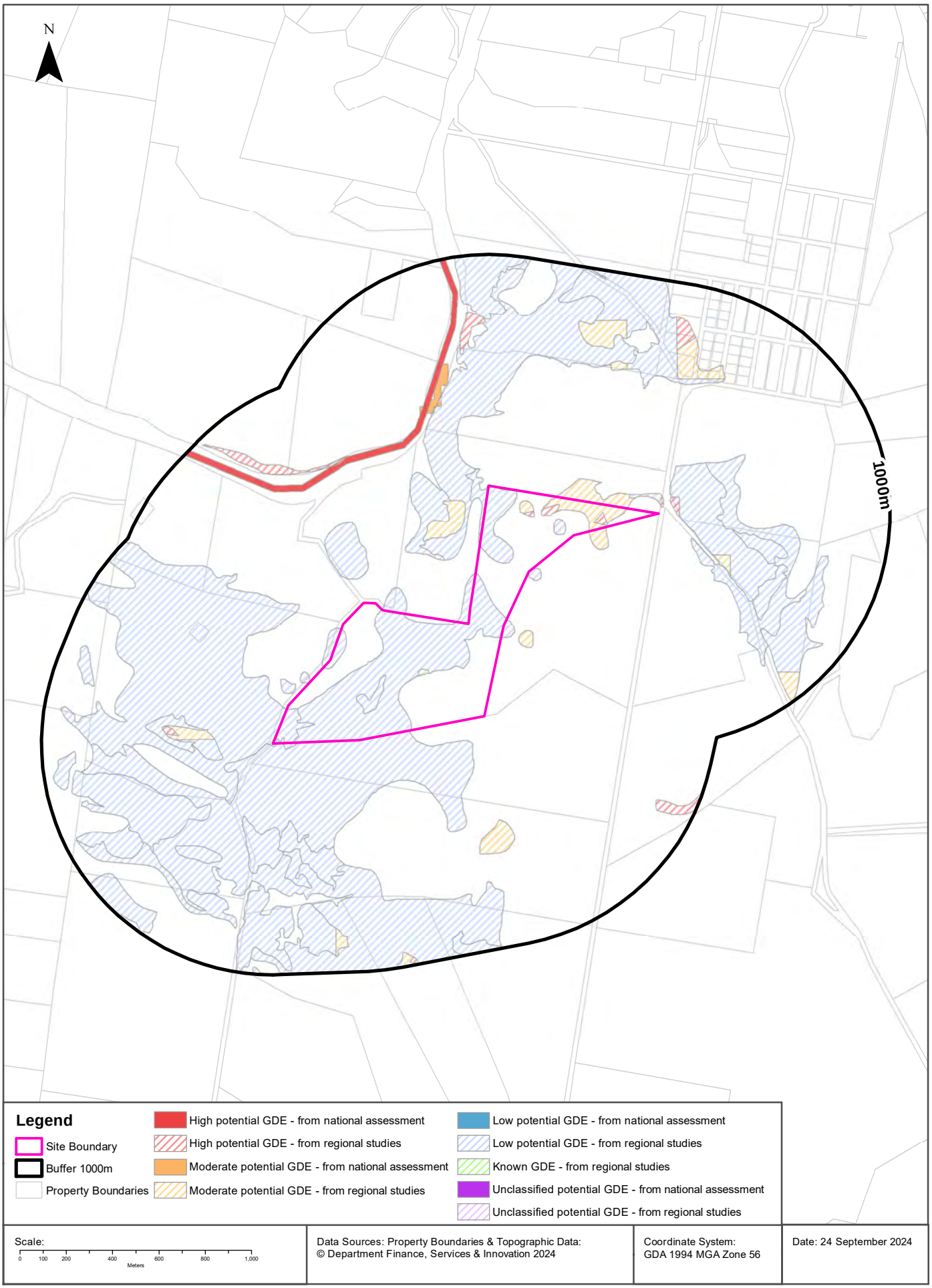
Ecological Constraints - Groundwater Dependent Ecosystems Atlas

559 Anambah Road, Gosforth, NSW 2320



Ecological Constraints

559 Anambah Road, Gosforth, NSW 2320

Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	Low potential GDE - from regional studies	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Terrestrial	Moderate potential GDE - from regional studies	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Terrestrial	High potential GDE - from regional studies	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Aquatic	High potential GDE - from national assessment	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	River		378m	North
Aquatic	Moderate potential GDE - from national assessment	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Wetland		394m	North

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology
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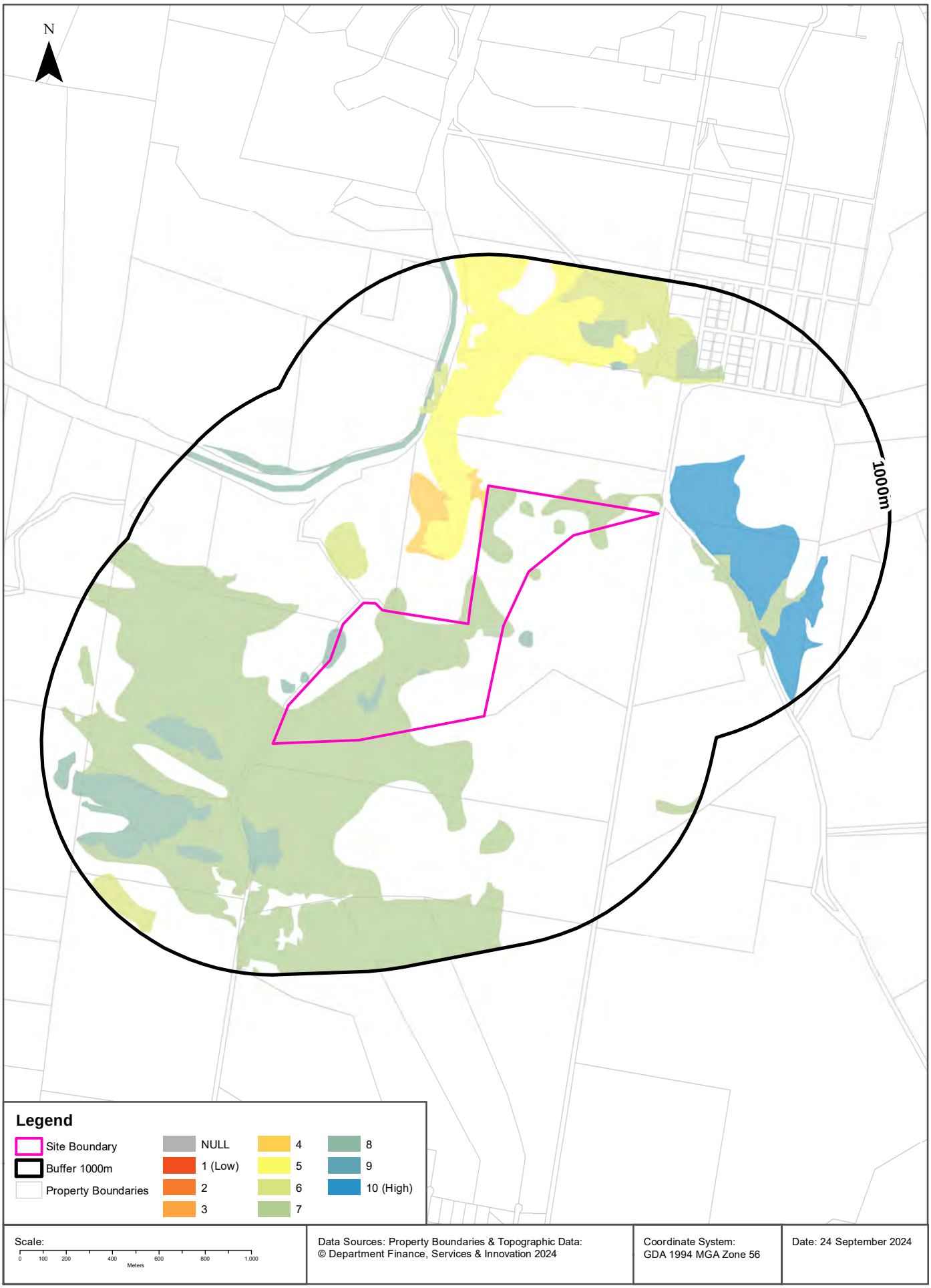
Ecological Constraints - Inflow Dependent Ecosystems Likelihood

559 Anambah Road, Gosforth, NSW 2320



Ecological Constraints

559 Anambah Road, Gosforth, NSW 2320

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	7	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Terrestrial	8	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Terrestrial	4	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		1m	North
Terrestrial	5	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		65m	North
Terrestrial	10	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		68m	North East
Terrestrial	6	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		109m	North West
Aquatic	8	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	River		378m	North
Aquatic	6	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Wetland		394m	North

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology
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Ecological Constraints

559 Anambah Road, Gosforth, NSW 2320

NSW BioNet Species Sightings

Species sightings from the NSW BioNet Repository that have either a state or federal conservation status, or a sensitivity status, and are within 10 km of the site:
Note: This data does not include NSW Category 1 sensitive species.

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Heleioporus australiacus	Giant Burrowing Frog	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Not Sensitive	Endangered	Vulnerable	
Animalia	Amphibia	Litoria littlejohni	Littlejohn's Tree Frog	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Category 2	Critically Endangered	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna carneipes	Flesh-footed Shearwater	Not Sensitive	Vulnerable	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna pacifica	Wedge-tailed Shearwater	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Not Sensitive	Endangered	Endangered	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Category 3	Endangered	Endangered	
Animalia	Aves	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Category 2	Vulnerable	Vulnerable	
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Circus assimilis	Spotted Harrier	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Aves	Cuculus optatus	Oriental Cuckoo	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Not Sensitive	Endangered	Not Listed	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;JAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Not Sensitive	Vulnerable	Not Listed	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Sensitive	Vulnerable	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Sensitive	Not Listed	Not Listed	JAMBA
Animalia	Aves	Lathamus discolor	Swift Parrot	Not Sensitive	Endangered	Critically Endangered	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Oxyura australis	Blue-billed Duck	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Category 3	Vulnerable	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ptilinopus magnificus	Wompoo Fruit-Dove	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Not Sensitive	Vulnerable	Not Listed	
Animalia	Aves	Thinornis cucullatus cucullatus	Eastern Hooded Dotterel	Not Sensitive	Critically Endangered	Vulnerable	
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Sensitive	Not Listed	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Category 3	Vulnerable	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Not Sensitive	Vulnerable	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Nyctophilus bifax	Eastern Long-eared Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Phascogale tapoatafa	Brush-tailed Phascogale	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Not Sensitive	Endangered	Endangered	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Not Sensitive	Vulnerable	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Mammalia	Vespadelus troughtoni	Eastern Cave Bat	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	Aspidites ramsayi	Woma	Not Sensitive	Vulnerable	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Not Sensitive	Endangered	Endangered	

Kingdom	Class	Scientific	Common	Sensitivity Class	State Conservation Status	Federal Conservation Status	Migratory Species Agreements
Animalia	Reptilia	Chelonia mydas	Green Turtle	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Not Sensitive	Endangered	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Category 3	Vulnerable	Not Listed	
Plantae	Flora	Cymbidium canaliculatum	Tiger Orchid	Category 2	Endangered Population	Not Listed	
Plantae	Flora	Eucalyptus camaldulensis	River Red Gum	Not Sensitive	Endangered Population	Not Listed	
Plantae	Flora	Eucalyptus glaucina	Slaty Red Gum	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Eucalyptus parramattensis subsp. decadens		Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Grevillea parviflora subsp. parviflora	Small-flower Grevillea	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Maundia triglochinoides		Not Sensitive	Vulnerable	Not Listed	
Plantae	Flora	Pterostylis gibbosa	Illawarra Greenhood	Category 2	Endangered	Endangered	
Plantae	Flora	Rhodomyrtus psidioides	Native Guava	Not Sensitive	Critically Endangered	Critically Endangered	
Plantae	Flora	Rutidosis heterogama	Heath Wrinklewort	Not Sensitive	Vulnerable	Vulnerable	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Not Sensitive	Endangered	Vulnerable	

Source: NSW BioNet Species Sightings

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Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a code is given under the field heading “LC” or “LocConf”. These codes lookup to the following location confidences:

LC Code	Location Confidence
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced to an approximate or general area
Road Match	Georeferenced to a road or rail corridor
Road Intersection	Georeferenced to a road intersection
Buffered Point	A point feature buffered to x metres
Adjacent Match	Land adjacent to a georeferenced feature
Network of Features	Georeferenced to a network of features
Suburb Match	Georeferenced to a suburb boundary
As Supplied	Spatial data supplied by provider

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Appendix E

HISTORCAL TITLE SEARCH

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Report

Re: - 559 Anambah Road, Gosforth, NSW 2320.

Description: - Lot 177 D.P. 874171 & Lot 55 D.P. 874170

As regards Lot 177 D.P. 874171.

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
	As regards the part tinted yellow on the attached Cadastral Records Enquiry Report	
03.12.1909 (1909 to 1944)	William Hooke Mackay (Grazier) John Julian Augustus Mackay (Grazier) Francis Keith Mackay (Grazier) (Adelaide Anne Mackay – Life Tenant died in 1922)	Book 896 No. 918 Now Volume 5364 Folio 194
21.07.1944 (1944 to 1950)	Mollie Jean Mackay (Widow) Now Mollie Jean Davies (Married Woman)	Volume 5364 Folio 194 Now Volume 5447 Folio 3
	As regards the part tinted green on the attached Cadastral Records Enquiry Report	
22.12.1909 (1909 to 1942)	Adelaide Anne Mackay (Married Woman) William Hooke Mackay (Grazier)	Volume 271 Folio 183
05.08.1942 (1942 to 1942)	William Hooke Mackay (Grazier)	Volume 271 Folio 183
05.08.1942 (1942 to 1944)	William Hooke Mackay (Grazier) John Julian Augustus Mackay (Grazier) Francis Keith Mackay (Grazier)	Volume 271 Folio 183 Now Volume 5364 Folio 194
21.07.1944 (1944 to 1950)	Mollie Jean Mackay (Widow) Now Mollie Jean Davies (Married Woman)	Volume 5364 Folio 194 Now Volume 5447 Folio 3
	Continued as regards the whole of Lot 177 D.P. 874171	
31.03.1950 (1950 to 1965)	John Blackwood Crothers (Grazier)	Volume 5447 Folio 3 Now Volume 6144 Folio 4
31.03.1965 (1965 to 1998)	Percy Clifford Bird (Company Director)	Volume 6144 Folio 4 Now 177/874171
06.08.1998 (1998 to date)	# Rodney David Bird	177/874171

 # Denotes current registered proprietor

Leases: - NIL

Easements: -

- 19.02.1973 (N 66519) Right of Carriageway 15.24 wide.

ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

As regards Lot 55 D.P. 874170.

Date of Acquisition and term held	Registered Proprietor(s) & Occupations where available	Reference to Title at Acquisition and sale
22.12.1909 (1909 to 1942)	Adelaide Anne Mackay (Married Woman) William Hooke Mackay (Grazier)	Volume 185 Folios 153 & 154
05.08.1942 (1942 to 1942)	William Hooke Mackay (Grazier)	Volume 185 Folios 153 & 154
05.08.1942 (1942 to 1944)	William Hooke Mackay (Grazier) John Julian Augustus Mackay (Grazier) Francis Keith Mackay (Grazier)	Volume 185 Folios 153 & 154
21.07.1944 (1944 to 1950)	Mollie Jean Mackay (Widow) Now Mollie Jean Davies (Married Woman)	Volume 185 Folios 153 & 154 Now Volume 5447 Folio 3
31.03.1950 (1950 to 1965)	John Blackwood Crothers (Grazier)	Volume 5447 Folio 3 Now Volume 6144 Folio 4
31.03.1965 (1965 to 1998)	Percy Clifford Bird (Company Director)	Volume 6144 Folio 4 Now 55/874170
06.08.1998 (1998 to date)	# Rodney David Bird	55/874170

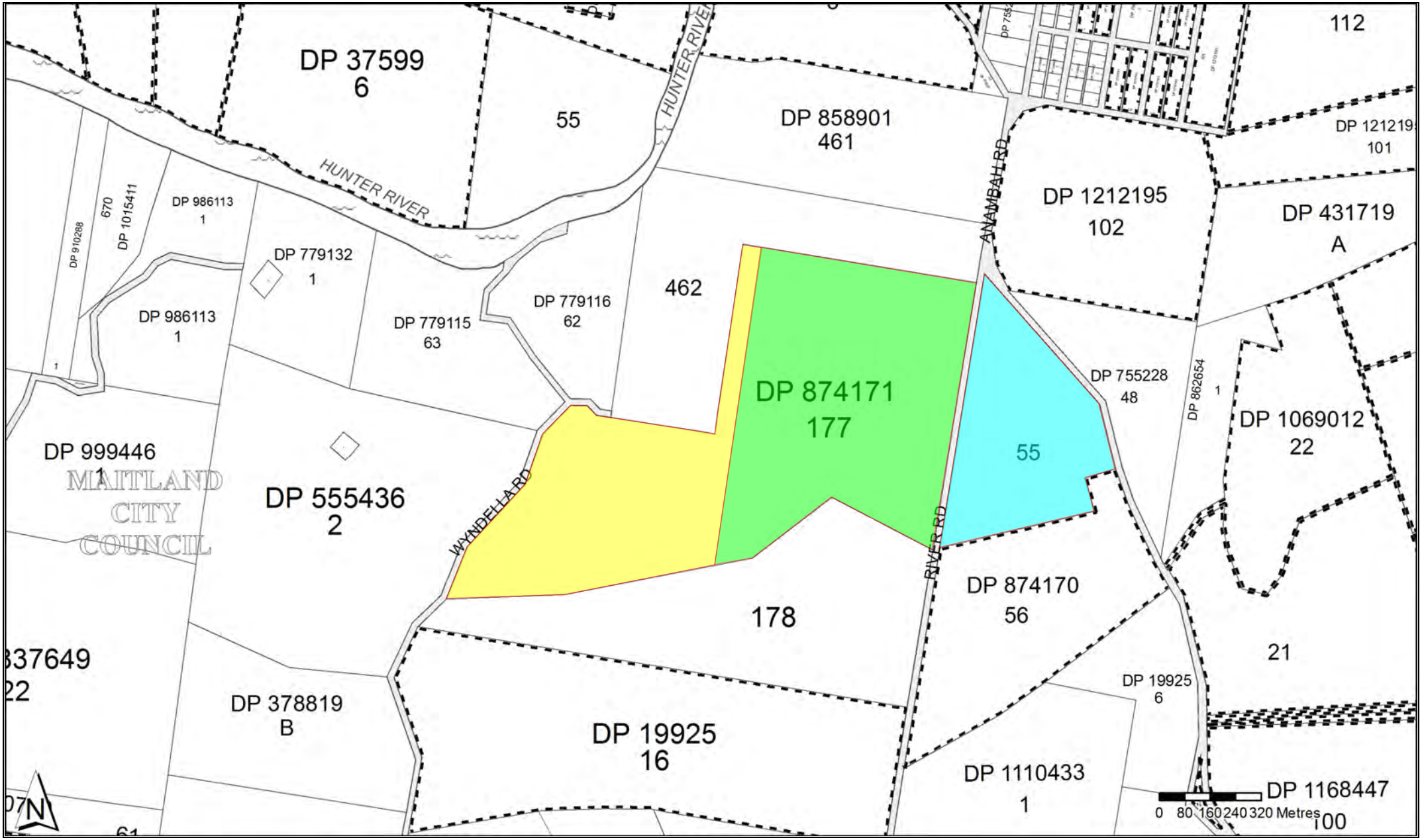
 # Denotes current registered proprietor

Easements & Leases: - NIL

Yours Sincerely
Mark Groll
27 September 2024

Cadastral Records Enquiry Report : Lot 177 DP 874171

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



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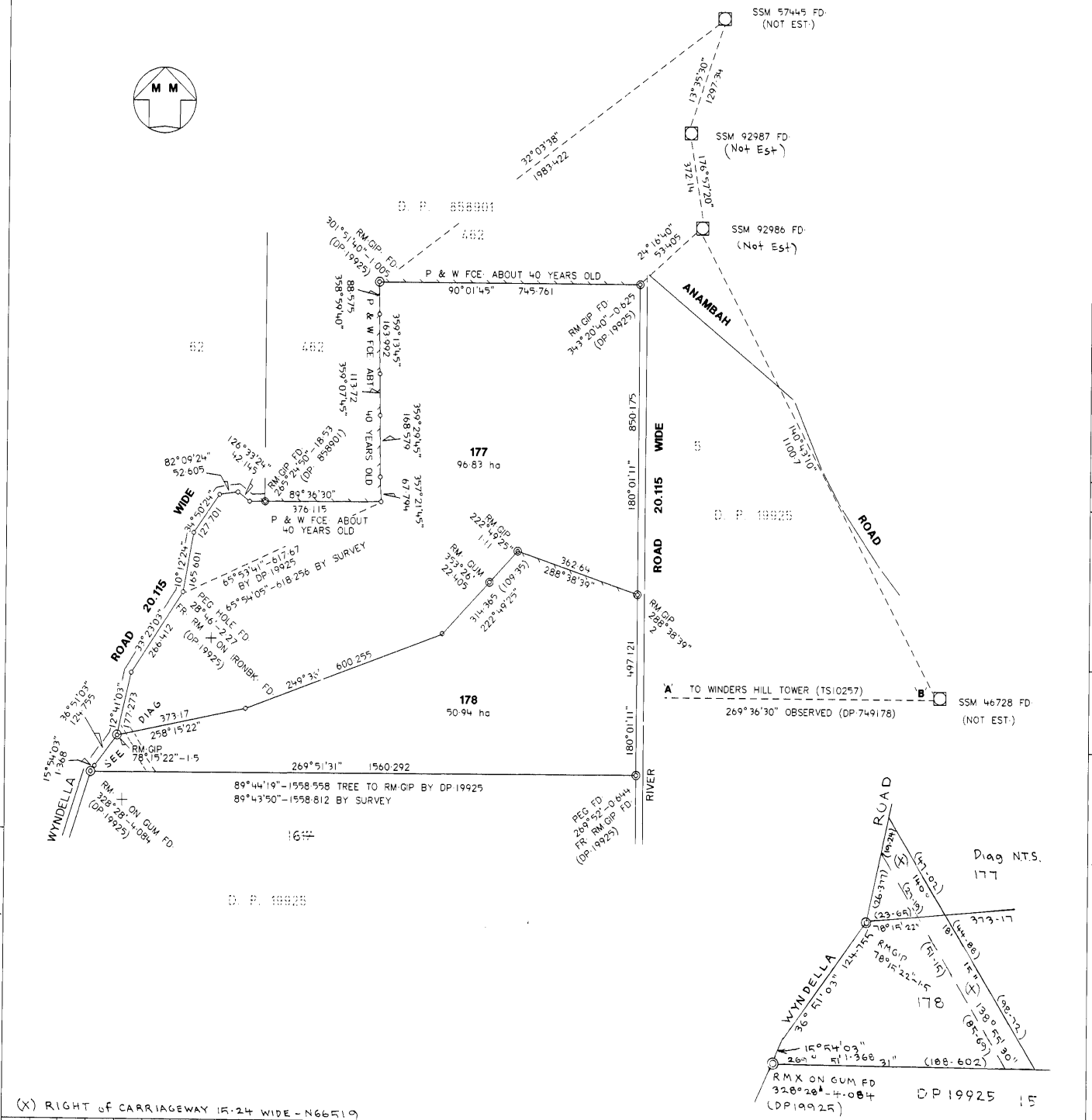
This information is provided as a searching aid only.Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For ALL ACTIVITY PRIOR TO SEPTEMBER 2002 you must refer to the RGs Charting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

PLAN FORM 2

SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads or to create public reserves, drainage reserves easements, restrictions on the use of land or positive covenants

Plan drawing only to appear in this space



(X) RIGHT of CARRIAGEWAY 15.24 WIDE - N66519

10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	Table of mm	210	220	230	240	260	270	280	290	300	310	320	330	340	350	360	370	380	390

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

Crown Lands Office Approval

PLAN APPROVED _____ Authorised Officer

Land District _____

Paper No _____

Field Book _____ Pages _____

Council's Certificate

I hereby certify that -

(a) the requirements of the Local Government Act 1993 (other than the requirements for the registration of plans) and

(b) the requirements of ~~Part 3 Division 2 of the Water Board Act 1987, or~~ Part 5 Division 7 of the Hunter Water Board (Corporatisation) Act 1991

have been complied with by the applicant in relation to the proposed SUBDIVISION (insert 'new road', 'subdivision', or 'consolidated lot') set out herein

Subdivision 970595

Date 12.12.97

Signature _____ ~~General Manager~~/Authorised Person

Council File No SU970595

* This part of the certificate to be deleted where the application is only for a consolidated lot or for the opening of a new road or where the land to be subdivided is wholly outside the areas of operations of the Water Board and the Hunter Water Corporation Ltd * Delete if inapplicable

SURVEYORS REFERENCE 97074/17/18

DP 874171

Registered 30-1-1998

C.A. No 970595 of 12-12-97

Title System TORRENS

Purpose SUBDIVISION

Ref. Map MAITLAND SHIO

Last Plan DP 19925#

PLAN

OF SUBDIVISION OF

LOTS 17 & 18 D.P. 19925

Lengths are in metres Reduction Ratio 1:8000

LGA	MAITLAND
Locality	~~GOSFORTH~~ ANAMBAH
Parish	GOSFORTH
County	NORTHUMBERLAND

~~This is sheet of my plan in sheets~~ (delete if inapplicable)

I GEOFFREY ALLAN GOLLEDGE of 36 ST. ANDREWS STREET, MAITLAND, 2320 a surveyor registered under the Surveyors Act 1929, hereby certify that the survey represented in this plan is accurate, has been made in accordance with the Survey Practice Regulation 1990 and was completed on 1 NOVEMBER 1997

(Signature) _____ Surveyor registered under the Surveyors Act 1929

Datum Line Of Azimuth **A-B**

Plans used in preparation of survey/~~compilation~~

D.P. 858901

D.P. 19925

PANEL FOR USE ONLY for statements of intention to dedicate public roads or to create public reserves, drainage reserves, easements restrictions on the use of land or positive covenants

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

1. Restriction on the use of land

P.M. STATUS CHECKED IN L.T.O. 7-1-1998

9132-1-S

DP 874171

InfoTrack

Req:R147823 /Doc:DP 0874171 P /Rev:09-Feb-1998 /NSW LRS /Pgs:ALL /Prt:27-Sep-2024 07:54 /Seq:1 of 1
© Office of the Registrar-General /Src:InfoTrack /Ref:LS062161_EP - 559 Anambah Road

PLAN FORM 1

Plan drawing only to appear in this space

SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants:

M. W. Bird

M. W. Bird

P.M. STATUS CHECKED IN L.T.O. 7-1-98

Crown Lands Office Approval

Plan Approved _____
Authorised Officer

Land District _____

Paper No: _____

Field Book _____ Poges _____

Council's Certificate

I hereby certify thot

(a) the requirements of the Local Government Act 1993 (other than the requirements for the registration of plans) and

(b) the requirements of ~~Part 3 Division 2 of the Water Board Act 1987, or~~ Part 5 Division 7 of the Hunter Board (Corporisotion) Act 1991*

have been complied with by the applicant in relation to the proposed SUBDIVISION
(insert new road, subdivision or consolidated lot) set out herein

Subdivision 970594

Date 25/11/97

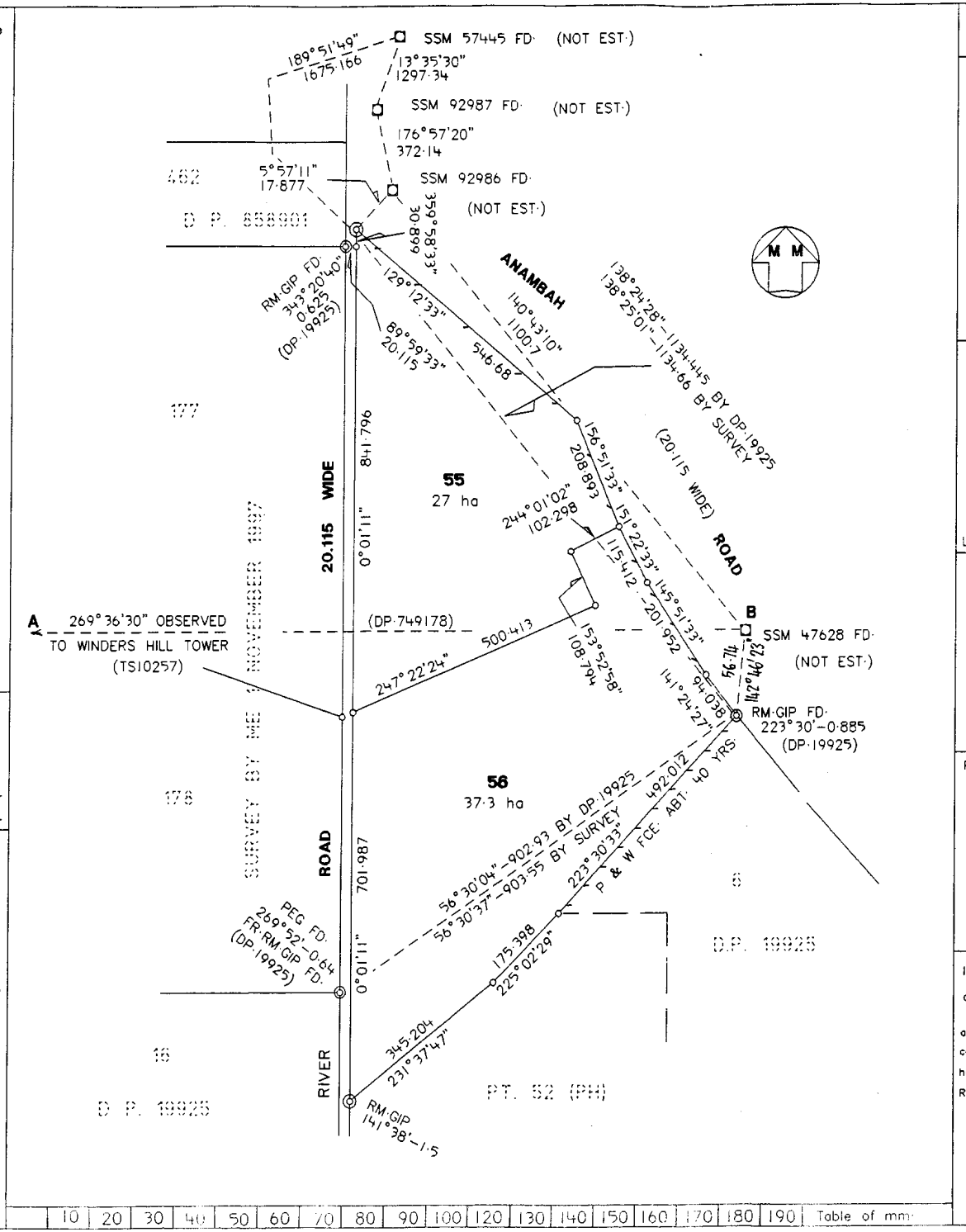
Signature Mark Shlew
General Manager/Authorised Person

Council File No: SU970594

* This part of the certificate to be deleted where the application is only for a consolidated lot or for the opening of a new road or where the land to be subdivided is wholly outside the areas of operations of the Water Board and the Hunter Water Corporation Ltd.

* delete if inapplicable

SURVEYORS REFERENCE 97074/5/1



10	20	30	40	50	60	70	80	90	100	120	130	140	150	160	170	180	190	Table of mm

WARNING: CREASING AND FOLDING WILL LEAD TO REJECTION

DP 874170

Registered: 30-1-1998

C.A.: No 970594 of 25-11-97

Title System: TORRENS

Purpose SUBDIVISION

Ref. Map: DP19925# MAITLAND# SH 10

Last Plan DP 348992

PLAN

OF SUBDIVISION OF
LOT 5 D.P.19925 AND
LOT 1 D.P.348992

Lengths are in metres. Reduction Ratio 1:8000

LGA MAITLAND

Locality ~~GOSFORTH~~ ANAMBAH

Parish GOSFORTH

County NORTHUMBERLAND

Plans used in preparation of survey/~~compilation~~

D.P.19925
D.P.858901

I GEOFFREY ALLAN GOLLEDGE
of 36 ST. ANDREWS STREET MAITLAND 2320

a surveyor registered under the Surveyors Act 1929, hereby certify that the survey represented in this plan is accurate has been made in accordance with the Survey Practice Regulations 1990 and was completed on 1 NOV 1997

(Signature) _____
Surveyor registered under the Surveyors Act 1929

AZIMUTH A-B

M

9132-1-S

DP 874170

InfoTrack
Req:R148158 /Doc:DP 0874170 P /Rev:05-Feb-1998 /NSW LRS /Pgs:ALL /Prt:27-Sep-2024 09:05 /Seq:1 of 1
© Office of the Registrar-General /Src:InfoTrack /Ref:LS062161_EP - 559 Anambah Road

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

26/9/2024 1:02PM

FOLIO: 177/874171

First Title(s): OLD SYSTEM VOL 185 FOL 140
VOL 185 FOL 141
Prior Title(s): VOL 6144 FOL 4

Recorded	Number	Type of Instrument	C.T. Issue
13/2/1998	DP874171	DEPOSITED PLAN	FOLIO CREATED EDITION 1
6/8/1998	5178918	TRANSFER	EDITION 2
23/9/2022	AS489911	CAVEAT	EDITION 3

*** END OF SEARCH ***

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Received: 26/09/2024 13:02:47

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 177/874171

SEARCH DATE	TIME	EDITION NO	DATE
26/9/2024	1:02 PM	3	23/9/2022

LAND

LOT 177 IN DEPOSITED PLAN 874171
AT ANAMBAH
LOCAL GOVERNMENT AREA MAITLAND
PARISH OF GOSFORTH COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP874171

FIRST SCHEDULE

RODNEY DAVID BIRD (T 5178918)

SECOND SCHEDULE (4 NOTIFICATIONS)

---

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 N66519 RIGHT OF CARRIAGEWAY 15.24 WIDE AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
3 DP874171 RESTRICTION(S) ON THE USE OF LAND
* 4 AS489911 CAVEAT BY THIRDI ANAMBAH PTY LTD

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Received: 26/09/2024 13:02:23

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
26/9/2024 1:02PM

FOLIO: 55/874170

First Title(s): VOL 185 FOL 153 VOL 185 FOL 154
Prior Title(s): VOL 6144 FOL 4

Recorded	Number	Type of Instrument	C.T. Issue
4/2/1998	DP874170	DEPOSITED PLAN	FOLIO CREATED EDITION 1
6/8/1998	5178918	TRANSFER	EDITION 2
23/9/2022	AS489911	CAVEAT	EDITION 3

*** END OF SEARCH ***

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Received: 26/09/2024 13:02:47

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 55/874170

SEARCH DATE	TIME	EDITION NO	DATE
26/9/2024	1:02 PM	3	23/9/2022

LAND

LOT 55 IN DEPOSITED PLAN 874170
AT ANAMBAH
LOCAL GOVERNMENT AREA MAITLAND
PARISH OF GOSFORTH COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP874170

FIRST SCHEDULE

RODNEY DAVID BIRD (T 5178918)

SECOND SCHEDULE (2 NOTIFICATIONS)

---

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
* 2 AS489911 CAVEAT BY THIRDI ANAMBAH PTY LTD

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

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Received: 26/09/2024 13:02:23

Appendix F

95% UCL

Open UCL Report Rev8.1 (Open UCL Beta Ver 3.02)

```
Report Date & Time:  2025-01-05 22:48:23

Data File Name:  input v2.1.xlsx

Report Title:  eg: Natural Soil Data
```

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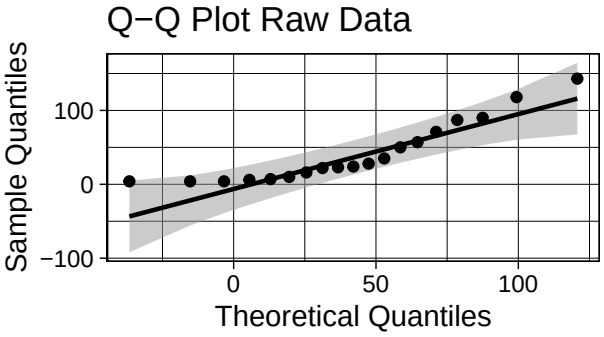
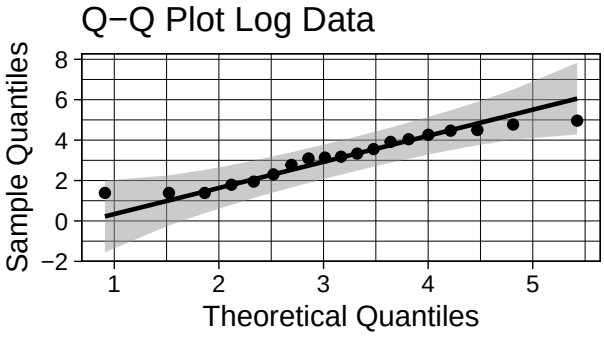
We encourage the reporting of bugs, issues, new ideas and contributions. If you want to report a bug, issue or have an idea to add to Open UCL you can email **openstatsonline@gmail.com**. Or if you are on github you can also use this link to post an issue on the Open UCL Repository.

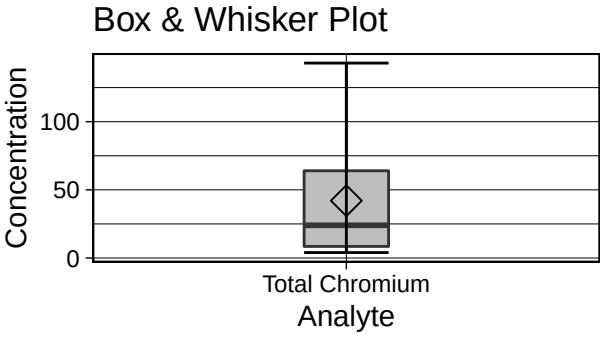
Total Chromium

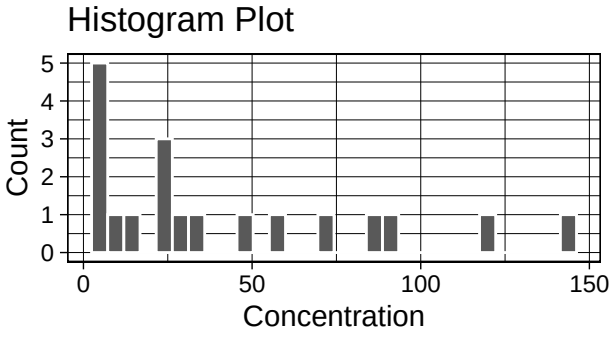
Descriptive Stats	
n	19
min	4
max	143
range	139
mean	42.053
gm	23.746
median	24
standard deviation (sd)	41.713
standard error of mean (sem)	9.57
coeficient of variation (cv)	0.992
skewness	1.169
Log Transformed	
Log min	1.386
Log max	4.963
Log mean	3.167
Log sd	1.196
Normality Tests	
Shapiro-Wilks Value (raw)	0.848
Shapiro-Wilks p (raw)	0.006
Shapiro-Wilks Value (log)	0.933
Shapiro-Wilks p (log)	0.196

Upper Conf Limits	
Confidence Level (%)	95
Students t UCL	58.647
Lands HUCL	110.096
Zou UCL	107.734
Tchebichef (Chebyshev) UCL	83.765
Other Results	
CV High	FALSE
Normality Raw Data	FALSE
Normality Log Data	TRUE
Critical t (95%) 2 Sided	2.101
Margin of Error (MoE)	20.105
Z	110.664
Max Probable Error (MPE%)	47.809
Relative Standard Deviation (%RSD)	99.191









Appendix G
NATA ACCREDITED LABORATORY REPORTS

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ Sydney 277 Woodpark Rd, Smithfield NSW 2164 Ph 02 8784 8555 E samples.sydney@alsenviro.com

☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304 Ph 02 4965 0433 E samples.newcastle@alsenviro.com

☐ Brisbane 32 Shand St Stafford QLD 4053 Ph 07 3243 7222 E samples.brisbane@alsenviro.com

☐ Townsville: 14-15 Desma Ct, Bohle, QLD 4818 Ph 07 4796 0600 E townsville.environmental@alsenviro.com

☐ Melbourne 24 Westall Rd, Springvale VIC 3171 Ph 03 8549 9600 E samples.melbourne@alsenviro.com

☐ Adelaide: 21 Burma Rd, Pooraka SA 5095 Ph 08 8359 0890 E adelaide@alsenviro.com

CLIENT:	EP RISK MANAGEMENT PTY LTD	TURNAROUND REQUIREMENTS: ✓ Standard TAT (List due date): 3 day	FOR LABORATORY USE ONLY (Circle)
OFFICE:	NEWCASTLE	(Standard TAT may be longer for some tests e.g. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No
PROJECT:	~~Tomakin EHM~~ Anambah PS1	ALS QUOTE NO.: ES23EPRISK0002	Cooling Method: Ice Gel None
ORDER NUMBER:	~~EP8678~~ EP3864	COC SEQUENCE NUMBER (Circle) COC: (1) 2 3 4 5 6 7	Sample Temperature on Receipt: 2.5 5.7
PROJECT MANAGER:	~~Luke Kerry~~ Nathan McGinn	CONTACT PH: 0422 937 410	OF: 1 (2) 3 4 5 6 7
SAMPLER:	Hayley Erskine	SAMPLER MOBILE: 0401855939	
COC emailed to ALS? (YES / NO)		EDD FORMAT (or default): esdat	
Email Reports to (will default to PM if no other addresses are listed): hayley.erskine@eprisk.com.au			
Email Invoice to (will default to PM if no other addresses are listed): accounts@eprisk.com.au			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Hayley Erskine	JN	JN	c.c
DATE/TIME:	DATE/TIME: 12-9-24 1550	DATE/TIME: 12-9-24 1700	DATE/TIME: 12/9 17:30

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	S-19	ES2004	hold	W-26	TRH(F1) BTEX				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	TP01R_0.1					X	X							
	TP01R_0.5							X						
	TP01R_1.0							X						
	TP02L_0.1					X	X							
	TP02L_0.5							X						
	TP02L_1.0							X						
	TP03R_0.1					X	X							
	TP03R_0.5							X						
	TP03R_1.0							X						
	TP03R_2.0							X						
	TP02L_2.0							X						
	TP04L_0.1					X	X							
	TP04L_0.5							X						
	TP04L_1.0							X						
	TP04L_2.0							X						
	TP05R_0.1					X	X							
	TP05R_0.5							X						
	TP05R_1.0							X						
	TP06R_0.1					X	X							
	TP06R_0.5							X						
	TP06R_1.0							X						
	TP06R_2.0							X						
	TP07L_0.1					X	X							
	TP07L_0.5							X						
					TOTAL									

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

E-MAILED

LAB OF ORIGIN: NEWCASTLE

Environmental Division Sydney
Work Order Reference
ES2429934

Telephone : +61-2-8784 8555

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ Sydney 277 Woodpark Rd Smithfield NSW 2164 Ph 02 8784 8555 E samples.sydney@alsenviro.com
☐ Newcastle, 5 Rosegum Rd Warabrook NSW 2304 Ph 02 4968 9433 E samples.newcastle@alsenviro.com
☐ Brisbane 32 Shand St Stafford QLD 4053 Ph 07 3243 7222 E samples.brisbane@alsenviro.com
☐ Townsville, 14-15 Desma Ct, Bohle QLD 4818 Ph 07 4796 0600 E townsville.environmental@alsenviro.com
☐ Melbourne 2-4 Westall Rd, Springvale VIC 3171 Ph 03 8549 9600 E samples.melbourne@alsenviro.com
☐ Adelaide 2-4 Burma Rd, Pooraka SA 5095 Ph 08 8359 0890 E.adelaide@alsenviro.com

CLIENT:	EP RISK MANAGEMENT PTY LTD	TURNAROUND REQUIREMENTS: (Standard TAT may be longer for some tests e.g. Ultra Trace Organics)	Standard TAT (List due date): ☐ Non Standard or urgent TAT (List due date):
OFFICE:	NEWCASTLE		
PROJECT:	~~Tomago EMM~~	ALS QUOTE NO.:	ES23EPRISK0002
ORDER NUMBER:	~~Portage~~ EP3864		
PROJECT MANAGER:	~~Luke Kerry~~	CONTACT PH:	
SAMPLER:	Hayley Erskine	SAMPLER MOBILE: 0401655939	
COC emailed to ALS? (YES / NO)		EDD FORMAT (or default): esdat	
Email Reports to (will default to PM if no other addresses are listed): hayley.erskine@eprisk.com.au			
Email Invoice to (will default to PM if no other addresses are listed): accounts@eprisk.com.au			

COC SEQUENCE NUMBER (Circle)
COC: 1 (2) 3 4 5 6 7
OF: 1 (2) 3 4 5 6 7

FOR LABORATORY USE ONLY (Circle)
Quote found? Yes (No) N/A
COC/Sample labels match? (Yes) No N/A
Samples received in correct condition? (Yes) No N/A
Other comments:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Hayley Erskine	JN	JN	
DATE/TIME:	DATE/TIME: 12-9-24 1550	DATE/TIME: 12-9-24 1700	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	S-19	EA200F	hold	TRH (F1) BTEXN	W-26				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	TP07L_1.0							X						
	TP08R_0.1					X	X							
	TP08R_0.5							X						
	TP08R_1.0							X						
	TP09R_0.1					X	X							
	TP09R_0.5							X						
	TP09R_1.0							X						
	TP10L_0.1					X	X							
	TP10L_0.5							X						
	TP10L_1.0							X						
	TP11R_0.1					X	X							
	TP11R_0.5							X						
	TP11R_1.0							X						
	TP12L_0.1					X	X							
	TP12L_0.5							X						
	RW01									X				
	TS01								X					
	TB01								X					
	QC01					X			*					
				TOTAL										

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

E-MAILED

LAB OF ORIGIN: NEWCASTLE

CERTIFICATE OF ANALYSIS

Work Order	: **ES2429934**	Page	: 1 of 26
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Contact	: Jason Dighton
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 4913 5650	Telephone	: +61-2-8784 8555
Project	: Anambah PSI	Date Samples Received	: 12-Sep-2024 15:53
Order number	: EP3864	Date Analysis Commenced	: 16-Sep-2024
C-O-C number	: ----	Issue Date	: 19-Sep-2024 17:31
Sampler	: Hayley Erskine		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 46		
No. of samples analysed	: 17		

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

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
- Descriptive 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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
John Williams	Lab Technician	Newcastle - Asbestos, Mayfield West, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Inorganics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW

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 Contract 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
ø = 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.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above 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: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.
- EA200N: Asbestos weights and percentages are not covered under the Scope of NATA Accreditation.
  Weights of Asbestos are based on extracted bulk asbestos, fibre bundles, and/or ACM and do not include respirable fibres (if present)
  The Asbestos (Fines and Fibrous) weight is calculated from the extracted Fibrous Asbestos and Asbestos Fines as an equivalent weight of 100% Asbestos
  Percentages for Asbestos content in ACM are based on the 2013 NEPM default values.
  All calculations of percentage Asbestos under this method are approximate and should be used as a guide only.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200N: ALS laboratory procedures and methods used for the identification and quantitation of asbestos are consistent with AS4964-2004 and the requirements of the 2013 NEPM for Assessment of Site Contamination

- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP01R_0.1	TP02L_0.1	TP03R_0.1	TP04L_0.1	TP05R_0.1
			Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit	ES2429934-001	ES2429934-004	ES2429934-007	ES2429934-012	ES2429934-016
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**40.8**	**29.8**	**17.6**	**14.6**	**27.1**
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	**No**	**No**	**No**	**No**	**No**
Asbestos Type	1332-21-4	-	--	**-**	**-**	**-**	**-**	**-**
Asbestos (Trace)	1332-21-4	-	-	**No**	**No**	**No**	**No**	**No**
Sample weight (dry)	----	0.01	g	**185**	**243**	**450**	**372**	**326**
Synthetic Mineral Fibre	----	-	--	**No**	**No**	**No**	**No**	**No**
Organic Fibre	----	-	--	**No**	**No**	**No**	**No**	**No**
APPROVED IDENTIFIER:	----	-	--	**J. WILLIAMS**	**J. WILLIAMS**	**J. WILLIAMS**	**J. WILLIAMS**	**J. WILLIAMS**
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
ø Weight Used for % Calculation	----	0.0001	kg	**0.185**	**0.243**	**0.450**	**0.372**	**0.326**
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	**5**	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**87**	**143**	**4**	**4**	**4**
Copper	7440-50-8	5	mg/kg	**36**	**39**	<5	<5	<5
Lead	7439-92-1	5	mg/kg	**11**	**6**	**5**	**6**	**5**
Nickel	7440-02-0	2	mg/kg	**51**	**55**	<2	<2	<2
Zinc	7440-66-6	5	mg/kg	**64**	**36**	**6**	**10**	**9**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP01R_0.1	TP02L_0.1	TP03R_0.1	TP04L_0.1	TP05R_0.1
				Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit		ES2429934-001	ES2429934-004	ES2429934-007	ES2429934-012	ES2429934-016
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP01R_0.1	TP02L_0.1	TP03R_0.1	TP04L_0.1	TP05R_0.1
			Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit	ES2429934-001	ES2429934-004	ES2429934-007	ES2429934-012	ES2429934-016
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP01R_0.1	TP02L_0.1	TP03R_0.1	TP04L_0.1	TP05R_0.1
			Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit	ES2429934-001	ES2429934-004	ES2429934-007	ES2429934-012	ES2429934-016
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<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	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<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	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<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	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<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	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<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	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<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**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP01R_0.1	TP02L_0.1	TP03R_0.1	TP04L_0.1	TP05R_0.1
				Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit		ES2429934-001	ES2429934-004	ES2429934-007	ES2429934-012	ES2429934-016
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<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	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**86.6**	**79.7**	**101**	**71.2**	**74.4**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**120**	**108**	**117**	**97.8**	**97.2**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP01R_0.1	TP02L_0.1	TP03R_0.1	TP04L_0.1	TP05R_0.1
				Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit		ES2429934-001	ES2429934-004	ES2429934-007	ES2429934-012	ES2429934-016
					Result	Result	Result	Result	Result
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		130	118	105	105	101
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		83.2	80.6	81.4	81.8	83.6
2-Chlorophenol-D4	93951-73-6	0.5	%		82.2	88.8	83.9	80.5	85.8
2.4.6-Tribromophenol	118-79-6	0.5	%		86.9	83.6	83.9	82.6	86.7
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		84.1	86.6	85.2	83.7	90.5
Anthracene-d10	1719-06-8	0.5	%		88.6	90.0	87.4	86.9	90.1
4-Terphenyl-d14	1718-51-0	0.5	%		82.6	82.5	81.7	81.0	84.4
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		81.4	93.8	99.0	109	111
Toluene-D8	2037-26-5	0.2	%		71.6	83.2	84.3	101	114
4-Bromofluorobenzene	460-00-4	0.2	%		74.2	83.1	86.7	93.9	106

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP06R_0.1	TP07L_0.1	TP08R_0.1	TP09R_0.1	TP10L_0.1
			Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit	ES2429934-019	ES2429934-023	ES2429934-026	ES2429934-029	ES2429934-032
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	17.6	14.5	10.5	8.5	16.6
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Asbestos (Trace)	1332-21-4	-	-	No	No	No	No	No
Sample weight (dry)	----	0.01	g	335	401	235	376	332
Synthetic Mineral Fibre	----	-	--	No	No	No	No	No
Organic Fibre	----	-	--	No	No	No	No	No
APPROVED IDENTIFIER:	----	-	--	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS	J. WILLIAMS
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	<0.001	<0.001
ø Weight Used for % Calculation	----	0.0001	kg	0.335	0.401	0.235	0.376	0.332
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	5	14	10
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	57	6	7	24	23
Copper	7440-50-8	5	mg/kg	17	<5	<5	12	<5
Lead	7439-92-1	5	mg/kg	11	7	6	14	10
Nickel	7440-02-0	2	mg/kg	25	4	<2	9	4
Zinc	7440-66-6	5	mg/kg	43	23	8	41	8
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06R_0.1	TP07L_0.1	TP08R_0.1	TP09R_0.1	TP10L_0.1
				Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit		ES2429934-019	ES2429934-023	ES2429934-026	ES2429934-029	ES2429934-032
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP06R_0.1	TP07L_0.1	TP08R_0.1	TP09R_0.1	TP10L_0.1
			Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit	ES2429934-019	ES2429934-023	ES2429934-026	ES2429934-029	ES2429934-032
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP06R_0.1	TP07L_0.1	TP08R_0.1	TP09R_0.1	TP10L_0.1
			Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit	ES2429934-019	ES2429934-023	ES2429934-026	ES2429934-029	ES2429934-032
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<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	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<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	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<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	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<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	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<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	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<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**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06R_0.1	TP07L_0.1	TP08R_0.1	TP09R_0.1	TP10L_0.1
				Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit		ES2429934-019	ES2429934-023	ES2429934-026	ES2429934-029	ES2429934-032
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<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	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**76.7**	**76.6**	**75.8**	**78.7**	**82.0**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**106**	**92.2**	**96.7**	**94.4**	**101**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06R_0.1	TP07L_0.1	TP08R_0.1	TP09R_0.1	TP10L_0.1
				Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit		ES2429934-019	ES2429934-023	ES2429934-026	ES2429934-029	ES2429934-032
					Result	Result	Result	Result	Result
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		120	85.6	83.4	92.8	99.3
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		83.8	83.2	85.6	81.5	88.8
2-Chlorophenol-D4	93951-73-6	0.5	%		84.9	87.3	87.1	87.9	88.6
2.4.6-Tribromophenol	118-79-6	0.5	%		83.0	87.3	83.1	82.7	82.0
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		81.1	86.4	80.4	83.8	83.8
Anthracene-d10	1719-06-8	0.5	%		84.4	88.7	88.1	87.2	85.9
4-Terphenyl-d14	1718-51-0	0.5	%		82.0	96.2	84.7	82.6	80.1
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		100	100	106	101	101
Toluene-D8	2037-26-5	0.2	%		95.9	100	97.1	99.0	101
4-Bromofluorobenzene	460-00-4	0.2	%		87.0	92.3	91.8	90.6	86.6

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP11R_0.1	TP12L_0.1	TS01	TB01	QC01
			Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	05-Sep-2024 00:00	06-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit	ES2429934-035	ES2429934-038	ES2429934-041	ES2429934-042	ES2429934-043
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**17.8**	**10.0**	----	----	**12.3**
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	**No**	**No**	----	----	----
Asbestos Type	1332-21-4	-	--	**-**	**-**	----	----	----
Asbestos (Trace)	1332-21-4	-	-	**No**	**No**	----	----	----
Sample weight (dry)	----	0.01	g	**331**	**353**	----	----	----
Synthetic Mineral Fibre	----	-	--	**No**	**No**	----	----	----
Organic Fibre	----	-	--	**No**	**No**	----	----	----
APPROVED IDENTIFIER:	----	-	--	**J. WILLIAMS**	**J. WILLIAMS**	----	----	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	----	----	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	----	----	----
ø Weight Used for % Calculation	----	0.0001	kg	**0.331**	**0.353**	----	----	----
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**8**	**6**	----	----	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	----	----	<1
Chromium	7440-47-3	2	mg/kg	**35**	**22**	----	----	**4**
Copper	7440-50-8	5	mg/kg	**7**	<5	----	----	<5
Lead	7439-92-1	5	mg/kg	**9**	**11**	----	----	**6**
Nickel	7440-02-0	2	mg/kg	**12**	**6**	----	----	<2
Zinc	7440-66-6	5	mg/kg	**18**	**21**	----	----	**9**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	----	----	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	----	----	<0.1
EP068A: Organochlorine Pesticides (OC)								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11R_0.1	TP12L_0.1	TS01	TB01	QC01
				Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	05-Sep-2024 00:00	06-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit		ES2429934-035	ES2429934-038	ES2429934-041	ES2429934-042	ES2429934-043
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	----	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	----	----	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-3	0.05	mg/kg		<0.05	<0.05	----	----	<0.05
EP068B: Organophosphorus Pesticides (OP)									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP11R_0.1	TP12L_0.1	TS01	TB01	QC01
			Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	05-Sep-2024 00:00	06-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit	ES2429934-035	ES2429934-038	ES2429934-041	ES2429934-042	ES2429934-043
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	----	----	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	----	----	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	----	----	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	----	----	<0.05
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	----	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP11R_0.1	TP12L_0.1	TS01	TB01	QC01
			Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	05-Sep-2024 00:00	06-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit	ES2429934-035	ES2429934-038	ES2429934-041	ES2429934-042	ES2429934-043
				Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued								
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	----	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	<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
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<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
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	----	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	----	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	----	----	**1.2**
EP080/071: Total Petroleum Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11R_0.1	TP12L_0.1	TS01	TB01	QC01
				Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	05-Sep-2024 00:00	06-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit		ES2429934-035	ES2429934-038	ES2429934-041	ES2429934-042	ES2429934-043
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	----	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	----	----	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	----	----	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	----	----	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<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 (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	----	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	----	----	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	----	----	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	----	----	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	----	----	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	----	----	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	**4.3**	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	**4.9**	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	**5.4**	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	**2.0**	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	**16.6**	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	**7.4**	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**85.1**	**123**	----	----	**126**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**104**	**112**	----	----	**110**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11R_0.1	TP12L_0.1	TS01	TB01	QC01
				Sampling date / time	12-Sep-2024 00:00	12-Sep-2024 00:00	05-Sep-2024 00:00	06-Sep-2024 00:00	12-Sep-2024 00:00
Compound	CAS Number	LOR	Unit		ES2429934-035	ES2429934-038	ES2429934-041	ES2429934-042	ES2429934-043
					Result	Result	Result	Result	Result
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		112	55.1	----	----	95.9
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		84.9	86.5	----	----	85.4
2-Chlorophenol-D4	93951-73-6	0.5	%		89.5	85.5	----	----	90.5
2.4.6-Tribromophenol	118-79-6	0.5	%		81.1	68.2	----	----	79.1
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		84.2	81.0	----	----	86.8
Anthracene-d10	1719-06-8	0.5	%		86.2	80.0	----	----	87.9
4-Terphenyl-d14	1718-51-0	0.5	%		80.4	81.2	----	----	83.5
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		101	104	94.6	93.8	102
Toluene-D8	2037-26-5	0.2	%		99.6	101	97.5	90.3	105
4-Bromofluorobenzene	460-00-4	0.2	%		89.5	90.6	90.5	79.5	93.6

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TSC	----	----	----	----
				Sampling date / time	05-Sep-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2429934-046	--------	--------	--------	--------
					Result	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		**4.7**	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		**5.7**	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		**6.4**	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		**2.5**	----	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		**19.3**	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		**8.9**	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**102**	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		**119**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		**100.0**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RW	----	----	----	----
				Sampling date / time	12-Sep-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2429934-040	--------	--------	--------	--------
					Result	----	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
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		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
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	----	----	----	----
Phenanthrene	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	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RW	----	----	----	----
				Sampling date / time	12-Sep-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2429934-040	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^ **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		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	----	----	----	----
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		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	----	----	----	----
^ **>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		<2	----	----	----	----
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		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**29.5**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RW	----	----	----	----
				Sampling date / time	12-Sep-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2429934-040	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	1.0	%		**61.3**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%		**78.5**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**82.6**	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		**88.2**	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		**95.1**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**101**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**98.3**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**102**	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	TP01R_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP02L_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP03R_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP04L_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP05R_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP06R_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP07L_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP08R_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP09R_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP10L_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP11R_0.1 - 12-Sep-2024 00:00	A soil sample.
EA200: Description	TP12L_0.1 - 12-Sep-2024 00:00	A soil sample.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
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	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
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	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry / Biology).

(SOIL) EA200N: Asbestos Quantification (non-NATA)

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

QUALITY CONTROL REPORT

Work Order	: **ES2429934**	Page	: 1 of 16
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Contact	: Jason Dighton
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 4913 5650	Telephone	: +61-2-8784 8555
Project	: Anambah PSI	Date Samples Received	: 12-Sep-2024
Order number	: EP3864	Date Analysis Commenced	: 16-Sep-2024
C-O-C number	: ----	Issue Date	: 19-Sep-2024
Sampler	: Hayley Erskine		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 46		
No. of samples analysed	: 17		

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

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 Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
John Williams	Lab Technician	Newcastle - Asbestos, Mayfield West, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Inorganics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW

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.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
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
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 6061076)									
ES2429934-001	TP01R_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	87	83	5.1	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	51	48	4.9	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	36	34	5.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	11	9	14.5	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	64	62	2.8	0% - 50%
ES2429934-035	TP11R_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	35	36	5.5	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	12	12	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	13	45.5	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	7	7	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	9	10	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	18	19	0.0	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6060061)									
ES2429915-002	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	8.1	6.1	28.1	No Limit
ES2429915-013	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	23.2	23.6	1.6	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 6060062)									
ES2429934-012	TP04L_0.1	EA055: Moisture Content	----	0.1 (1.0)*	%	14.6	15.2	4.1	0% - 50%
ES2429949-001	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	2.3	2.5	5.6	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6061077)									
ES2429934-001	TP01R_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2429934-035	TP11R_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 6055556)									
ES2429934-001	TP01R_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2429934-035	TP11R_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6055555)									
ES2429934-001	TP01R_0.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2429934-035	TP11R_0.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 6055555) - continued									
ES2429934-035	TP11R_0.1	EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6055555)									
ES2429934-001	TP01R_0.1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2429934-035	TP11R_0.1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 6055555) - continued									
ES2429934-035	TP11R_0.1	EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 6055554)									
ES2429934-001	TP01R_0.1	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES2429934-035	TP11R_0.1	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6055554)									
ES2429934-001	TP01R_0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2429934-035	TP11R_0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 6055554) - continued									
ES2429934-035	TP11R_0.1	EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6055553)									
ES2429934-001	TP01R_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2429934-035	TP11R_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6058428)									
ES2429934-001	TP01R_0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2429934-035	TP11R_0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6055553)									
ES2429934-001	TP01R_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2429934-035	TP11R_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6058428)									
ES2429934-001	TP01R_0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2429934-035	TP11R_0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 6058428)									
ES2429934-001	TP01R_0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2429934-035	TP11R_0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080: BTEXN (QC Lot: 6058428) - continued									
ES2429934-035	TP11R_0.1	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020T: Total Metals by ICP-MS (QC Lot: 6061483)									
ES2429873-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.027	0.028	0.0	0% - 20%
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.052	0.052	0.0	0% - 20%
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.018	0.018	0.0	0% - 50%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.061	0.062	0.0	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.024	0.022	7.9	0% - 20%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.270	0.270	0.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 6061487)									
ES2429956-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 6058046)									
CA2405891-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	400	400	0.0	0% - 20%
ES2430188-005	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 6058046)									
CA2405891-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	430	430	0.0	0% - 20%
ES2430188-005	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 6058046)									
CA2405891-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2430188-005	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6061076)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	102	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	112	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	114	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	106	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	100	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	100	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	103	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6061077)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	109	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6055556)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	80.0	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 6055555)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.2	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	88.4	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	87.3	67.0	119
EP068: gamma-BHC - (Lindane)	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.9	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.8	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	84.4	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	83.5	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	82.9	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	85.1	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.0	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	88.3	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.5	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	83.6	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.3	62.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 6055555) - continued								
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	82.3	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.1	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	99.9	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6055555)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	103	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.6	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	77.7	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.7	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.5	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	82.0	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	79.9	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	86.1	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	78.9	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	83.9	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.6	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	81.4	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.0	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	82.8	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.7	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	57.6	41.0	123
EP075(SIM)A: Phenolic Compounds (QCLot: 6055554)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	91.9	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	95.1	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	89.1	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	89.5	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	75.0	54.0	114
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	90.8	68.0	126
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	89.0	66.0	120
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	94.5	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	96.4	70.0	116
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	73.0	54.0	114

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)A: Phenolic Compounds (QCLot: 6055554) - continued								
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	77.8	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	35.6	10.0	80.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6055554)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	93.5	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	93.4	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	91.7	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	92.3	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	93.0	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	93.6	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	90.9	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	92.9	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	87.7	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	93.5	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	92.1	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	92.5	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	92.2	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	94.3	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	92.2	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	92.9	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6055553)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	97.3	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	96.0	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	102	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6058428)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	94.7	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6055553)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	98.7	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	96.6	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	99.6	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6058428)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	95.4	72.4	133
EP080: BTEXN (QCLot: 6058428)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	101	76.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080: BTEXN (QCLot: 6058428) - continued								
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	97.7	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	97.8	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	108	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	103	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	99.2	78.8	122

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 6061483)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	97.8	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	96.2	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	104	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	103	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	96.9	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	99.3	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	103	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6061487)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	98.3	77.0	111
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6055816)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	75.4	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	71.9	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	71.0	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	75.0	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	81.3	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	75.9	64.3	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	91.1	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	93.5	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	82.7	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	78.6	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	96.9	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	97.7	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	85.5	63.3	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	78.9	59.9	118

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6055816) - continued								
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	85.9	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	82.5	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6055817)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	65.3	53.7	97.0
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	89.5	63.3	107
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	109	58.3	120
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6058046)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	83.0	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6055817)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	62.0	53.9	95.5
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	98.5	57.8	110
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	78.0	50.5	115
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6058046)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	83.7	75.0	127
EP080: BTEXN (QCLot: 6058046)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	94.5	68.3	119
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	95.8	73.5	120
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	95.7	73.8	122
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	90.6	73.0	122
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	96.7	76.4	123
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	118	75.5	124

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6061076)							
ES2429934-001	TP01R_0.1	EG005T: Arsenic	7440-38-2	50 mg/kg	82.9	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	102	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	92.2	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	94.7	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	95.0	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 6061076) - continued							
ES2429934-001	TP01R_0.1	EG005T: Nickel	7440-02-0	50 mg/kg	92.4	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	101	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6061077)							
ES2429934-001	TP01R_0.1	EG035T: Mercury	7439-97-6	5 mg/kg	98.7	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 6055556)							
ES2429934-001	TP01R_0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	86.9	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 6055555)							
ES2429934-001	TP01R_0.1	EP068: gamma-BHC - (Lindane)	58-89-9	0.5 mg/kg	80.0	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	98.7	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	90.3	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	94.1	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	95.7	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	84.7	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 6055555)							
ES2429934-001	TP01R_0.1	EP068: Diazinon	333-41-5	0.5 mg/kg	90.1	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	76.0	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	75.9	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	96.4	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	92.7	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 6055554)							
ES2429934-001	TP01R_0.1	EP075(SIM): Phenol	108-95-2	10 mg/kg	93.4	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	95.4	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	86.0	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	85.2	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	69.7	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 6055554)							
ES2429934-001	TP01R_0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	96.6	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	101	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6055553)							
ES2429934-001	TP01R_0.1	EP071: C10 - C14 Fraction	----	480 mg/kg	104	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	108	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	112	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6058428)							
ES2429934-001	TP01R_0.1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	83.6	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6055553)							
ES2429934-001	TP01R_0.1	EP071: >C10 - C16 Fraction	----	860 mg/kg	98.6	73.0	137

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6055553) - continued							
ES2429934-001	TP01R_0.1	EP071: >C16 - C34 Fraction	----	4320 mg/kg	120	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	113	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6058428)							
ES2429934-001	TP01R_0.1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	83.7	61.1	142
EP080: BTEXN (QCLot: 6058428)							
ES2429934-001	TP01R_0.1	EP080: Benzene	71-43-2	2.5 mg/kg	83.4	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	80.4	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	85.9	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	92.3	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	91.8	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	87.0	61.1	115

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EG020T: Total Metals by ICP-MS (QCLot: 6061483)							
ES2429934-040	RW	EG020A-T: Arsenic	7440-38-2	1 mg/L	94.1	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	94.3	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	103	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	102	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	98.8	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	98.4	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	96.2	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 6061487)							
ES2429934-040	RW	EG035T: Mercury	7439-97-6	0.01 mg/L	97.4	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 6058046)							
CA2405891-001	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	103	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 6058046)							
CA2405891-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	95.2	70.0	130
EP080: BTEXN (QCLot: 6058046)							
CA2405891-001	Anonymous	EP080: Benzene	71-43-2	25 µg/L	105	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	109	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	105	70.0	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	111	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	99.3	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080: BTEXN (QCLot: 6058046) - continued							
CA2405891-001	Anonymous	EP080: Naphthalene	91-20-3	25 µg/L	98.6	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2429934**	Page	: 1 of 10
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Telephone	: +61-2-8784 8555
Project	: Anambah PSI	Date Samples Received	: 12-Sep-2024
Site	: ----	Issue Date	: 19-Sep-2024
Sampler	: Hayley Erskine	No. of samples received	: 46
Order number	: EP3864	No. of samples analysed	: 17

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, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

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

Outliers : Frequency of Quality Control Samples

Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	2	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: **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)								
TP01R_0.1,	TP02L_0.1,	**12-Sep-2024**	**----**	----	----	**17-Sep-2024**	26-Sep-2024	✓
TP03R_0.1,	TP04L_0.1,							
TP05R_0.1,	TP06R_0.1,							
TP07L_0.1,	TP08R_0.1,							
TP09R_0.1,	TP10L_0.1,							
TP11R_0.1,	TP12L_0.1,							
QC01								
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)								
TP01R_0.1,	TP02L_0.1,	**12-Sep-2024**	**----**	----	----	**16-Sep-2024**	11-Mar-2025	✓
TP03R_0.1,	TP04L_0.1,							
TP05R_0.1,	TP06R_0.1,							
TP07L_0.1,	TP08R_0.1,							
TP09R_0.1,	TP10L_0.1,							
TP11R_0.1,	TP12L_0.1							

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
EA200N: Asbestos Quantification (non-NATA)							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1	**12-Sep-2024**	**----**	----	----	**16-Sep-2024**	11-Mar-2025	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1, QC01	**12-Sep-2024**	**17-Sep-2024**	11-Mar-2025	✓	**18-Sep-2024**	11-Mar-2025	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1, QC01	**12-Sep-2024**	**17-Sep-2024**	10-Oct-2024	✓	**19-Sep-2024**	10-Oct-2024	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1, QC01	**12-Sep-2024**	**16-Sep-2024**	26-Sep-2024	✓	**17-Sep-2024**	26-Oct-2024	✓

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
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1, QC01	**12-Sep-2024**	**16-Sep-2024**	26-Sep-2024	✓	**17-Sep-2024**	26-Oct-2024	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1, QC01	**12-Sep-2024**	**16-Sep-2024**	26-Sep-2024	✓	**17-Sep-2024**	26-Oct-2024	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1, QC01	**12-Sep-2024**	**16-Sep-2024**	26-Sep-2024	✓	**17-Sep-2024**	26-Oct-2024	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1, QC01	**12-Sep-2024**	**16-Sep-2024**	26-Sep-2024	✓	**17-Sep-2024**	26-Oct-2024	✓

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 Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
TB01	**06-Sep-2024**	**16-Sep-2024**	20-Sep-2024	✓	**17-Sep-2024**	20-Sep-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1, QC01	**12-Sep-2024**	**16-Sep-2024**	26-Sep-2024	✓	**17-Sep-2024**	26-Sep-2024	✓
Soil Glass Jar - Unpreserved (EP071)							
TP06R_0.1	**12-Sep-2024**	**16-Sep-2024**	26-Sep-2024	✓	**19-Sep-2024**	26-Oct-2024	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080)							
TB01	**06-Sep-2024**	**16-Sep-2024**	20-Sep-2024	✓	**17-Sep-2024**	20-Sep-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1, QC01	**12-Sep-2024**	**16-Sep-2024**	26-Sep-2024	✓	**17-Sep-2024**	26-Sep-2024	✓
Soil Glass Jar - Unpreserved (EP071)							
TP06R_0.1	**12-Sep-2024**	**16-Sep-2024**	26-Sep-2024	✓	**19-Sep-2024**	26-Oct-2024	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
TS01, TSC	**05-Sep-2024**	**16-Sep-2024**	19-Sep-2024	✓	**17-Sep-2024**	19-Sep-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TB01	**06-Sep-2024**	**16-Sep-2024**	20-Sep-2024	✓	**17-Sep-2024**	20-Sep-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP01R_0.1, TP02L_0.1, TP03R_0.1, TP04L_0.1, TP05R_0.1, TP06R_0.1, TP07L_0.1, TP08R_0.1, TP09R_0.1, TP10L_0.1, TP11R_0.1, TP12L_0.1, QC01	**12-Sep-2024**	**16-Sep-2024**	26-Sep-2024	✓	**17-Sep-2024**	26-Sep-2024	✓

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

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) RW	12-Sep-2024	17-Sep-2024	11-Mar-2025	✓	17-Sep-2024	11-Mar-2025	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T) RW	12-Sep-2024	----	----	----	19-Sep-2024	10-Oct-2024	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM)) RW	12-Sep-2024	16-Sep-2024	19-Sep-2024	✓	18-Sep-2024	26-Oct-2024	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071) RW	12-Sep-2024	16-Sep-2024	19-Sep-2024	✓	17-Sep-2024	26-Oct-2024	✓
Amber VOC Vial - Sulfuric Acid (EP080) RW	12-Sep-2024	16-Sep-2024	26-Sep-2024	✓	17-Sep-2024	26-Sep-2024	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071) RW	12-Sep-2024	16-Sep-2024	19-Sep-2024	✓	17-Sep-2024	26-Oct-2024	✓
Amber VOC Vial - Sulfuric Acid (EP080) RW	12-Sep-2024	16-Sep-2024	26-Sep-2024	✓	17-Sep-2024	26-Sep-2024	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080) RW	12-Sep-2024	16-Sep-2024	26-Sep-2024	✓	17-Sep-2024	26-Sep-2024	✓

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***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	4	39	**10.26**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	13	**15.38**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	17	**11.76**	**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	13	**15.38**	**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	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	**7.69**	**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-AES	EG005T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	**7.69**	**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	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	**7.69**	**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-AES	EG005T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	**7.69**	**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	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	13	**7.69**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	13	**7.69**	**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-AES	EG005T	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	13	**7.69**	**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.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	

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 Duplicates (DUP)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	2	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	2	**0.00**	**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 (GC/MS - SIM)	EP075(SIM)	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	2	**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).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Asbestos Classification and Quantitation per NEPM 2013	* EA200N	SOIL	Asbestos Classification and Quantitation per NEPM with Confirmation of Identification by AS 4964 - Gravimetric determination of Asbestos Containing Material, Fibrous Asbestos, Asbestos Fines and sample weight and calculation of percentage concentrations per NEPM protocols. Asbestos (Fines and Fibrous FA+AF) is reported as the equivalent weight in the sample received after accounting for sub-sampling (where applicable for the <7mm and/or <2mm fractions).
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 (SnCl2) (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 SnCl2 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)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 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).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique 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.

Analytical Methods	Method	Matrix	Method Descriptions
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl2)(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 SnCl2 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	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)
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.

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	EP RISK	Project №	EP3864	Project Manager	Nathan McGuire
Address	3/19 Bolton Street, Newcastle NSW	Project Name	Anambah PS1	EDD Format (ESdat, EQuIS etc)	Esdat
Contact Name	Nathan McGuire				
Phone №	0422937 410				
Special Directions					
Purchase Order					
Quote ID №					

Sampler(s)	Hayley Erskine
Handed over by	Hayley Erskine
Email for Invoice	accounts@eprisk.com.au
Email for Results	hayley.erskine@eprisk.com.au nathan.mcguire@eprisk.com.au

Analyses
Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing

BTOC

Containers
Change container type & size if necessary

250 mL Glass Jar | 250mL Plastic Bag (Asbestos) | 125mL Plastic | 250mL Plastic (PFAS)

Required Turnaround Time (TAT)
Default will be 5 days if not ticked

♦Surcharge will apply
☐ Overnight (reporting by 9am)♦
☐ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3 days♦
☑ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)		Sample Comments / Dangerous Goods Hazard Warning
1	QC02	12.9.24	S	X	
2					
3					
4					
5					
6					
7					
8					
9					
10					
	Total Counts				

Method of Shipment: ☐ Courier (#) ☐ Hand Delivered ☐ Postal | Name | Signature | Date | Time

Eurofins | mgt Laboratory Use Only											
	Received By	JRandall	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	12/9	Time	4:05	Temperature	6.2
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Report №	1138890

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370

Eurofins ProMicro Pty Ltd

ABN: 47 009 120 549

Perth ProMicro
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name: EP Risk Management (Newcastle)
Contact name: Nathan McGuire
Project name: ANAMBAH PSI
Project ID: EP3864
Turnaround time: 5 Day
Date/Time received Sep 12, 2024 4:05 PM
Eurofins reference 1138890

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.

X Split sample sent to requested external lab.

X Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

Contact

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

Bonnie Pu on phone : or by email: BonniePu@eurofins.com

Results will be delivered electronically via email to Nathan McGuire - nathan.mcguire@eprisk.com.au.

Note: A copy of these results will also be delivered to the general EP Risk Management (Newcastle) email address.

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Company Name: EP Risk Management (Newcastle)
Address: 80 Mount Street,
North Sydney
NSW 2060

Project Name: ANAMBAH PSI
Project ID: EP3864

Order No.:
Report #: 1138890
Phone: 02 99225021
Fax:

Received: Sep 12, 2024 4:05 PM
Due: Sep 19, 2024
Priority: 5 Day
Contact Name: Nathan McGuire

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Moisture Set	Suite B10C: M8/BTEX/TRH/PAH/Phenol/OCP/OPP/PCB
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	QC02	Sep 12, 2024		Soil	N24-Se0033739	X	X
Test Counts						1	1

EP Risk Management (NSW)
80 Mount Street,
North Sydney
NSW 2060

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: **Nathan McGuire**

Report **1138890-S**
Project name ANAMBAH PSI
Project ID EP3864
Received Date Sep 12, 2024

Client Sample ID			**QC02**
Sample Matrix			**Soil**
Eurofins Sample No.			**N24-Se0033739**
Date Sampled			**Sep 12, 2024**
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	%	98
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
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5

Client Sample ID			QC02
Sample Matrix			Soil
Eurofins Sample No.			N24-Se0033739
Date Sampled			Sep 12, 2024
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	76
p-Terphenyl-d14 (surr.)	1	%	83
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	%	64
Tetrachloro-m-xylene (surr.)	1	%	75
Organophosphorus Pesticides			
Azinphos-methyl	0.2	mg/kg	< 0.2
Bolstar	0.2	mg/kg	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2
Coumaphos	2	mg/kg	< 2
Demeton-S	0.2	mg/kg	< 0.2
Demeton-O	0.2	mg/kg	< 0.2
Diazinon	0.2	mg/kg	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2
Dimethoate	0.2	mg/kg	< 0.2
Disulfoton	0.2	mg/kg	< 0.2
EPN	0.2	mg/kg	< 0.2
Ethion	0.2	mg/kg	< 0.2

Client Sample ID			QC02
Sample Matrix			Soil
Eurofins Sample No.			N24-Se0033739
Date Sampled			Sep 12, 2024
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Ethoprop	0.2	mg/kg	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2
Fenthion	0.2	mg/kg	< 0.2
Malathion	0.2	mg/kg	< 0.2
Merphos	0.2	mg/kg	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2
Mevinphos	0.2	mg/kg	< 0.2
Monocrotophos	2	mg/kg	< 2
Naled	0.2	mg/kg	< 0.2
Omethoate	2	mg/kg	< 2
Phorate	0.2	mg/kg	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2
Ronnel	0.2	mg/kg	< 0.2
Terbufos	0.2	mg/kg	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2
Tokuthion	0.2	mg/kg	< 0.2
Trichloronate	0.2	mg/kg	< 0.2
Triphenylphosphate (surr.)	1	%	72
Polychlorinated Biphenyls			
Aroclor-1016	0.1	mg/kg	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1
Total PCB*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	64
Tetrachloro-m-xylene (surr.)	1	%	75
Phenols (Halogenated)			
2-Chlorophenol	0.5	mg/kg	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	< 1
2.4.6-Trichlorophenol	1	mg/kg	< 1
2.6-Dichlorophenol	0.5	mg/kg	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	< 1
Pentachlorophenol	1	mg/kg	< 1
Tetrachlorophenols - Total	10	mg/kg	< 10
Total Halogenated Phenol*	1	mg/kg	< 1
Phenols (non-Halogenated)			
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5
2-Nitrophenol	1	mg/kg	< 1
2.4-Dimethylphenol	0.5	mg/kg	< 0.5
2.4-Dinitrophenol	5	mg/kg	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2

Client Sample ID			QC02
Sample Matrix			Soil
Eurofins Sample No.			N24-Se0033739
Date Sampled			Sep 12, 2024
Test/Reference	LOR	Unit	
Phenols (non-Halogenated)			
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4
Total cresols*	0.5	mg/kg	< 0.5
4-Nitrophenol	5	mg/kg	< 5
Dinoseb	20	mg/kg	< 20
Phenol	0.5	mg/kg	< 0.5
Phenol-d6 (surr.)	1	%	70
Total Non-Halogenated Phenol*	20	mg/kg	< 20
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
Heavy Metals			
Arsenic	2	mg/kg	3.6
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	< 5
Copper	5	mg/kg	< 5
Lead	5	mg/kg	5.4
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	< 5
Zinc	5	mg/kg	8.0
Sample Properties			
% Moisture	1	%	11

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	Sep 18, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Sep 18, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Sep 18, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Sep 18, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Sep 18, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	Sep 18, 2024	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	Sep 18, 2024	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Phenols (Halogenated)	Sydney	Sep 18, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Sydney	Sep 18, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Sep 18, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Sydney	Sep 18, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Sep 13, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794 & 2780	Site# 25079

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IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: EP Risk Management (Newcastle)
Address: 80 Mount Street,
North Sydney
NSW 2060

Project Name: ANAMBAH PSI
Project ID: EP3864

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Received: Sep 12, 2024 4:05 PM
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Contact Name: Nathan McGuire

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Moisture Set	Suite B10C: M8/BTEX/TRH/PAH/Phenol/OCP/OPP/PCB
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	QC02	Sep 12, 2024		Soil	N24-Se0033739	X	X
Test Counts						1	1

Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

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

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

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-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 6.0
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	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							
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	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	98			70-130	Pass	
TRH C10-C14	%	96			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	113			70-130	Pass	
Toluene	%	114			70-130	Pass	
Ethylbenzene	%	118			70-130	Pass	
m&p-Xylenes	%	122			70-130	Pass	
o-Xylene	%	120			70-130	Pass	
Xylenes - Total*	%	121			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	111			70-130	Pass	
TRH C6-C10	%	101			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Acenaphthene	%	92			70-130	Pass	
Acenaphthylene	%	86			70-130	Pass	
Anthracene	%	89			70-130	Pass	
Benz(a)anthracene	%	99			70-130	Pass	
Benzo(a)pyrene	%	99			70-130	Pass	
Benzo(b&j)fluoranthene	%	100			70-130	Pass	
Benzo(g.h.i)perylene	%	111			70-130	Pass	
Benzo(k)fluoranthene	%	98			70-130	Pass	
Chrysene	%	101			70-130	Pass	
Dibenz(a.h)anthracene	%	112			70-130	Pass	
Fluoranthene	%	93			70-130	Pass	
Fluorene	%	94			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	112			70-130	Pass	
Naphthalene	%	89			70-130	Pass	
Phenanthrene	%	96			70-130	Pass	
Pyrene	%	92			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	94			70-130	Pass	
4.4'-DDD	%	92			70-130	Pass	
4.4'-DDE	%	101			70-130	Pass	
4.4'-DDT	%	109			70-130	Pass	
Aldrin	%	94			70-130	Pass	
b-HCH	%	100			70-130	Pass	
d-HCH	%	101			70-130	Pass	
Dieldrin	%	92			70-130	Pass	
Endosulfan I	%	91			70-130	Pass	
Endosulfan II	%	95			70-130	Pass	
Endosulfan sulphate	%	99			70-130	Pass	
Endrin	%	104			70-130	Pass	
Endrin ketone	%	96			70-130	Pass	
Heptachlor	%	104			70-130	Pass	
Heptachlor epoxide	%	92			70-130	Pass	
Hexachlorobenzene	%	99			70-130	Pass	
Methoxychlor	%	110			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	127			70-130	Pass	
Dimethoate	%	126			70-130	Pass	
Ethion	%	110			70-130	Pass	
Fenitrothion	%	115			70-130	Pass	
Methyl parathion	%	126			70-130	Pass	
Mevinphos	%	116			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	90			70-130	Pass	
Aroclor-1260	%	97			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	89			25-140	Pass	
2.4-Dichlorophenol	%	95			25-140	Pass	
2.4.5-Trichlorophenol	%	79			25-140	Pass	
2.4.6-Trichlorophenol	%	93			25-140	Pass	
2.6-Dichlorophenol	%	92			25-140	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4-Chloro-3-methylphenol	%	89			25-140	Pass	
Pentachlorophenol	%	79			25-140	Pass	
Tetrachlorophenols - Total	%	82			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	120			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	111			25-140	Pass	
2-Nitrophenol	%	92			25-140	Pass	
2.4-Dimethylphenol	%	93			25-140	Pass	
2-Methylphenol (o-Cresol)	%	90			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	95			25-140	Pass	
4-Nitrophenol	%	95			25-140	Pass	
Dinoseb	%	111			25-140	Pass	
Phenol	%	91			25-140	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	94			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			80-120	Pass	
Cadmium	%	97			80-120	Pass	
Chromium	%	98			80-120	Pass	
Copper	%	98			80-120	Pass	
Lead	%	96			80-120	Pass	
Mercury	%	99			80-120	Pass	
Nickel	%	97			80-120	Pass	
Zinc	%	98			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 C6-C9	S24-Se0034424	NCP	%	78			70-130	Pass	
TRH C10-C14	N24-Se0037582	NCP	%	87			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S24-Se0034424	NCP	%	91			70-130	Pass	
Toluene	S24-Se0034424	NCP	%	91			70-130	Pass	
Ethylbenzene	S24-Se0034424	NCP	%	95			70-130	Pass	
m&p-Xylenes	S24-Se0034424	NCP	%	101			70-130	Pass	
o-Xylene	S24-Se0034424	NCP	%	96			70-130	Pass	
Xylenes - Total*	S24-Se0034424	NCP	%	99			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S24-Se0034424	NCP	%	91			70-130	Pass	
TRH C6-C10	S24-Se0034424	NCP	%	83			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	N24-Se0037582	NCP	%	77			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	N24-Se0033739	CP	%	102			75-125	Pass	
Cadmium	N24-Se0033739	CP	%	95			75-125	Pass	
Chromium	N24-Se0033739	CP	%	98			75-125	Pass	
Copper	N24-Se0033739	CP	%	92			75-125	Pass	
Lead	N24-Se0033739	CP	%	95			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Mercury	N24-Se0033739	CP	%	95			75-125	Pass	
Nickel	N24-Se0033739	CP	%	91			75-125	Pass	
Zinc	N24-Se0033739	CP	%	94			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	S24-Se0034436	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	N24-Se0033739	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	N24-Se0033739	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	N24-Se0033739	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S24-Se0034436	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S24-Se0034436	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S24-Se0034436	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S24-Se0034436	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S24-Se0034436	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S24-Se0034436	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S24-Se0034436	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S24-Se0034436	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	N24-Se0033739	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endrin aldehyde	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	N24-Se0033739	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	N24-Se0033739	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	N24-Se0033739	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	N24-Se0033739	CP	mg/kg	< 0.2	0.3	200	30%	Fail	Q15
Omethoate	N24-Se0033739	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	N24-Se0033739	CP	mg/kg	< 0.2	0.7	160	30%	Fail	Q15
Ronnel	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	N24-Se0033739	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	N24-Se0033739	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	N24-Se0033739	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	N24-Se0033739	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	N24-Se0033739	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	N24-Se0033739	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	N24-Se0033739	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	N24-Se0033739	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	N24-Se0033739	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	N24-Se0033739	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	N24-Se0033739	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	N24-Se0033739	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	N24-Se0033739	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	N24-Se0033739	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	N24-Se0033739	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	N24-Se0033739	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	N24-Se0033739	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	N24-Se0033739	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	N24-Se0033739	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	N24-Se0033739	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	N24-Se0033739	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	N24-Se0033739	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	N24-Se0033739	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	N24-Se0033739	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	N24-Se0033739	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	N24-Se0037574	NCP	mg/kg	6.5	5.2	22	30%	Pass	
Cadmium	N24-Se0037574	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	N24-Se0037574	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	N24-Se0037574	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Lead	N24-Se0037574	NCP	mg/kg	6.1	6.4	4.0	30%	Pass	
Mercury	N24-Se0037574	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	N24-Se0037574	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Zinc	N24-Se0037574	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-Se0034402	NCP	%	7.2	8.0	11	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
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:

Bonnie Pu	Analytical Services Manager
Fang Yee Tan	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Sample Properties
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
Managing Director

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.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

REBATCH REQUEST

Workorder / Client code /	Copy + Paste Header Information from GEL		**CS Contact: Jason Dighton**
Project:	ALS Workorder ES2429934, Client EPRISK, Project Anambah PSI		Additional Information:
Project Manager:	Nathan McGuire ***Please include this rebatch PM plus all report recipients as per original workorder***		
Date samples rec'd:	12/09/2024 1553		
Date instructions rec'd:	26/09/2024 1548		
Rebatch due date:	Tuesday, 1 October 2024	FTAT approved? NO	
Due date surcharge:	**3 DAY**		

Sample information							Analysis: Standard					Analysis: Leach					
New Lab ID	Client ID	Sampling Date / Time	Previous Work Order Reference	Previous ALS ID	Tray Number(s)	Container	Managed Moisture	Cr(VI) - EG048G									Shortest Holding time expiry
1	TP02L_0.1	12/09/2024 0:00	ES2429934	004	S578 to S560	Soil glass	YES	X									

CERTIFICATE OF ANALYSIS

Work Order	: **ES2431730**	Page	: 1 of 2
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Contact	: Jason Dighton
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 4913 5650	Telephone	: +61-2-8784 8555
Project	: Anambah PSI	Date Samples Received	: 12-Sep-2024 15:53
Order number	: EP3864	Date Analysis Commenced	: 30-Sep-2024
C-O-C number	: ----	Issue Date	: 01-Oct-2024 10:58
Sampler	: Hayley Erskine		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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

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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

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 Contract 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
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- This is a rebatch of ES2429934.

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)				Sample ID	**TP02L_0.1**	**----**	**----**	**----**	**----**
				Sampling date / time	12-Sep-2024 00:00	----	----	----	----
Compound	*CAS Number*	*LOR*	*Unit*		**ES2431730-001**	--------	--------	--------	--------
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	0.1	%		**27.6**	**----**	**----**	**----**	**----**
EG048: Hexavalent Chromium (Alkaline Digest)									
Hexavalent Chromium	18540-29-9	0.5	mg/kg		<0.5	**----**	**----**	**----**	**----**

QUALITY CONTROL REPORT

Work Order	: **ES2431730**	Page	: 1 of 3
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Contact	: Jason Dighton
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 4913 5650	Telephone	: +61-2-8784 8555
Project	: Anambah PSI	Date Samples Received	: 12-Sep-2024
Order number	: EP3864	Date Analysis Commenced	: 30-Sep-2024
C-O-C number	: ----	Issue Date	: 01-Oct-2024
Sampler	: Hayley Erskine		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 1		
No. of samples analysed	: 1		

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

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 Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW

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.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
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
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 6086592)									
ES2430718-001	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 6086592)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	20 mg/kg	100	68.0	114

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 6086592)							
ES2430718-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	78.2	70.0	130
ES2430718-002	Anonymous	EG048G: Hexavalent Chromium	18540-29-9	20 mg/kg	70.3	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2431730**	Page	: 1 of 4
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Telephone	: +61-2-8784 8555
Project	: Anambah PSI	Date Samples Received	: 12-Sep-2024
Site	: ----	Issue Date	: 01-Oct-2024
Sampler	: Hayley Erskine	No. of samples received	: 1
Order number	: EP3864	No. of samples analysed	: 1

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, where applicable to the methodology, NO surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

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: **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)							
Lab Split: Managed Moisture for Dry Weight Det. (EA055)							
TP02L_0.1	**12-Sep-2024**	**----**	----	**----**	**30-Sep-2024**	11-Mar-2025	✓
EG048: Hexavalent Chromium (Alkaline Digest)							
Soil Glass Jar - Unpreserved (EG048G)							
TP02L_0.1	**12-Sep-2024**	**30-Sep-2024**	10-Oct-2024	✓	**30-Sep-2024**	07-Oct-2024	✓

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***	*Evaluation*	
Laboratory Duplicates (DUP)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	5	**40.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	5	**40.00**	**10.00**	✓	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).
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	SOIL	In house: Referenced to USEPA SW846, Method 3060. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM Schedule B(3)

Preparation Methods	*Method*	*Matrix*	*Method Descriptions*
Alkaline digestion for Hexavalent Chromium	EG048PR	SOIL	In house: Referenced to USEPA SW846, Method 3060A.

Phoung Tran

From: Mathew Cheshire <mathew.cheshire@eprisk.com.au>
Sent: Monday, 29 April 2024 9:16 AM
To: Jason Dighton
Cc: Nathan Mcguire
Subject: [EXTERNAL] - FW: SRN for ALS Workorder : ES2413458 | ES2413401
Attachments: ES2413458_0_SRN_240426222846.pdf; ES2413458_COC.pdf; ES2413401_0_SRN_240426222521.pdf

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Hi Jason, How are you ?

Sorry to be a pain but can I change a few things with this analysis:

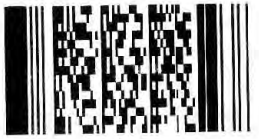
Cancel the s-16 analysis on all samples EXCEPT for the following:

ES2413401
36 TP08-L_0.1
41 TP09-P_0.1
63 TP14-P_0.1
88 TP19-L_0.1
97 TP21-P_0.1
23 TP27-L_0.1 ES2413458
48 TP33-P_0.1
62 TP36-L_0.1
70 TP38-P_0.1
8 TP24-P_0.1

Analyse the following for Metals, OCP and OPP:

ES2413401
1 TP01-L_0.1
6 TP02-P_0.0.1
11 TP03-L_0.1

Environmental Division
Sydney
Work Order Reference
ES2413401



Telephone : +61-2-8784 8555

TP04-P_0.1
TP05-P_0.1
TP06-L_0.1
TP07-P_0.1
TP10-P_0.1
TP11-L_0.1
TP12-P_0.1
TP13-L_0.1
TP15-P_0.1
TP16-L_0.1
TP17-L_0.1
TP18-L_0.1
TP20-P_0.1
TP22-P_0.1
TP23-L_0.1 ES2413458
TP25-P_0.1
TP26-P_0.1
TP28-P_0.1
TP29-P_0.1
TP30-P_0.1
TP31-L_0.1
TP32-P_0.1
TP34-L_0.1
TP35-P_0.1
TP37-P_0.1
TP39-L_0.1
TP40-P_0.1

Change the analysis on the following samples to a NEPM Screen for soil classification (P-22):

NEPM_0.2-0.5
NEPM_0.1

Cancel EA200F Analysis for the following:

ES2413401
TP18-L_0.1
TP19-L_0.1
TP09-P_0.1

Project name is Gosforth not Gosford.

Contact Number is (02) 4048 2845

Thanks very much Jason.

Mathew Cheshire
Graduate Environmental Scientist
M 0431165533 | E Mathew.Cheshire@eprisk.com.au

View my profile on LinkedIn

EP Risk Management Pty Ltd | ABN 81 147 147 591
3/19 Bolton Street | Newcastle NSW 2300
T +61240482845 | W eprisk.com.au

EP RISK | NEWCASTLE SYDNEY MELBOURNE

From: Nathan Mcguire <nathan.mcguire@eprisk.com.au>
Sent: Friday, April 26, 2024 10:49 PM
To: Mathew Cheshire <mathew.cheshire@eprisk.com.au>
Subject: Fwd: SRN for ALS Workorder : ES2413458 | Your Reference: Gosford

Hey Mat,

SRN 2 of 2 attached.

Same as before can you check missing and extra samples.

The NEPM samples are being analysed for asbestos (the lab think it means NEPM asbestos, but you need to give them the suite code for the NEPM screen for soil classification). And make sure the number of samples and analyses matches the proposal, again there's too many S-16 suites.

From: angel-no-reply@alsglobal.com <angel-no-reply@alsglobal.com>
Sent: Friday, April 26, 2024 10:33 pm
To: Nathan Mcguire <nathan.mcguire@eprisk.com.au>
Subject: SRN for ALS Workorder : ES2413458 | Your Reference: Gosford

Deliverables for ALS Workorder ES2413458

Project: Gosford

Dear NATHAN MCGUIRE (EPRISK),

Please find enclosed the following deliverables for **ES2413458**:

- ES2413458_0_SRN_240426222846.pdf
- ES2413458_COC.pdf

Report Recipients

- NATHAN.MCGUIRE (EPRISK)
  - ES2413458_0_SRN_240426222846.pdf (Email)
  - ES2413458_COC.pdf (Email)

right solutions.
right partner.

CERTIFICATE OF ANALYSIS

Work Order	: **ES2413401**	Page	: 1 of 28
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Contact	: Jason Dighton
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 4913 5650	Telephone	: +61-2-8784 8555
Project	: Gosford	Date Samples Received	: 24-Apr-2024 16:15
Order number	: EP3627	Date Analysis Commenced	: 29-Apr-2024
C-O-C number	: ----	Issue Date	: 03-May-2024 11:09
Sampler	: MC		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 105		
No. of samples analysed	: 22		

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

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
- Descriptive 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*
Alana Smylie	Team Leader - Asbestos	Newcastle - Asbestos, Mayfield West, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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 Contract 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
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- 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.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above 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.
- EA200N: Asbestos weights and percentages are not covered under the Scope of NATA Accreditation.
  Weights of Asbestos are based on extracted bulk asbestos, fibre bundles, and/or ACM and do not include respirable fibres (if present)
  The Asbestos (Fines and Fibrous) weight is calculated from the extracted Fibrous Asbestos and Asbestos Fines as an equivalent weight of 100% Asbestos
  Percentages for Asbestos content in ACM are based on the 2013 NEPM default values.
  All calculations of percentage Asbestos under this method are approximate and should be used as a guide only.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200N: ALS laboratory procedures and methods used for the identification and quantitation of asbestos are consistent with AS4964-2004 and the requirements of the 2013 NEPM for Assessment of Site Contamination
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP01-L_0.1	TP02-P_0.1	TP03-L_0.1	TP04-P_0.1	TP05-P_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413401-001	ES2413401-006	ES2413401-011	ES2413401-016	ES2413401-021
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	29.1	12.0	18.5	18.5	25.4
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	----	----
Asbestos Type	1332-21-4	-	--	-	-	-	----	----
Asbestos (Trace)	1332-21-4	-	-	No	No	No	----	----
Sample weight (dry)	----	0.01	g	227	315	327	----	----
Synthetic Mineral Fibre	----	-	--	No	No	No	----	----
Organic Fibre	----	-	--	No	No	No	----	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	A. SMYLIE	A. SMYLIE	----	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	<0.0004	<0.0004	----	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	<0.001	<0.001	----	----
ø Weight Used for % Calculation	----	0.0001	kg	0.227	0.315	0.327	----	----
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	<0.0004	<0.0004	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	10	8	5	12	5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	45	28	10	33	107
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	37
Lead	7439-92-1	5	mg/kg	14	11	6	11	9
Nickel	7440-02-0	2	mg/kg	9	5	4	6	101
Zinc	7440-66-6	5	mg/kg	23	6	12	12	42
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP01-L_0.1	TP02-P_0.1	TP03-L_0.1	TP04-P_0.1	TP05-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-001	ES2413401-006	ES2413401-011	ES2413401-016	ES2413401-021
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-29-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP01-L_0.1	TP02-P_0.1	TP03-L_0.1	TP04-P_0.1	TP05-P_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413401-001	ES2413401-006	ES2413401-011	ES2413401-016	ES2413401-021
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**99.3**	**93.3**	**88.4**	**106**	**93.8**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**105**	**96.3**	**91.8**	**113**	**100**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP06-P_0.1 received as TP06-L_0.1	TP07-P_0.1	TP08-L_0.1	TP09-P_0.1	TP10-P_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413401-026	ES2413401-031	ES2413401-036	ES2413401-041	ES2413401-046
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**21.4**	**27.9**	**27.2**	**25.2**	**25.6**
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	**No**	**----**	**No**	**----**	**No**
Asbestos Type	1332-21-4	-	--	**-**	**----**	**-**	**----**	**-**
Asbestos (Trace)	1332-21-4	-	-	**No**	**----**	**No**	**----**	**No**
Sample weight (dry)	----	0.01	g	**218**	**----**	**243**	**----**	**225**
Synthetic Mineral Fibre	----	-	--	**No**	**----**	**No**	**----**	**No**
Organic Fibre	----	-	--	**No**	**----**	**No**	**----**	**No**
APPROVED IDENTIFIER:	----	-	--	**A. SMYLIE**	**----**	**A. SMYLIE**	**----**	**A. SMYLIE**
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	<0.0004	**----**	<0.0004	**----**	<0.0004
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	<0.001	**----**	<0.001	**----**	<0.001
ø Weight Used for % Calculation	----	0.0001	kg	**0.218**	**----**	**0.243**	**----**	**0.225**
ø Fibrous Asbestos >7mm	----	0.0004	g	<0.0004	**----**	<0.0004	**----**	<0.0004
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**6**	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**40**	**106**	**83**	**83**	**88**
Copper	7440-50-8	5	mg/kg	**12**	**36**	**21**	**21**	**28**
Lead	7439-92-1	5	mg/kg	**10**	**6**	**9**	**11**	**9**
Nickel	7440-02-0	2	mg/kg	**19**	**36**	**39**	**33**	**40**
Zinc	7440-66-6	5	mg/kg	**27**	**31**	**25**	**15**	**30**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	**----**	**----**	<0.1	<0.1	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06-P_0.1 received as TP06-L_0.1	TP07-P_0.1	TP08-L_0.1	TP09-P_0.1	TP10-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-026	ES2413401-031	ES2413401-036	ES2413401-041	ES2413401-046
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-29-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06-P_0.1 received as TP06-L_0.1	TP07-P_0.1	TP08-L_0.1	TP09-P_0.1	TP10-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-026	ES2413401-031	ES2413401-036	ES2413401-041	ES2413401-046
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	----	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg		----	----	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg		----	----	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg		----	----	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg		----	----	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg		----	----	<0.5	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP06-P_0.1 received as TP06-L_0.1	TP07-P_0.1	TP08-L_0.1	TP09-P_0.1	TP10-P_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413401-026	ES2413401-031	ES2413401-036	ES2413401-041	ES2413401-046
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Fluoranthene	206-44-0	0.5	mg/kg	----	----	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	----	----	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	----	----	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	----	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	----	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	**0.6**	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	**1.2**	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	----	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg	----	----	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg	----	----	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg	----	----	<100	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	----	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	----	<10	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	----	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg	----	----	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg	----	----	<100	<100	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP06-P_0.1 received as TP06-L_0.1	TP07-P_0.1	TP08-L_0.1	TP09-P_0.1	TP10-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-026	ES2413401-031	ES2413401-036	ES2413401-041	ES2413401-046
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	mg/kg		----	----	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	<50	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	<50	<50	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg		----	----	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	<0.2	<0.2	----
^ Total Xylenes	----	0.5	mg/kg		----	----	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg		----	----	<1	<1	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	**77.9**	**89.2**	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**93.1**	**101**	**79.7**	**83.2**	**93.9**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**97.2**	**104**	**77.3**	**89.0**	**96.4**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	**93.5**	**71.8**	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	**91.2**	**65.5**	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	**55.1**	**38.0**	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	**88.4**	**68.4**	----
Anthracene-d10	1719-06-8	0.5	%		----	----	**103**	**75.7**	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	**100**	**73.6**	----

Analytical Results

Sub-Matrix: **SOIL**
(Matrix: **SOIL**)

Compound	CAS Number	LOR	Unit	Sample ID	TP06-P_0.1 received as TP06-L_0.1	TP07-P_0.1	TP08-L_0.1	TP09-P_0.1	TP10-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
					ES2413401-026	ES2413401-031	ES2413401-036	ES2413401-041	ES2413401-046
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	**84.1**	**72.5**	----
Toluene-D8	2037-26-5	0.2	%		----	----	**79.4**	**70.0**	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	**85.0**	**77.0**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP11-L_0.1	TP12-P_0.1	TP13-L_0.1	TP14-P_0.1	TP15-P_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413401-051	ES2413401-056	ES2413401-058	ES2413401-063	ES2413401-068
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**25.9**	**24.1**	**25.0**	**29.0**	**26.8**
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	----	----	**No**	----
Asbestos Type	1332-21-4	-	--	----	----	----	-	----
Asbestos (Trace)	1332-21-4	-	-	----	----	----	**No**	----
Sample weight (dry)	----	0.01	g	----	----	----	**261**	----
Synthetic Mineral Fibre	----	-	--	----	----	----	**No**	----
Organic Fibre	----	-	--	----	----	----	**No**	----
APPROVED IDENTIFIER:	----	-	--	----	----	----	**A. SMYLIE**	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	----	----	----	<0.0004	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	----	----	----	<0.001	----
ø Weight Used for % Calculation	----	0.0001	kg	----	----	----	**0.261**	----
ø Fibrous Asbestos >7mm	----	0.0004	g	----	----	----	<0.0004	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**71**	**74**	**98**	**89**	**94**
Copper	7440-50-8	5	mg/kg	**25**	**26**	**36**	**40**	**33**
Lead	7439-92-1	5	mg/kg	**9**	**8**	**6**	<5	<5
Nickel	7440-02-0	2	mg/kg	**83**	**85**	**49**	**73**	**55**
Zinc	7440-66-6	5	mg/kg	**30**	**31**	**26**	**28**	**26**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11-L_0.1	TP12-P_0.1	TP13-L_0.1	TP14-P_0.1	TP15-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-051	ES2413401-056	ES2413401-058	ES2413401-063	ES2413401-068
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP11-L_0.1	TP12-P_0.1	TP13-L_0.1	TP14-P_0.1	TP15-P_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413401-051	ES2413401-056	ES2413401-058	ES2413401-063	ES2413401-068
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11-L_0.1	TP12-P_0.1	TP13-L_0.1	TP14-P_0.1	TP15-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-051	ES2413401-056	ES2413401-058	ES2413401-063	ES2413401-068
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Pyrene	129-00-0	0.5	mg/kg		----	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg		----	----	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	----	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	----	----	<0.5	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		----	----	----	<0.5	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		----	----	----	<0.5	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		----	----	----	**0.6**	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		----	----	----	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	----	----	<10	----
C10 - C14 Fraction	----	50	mg/kg		----	----	----	<50	----
C15 - C28 Fraction	----	100	mg/kg		----	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	<100	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		----	----	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	<10	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		----	----	----	<10	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	<100	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		----	----	----	<50	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11-L_0.1	TP12-P_0.1	TP13-L_0.1	TP14-P_0.1	TP15-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-051	ES2413401-056	ES2413401-058	ES2413401-063	ES2413401-068
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	<50	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	<0.2	----
^ Total Xylenes	----	0.5	mg/kg		----	----	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	<1	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	**87.5**	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**89.8**	**95.4**	**89.8**	**87.1**	**98.0**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**91.6**	**96.2**	**93.0**	**86.1**	**97.6**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	**78.5**	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	**75.2**	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	----	**48.5**	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	**76.8**	----
Anthracene-d10	1719-06-8	0.5	%		----	----	----	**91.4**	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	----	**88.0**	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	----	**91.3**	----
Toluene-D8	2037-26-5	0.2	%		----	----	----	**88.0**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP11-L_0.1	TP12-P_0.1	TP13-L_0.1	TP14-P_0.1	TP15-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-051	ES2413401-056	ES2413401-058	ES2413401-063	ES2413401-068
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		**----**	**----**	**----**	**88.0**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP16-L_0.1	TP17-L_0.1	TP18-L_0.1	TP19-L_0.1	TP20-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-073	ES2413401-078	ES2413401-083	ES2413401-088	ES2413401-093
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		24.8	21.7	22.4	28.9	28.7
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		69	68	50	84	97
Copper	7440-50-8	5	mg/kg		22	12	10	31	37
Lead	7439-92-1	5	mg/kg		7	9	10	7	6
Nickel	7440-02-0	2	mg/kg		45	52	19	50	68
Zinc	7440-66-6	5	mg/kg		28	20	16	32	57
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	<0.1	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP16-L_0.1	TP17-L_0.1	TP18-L_0.1	TP19-L_0.1	TP20-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-073	ES2413401-078	ES2413401-083	ES2413401-088	ES2413401-093
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP16-L_0.1	TP17-L_0.1	TP18-L_0.1	TP19-L_0.1	TP20-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-073	ES2413401-078	ES2413401-083	ES2413401-088	ES2413401-093
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg		----	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg		----	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg		----	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg		----	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg		----	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg		----	----	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg		----	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg		----	----	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	----	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	----	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	----	----	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	----	----	**1.2**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP16-L_0.1	TP17-L_0.1	TP18-L_0.1	TP19-L_0.1	TP20-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-073	ES2413401-078	ES2413401-083	ES2413401-088	ES2413401-093
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	----	----	<10	----
C10 - C14 Fraction	----	50	mg/kg		----	----	----	<50	----
C15 - C28 Fraction	----	100	mg/kg		----	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg		----	----	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	<10	----
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	----	----	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	<50	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg		----	----	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	----	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	----	----	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg		----	----	----	<0.2	----
^ Total Xylenes	----	0.5	mg/kg		----	----	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg		----	----	----	<1	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	**97.1**	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**94.0**	**90.1**	**87.7**	**92.0**	**84.8**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP16-L_0.1	TP17-L_0.1	TP18-L_0.1	TP19-L_0.1	TP20-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413401-073	ES2413401-078	ES2413401-083	ES2413401-088	ES2413401-093
					Result	Result	Result	Result	Result
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**100**	**91.4**	**90.5**	**93.0**	**84.9**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	----	----	**72.2**	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	----	----	**69.8**	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	----	----	**47.3**	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	----	----	**70.9**	----
Anthracene-d10	1719-06-8	0.5	%		----	----	----	**93.4**	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	----	----	**89.3**	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	----	----	**105**	----
Toluene-D8	2037-26-5	0.2	%		----	----	----	**106**	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	----	----	**96.2**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP21-P_0.1	TP22-P_0.1	----	----	----
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2413401-097	ES2413401-102	--------	--------	--------
					Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**30.0**	**22.6**	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	**5**	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg		**118**	**34**	----	----	----
Copper	7440-50-8	5	mg/kg		**36**	**7**	----	----	----
Lead	7439-92-1	5	mg/kg		**9**	**10**	----	----	----
Nickel	7440-02-0	2	mg/kg		**43**	**13**	----	----	----
Zinc	7440-66-6	5	mg/kg		**40**	**16**	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP21-P_0.1	TP22-P_0.1	----	----	----
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2413401-097	ES2413401-102	--------	--------	--------
					Result	Result	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	----	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP21-P_0.1	TP22-P_0.1	----	----	----
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2413401-097	ES2413401-102	--------	--------	--------
					Result	Result	----	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued									
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	----	----	----	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	----	----	----	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP21-P_0.1	TP22-P_0.1	----	----	----
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2413401-097	ES2413401-102	--------	--------	--------
					Result	Result	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	----	----	----	----
^ Total Xylenes	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**123**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**122**	**115**	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP21-P_0.1	TP22-P_0.1	----	----	----
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2413401-097	ES2413401-102	--------	--------	--------
					Result	Result	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**131**	**130**	**----**	**----**	**----**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**99.7**	**----**	**----**	**----**	**----**
2-Chlorophenol-D4	93951-73-6	0.5	%		**99.8**	**----**	**----**	**----**	**----**
2.4.6-Tribromophenol	118-79-6	0.5	%		**78.8**	**----**	**----**	**----**	**----**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**93.4**	**----**	**----**	**----**	**----**
Anthracene-d10	1719-06-8	0.5	%		**112**	**----**	**----**	**----**	**----**
4-Terphenyl-d14	1718-51-0	0.5	%		**111**	**----**	**----**	**----**	**----**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**77.6**	**94.6**	**----**	**----**	**----**
Toluene-D8	2037-26-5	0.2	%		**73.9**	**85.7**	**----**	**----**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%		**74.7**	**86.5**	**----**	**----**	**----**

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	TP01-L_0.1 - 24-Apr-2024 00:00	Soil sample.
EA200: Description	TP02-P_0.1 - 24-Apr-2024 00:00	Soil sample.
EA200: Description	TP03-L_0.1 - 24-Apr-2024 00:00	Soil sample.
EA200: Description	TP06-P_0.1received as TP06-L_0.1 - 24-Apr-2024 00:00	Soil sample.
EA200: Description	TP08-L_0.1 - 24-Apr-2024 00:00	Soil sample.
EA200: Description	TP10-P_0.1 - 24-Apr-2024 00:00	Soil sample.
EA200: Description	TP14-P_0.1 - 24-Apr-2024 00:00	Soil sample.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
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	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(SOIL) EA200N: Asbestos Quantification (non-NATA)

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

QUALITY CONTROL REPORT

Work Order	: **ES2413401**	Page	: 1 of 20
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Contact	: Jason Dighton
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 4913 5650	Telephone	: +61-2-8784 8555
Project	: Gosford	Date Samples Received	: 24-Apr-2024
Order number	: EP3627	Date Analysis Commenced	: 29-Apr-2024
C-O-C number	: ----	Issue Date	: 03-May-2024
Sampler	: MC		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 105		
No. of samples analysed	: 22		

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

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 Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

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*
Alana Smylie	Team Leader - Asbestos	Newcastle - Asbestos, Mayfield West, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
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
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5755590)									
ES2413330-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	16	17	6.2	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	10	10	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	7	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	18	20	5.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	22	22	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	28	32	15.2	No Limit
ES2413348-022	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	9	8	18.8	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	13	11	16.5	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	6	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	32	21	41.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	34	30	13.2	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	163	169	3.7	0% - 20%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5755592)									
ES2413401-041	TP09-P_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	83	86	2.9	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	33	30	10.6	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	21	20	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	11	11	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5755592) - continued									
ES2413401-041	TP09-P_0.1	EG005T: Zinc	7440-66-6	5	mg/kg	15	17	14.5	No Limit
ES2413401-088	TP19-L_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	84	85	0.0	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	50	49	0.0	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	31	31	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	7	7	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	32	30	5.3	No Limit
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5757401)									
ES2413401-097	TP21-P_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	118	113	4.2	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	43	43	0.0	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	36	35	4.3	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	9	8	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	40	37	6.8	No Limit
ES2413458-040	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	17	13	26.3	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	4	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	<5	22.6	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	8	19.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	19	16	16.6	No Limit
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5755594)									
ES2413330-003	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	20.0	19.8	1.4	0% - 20%
ES2413401-006	TP02-P_0.1	EA055: Moisture Content	----	0.1 (1.0)*	%	12.0	11.9	0.9	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5755595)									
ES2413401-051	TP11-L_0.1	EA055: Moisture Content	----	0.1 (1.0)*	%	25.9	26.2	1.3	0% - 20%
ES2413404-002	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	13.8	13.6	1.5	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5757405)									
ES2413458-003	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	24.6	25.0	1.6	0% - 20%
ES2413458-052	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	19.4	17.5	9.8	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5755591)									
ES2413330-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2413348-022	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.4	0.3	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5755593)									
ES2413401-041	TP09-P_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5755593) - continued									
ES2413401-088	TP19-L_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5757402)									
ES2413401-097	TP21-P_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2413458-040	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 5754520)									
ES2413401-001	TP01-L_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2413401-051	TP11-L_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 5754695)									
ES2413401-097	TP21-P_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 5754519)									
ES2413401-001	TP01-L_0.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2413401-051	TP11-L_0.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 5754519) - continued									
ES2413401-051	TP11-L_0.1	EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 5754694)									
ES2413401-097	TP21-P_0.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 5754519)									
ES2413401-001	TP01-L_0.1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2413401-051	TP11-L_0.1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 5754694)									
ES2413401-097	TP21-P_0.1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 5754518)									
ES2413401-001	TP01-L_0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 5754518) - continued									
ES2413401-001	TP01-L_0.1	EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2413401-051	TP11-L_0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 5754693)									
ES2413627-001	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 5754693) - continued									
ES2413627-001	Anonymous	EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2413401-097	TP21-P_0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5754458)									
ES2413401-001	TP01-L_0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2413401-051	TP11-L_0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5754517)									
ES2413401-001	TP01-L_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2413401-051	TP11-L_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5754692)									
ES2413627-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5754692) - continued									
ES2413627-001	Anonymous	EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2413401-097	TP21-P_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5756923)									
ES2413096-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2413522-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5754458)									
ES2413401-001	TP01-L_0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2413401-051	TP11-L_0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5754517)									
ES2413401-001	TP01-L_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2413401-051	TP11-L_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5754692)									
ES2413627-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2413401-097	TP21-P_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5756923)									
ES2413096-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2413522-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 5754458)									
ES2413401-001	TP01-L_0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2413401-051	TP11-L_0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080: BTEXN (QC Lot: 5754458) - continued									
ES2413401-051	TP11-L_0.1	EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 5756923)									
ES2413096-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2413522-001	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5755590)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	106	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	76.4	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	118	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	102	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	95.7	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	99.0	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	89.4	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5755592)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	98.1	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	83.6	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	115	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	97.8	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	95.4	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	95.7	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	89.2	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5757401)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	113	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	101	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	117	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	104	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	97.2	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	98.1	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	95.5	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5755591)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	105	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5755593)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	93.1	70.0	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5757402)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	102	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5754520)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5754520) - continued								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	99.9	62.0	126
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5754695)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	91.5	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 5754519)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.0	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.6	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.8	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.8	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.3	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.5	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	86.5	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.0	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	100	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.0	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.1	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.5	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.5	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	91.3	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	80.2	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.1	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	81.8	54.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 5754694)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	86.9	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	90.1	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	90.3	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	88.1	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	76.5	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.6	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	84.4	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	77.6	62.0	118

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 5754694) - continued								
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.6	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	86.4	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	94.1	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	89.9	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.3	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.8	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	90.7	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	84.9	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.0	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	84.6	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5754519)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	78.0	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.5	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	100.0	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	80.8	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	87.6	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	83.7	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.2	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.6	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.7	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	81.5	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.1	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.3	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	89.1	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	91.2	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.8	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.9	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	60.7	41.0	123
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5754694)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5754694) - continued								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	82.7	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.0	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	80.8	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.2	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.7	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	86.7	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	84.4	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	83.6	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	82.4	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	79.9	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	83.7	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	85.6	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	82.9	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.2	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	89.2	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.4	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	67.3	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5754518)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	97.5	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	94.2	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	97.4	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	94.0	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	98.6	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	101	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	98.0	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	99.4	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	90.4	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	97.6	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	90.7	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	100.0	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	100	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	103	61.0	121

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5754518) - continued								
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	104	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	101	63.0	121
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5754693)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	95.2	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	90.6	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	94.9	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	92.1	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	94.9	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	99.7	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	92.0	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	95.3	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	88.9	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	98.1	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	92.0	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	96.5	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	95.2	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	86.7	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	82.8	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	82.4	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754458)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	88.2	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754517)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	96.2	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	103	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	105	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754692)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	114	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	108	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	102	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5756923)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	83.1	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754458)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	82.7	72.4	133

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754517)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	102	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	102	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	108	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754692)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	115	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	104	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	97.5	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5756923)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	85.7	72.4	133
EP080: BTEXN (QCLot: 5754458)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	96.5	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	92.1	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	93.0	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	94.8	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	97.5	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	101	78.8	122
EP080: BTEXN (QCLot: 5756923)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	95.4	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	83.3	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	81.7	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	83.7	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	83.7	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	99.3	78.8	122

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5755590)							
ES2413330-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	88.5	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	87.0	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5755590) - continued							
ES2413330-001	Anonymous	EG005T: Chromium	7440-47-3	50 mg/kg	86.6	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	88.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	86.2	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	85.3	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	85.4	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5755592)							
ES2413401-041	TP09-P_0.1	EG005T: Arsenic	7440-38-2	50 mg/kg	73.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	96.4	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	109	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	102	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	95.2	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	87.9	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	97.9	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5757401)							
ES2413401-097	TP21-P_0.1	EG005T: Arsenic	7440-38-2	50 mg/kg	75.3	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	91.5	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	85.7	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	96.9	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	90.0	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	91.2	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	87.8	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5755591)							
ES2413330-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	88.8	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5755593)							
ES2413401-041	TP09-P_0.1	EG035T: Mercury	7439-97-6	5 mg/kg	90.1	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5757402)							
ES2413401-097	TP21-P_0.1	EG035T: Mercury	7439-97-6	5 mg/kg	92.6	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5754520)							
ES2413401-001	TP01-L_0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	97.0	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5754695)							
ES2413401-097	TP21-P_0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	113	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 5754519)							
ES2413401-001	TP01-L_0.1	EP068: gamma-BHC	58-89-9	0.5 mg/kg	92.0	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	115	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	102	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	112	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 5754519) - continued							
ES2413401-001	TP01-L_0.1	EP068: Endrin	72-20-8	2 mg/kg	105	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	106	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 5754694)							
ES2413401-097	TP21-P_0.1	EP068: gamma-BHC	58-89-9	0.5 mg/kg	82.2	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	74.2	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	80.2	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	96.5	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	71.9	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	72.6	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5754519)							
ES2413401-001	TP01-L_0.1	EP068: Diazinon	333-41-5	0.5 mg/kg	95.0	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	99.0	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	98.9	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	97.3	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	81.6	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5754694)							
ES2413401-097	TP21-P_0.1	EP068: Diazinon	333-41-5	0.5 mg/kg	78.3	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	86.0	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	77.1	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	83.2	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	77.3	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5754518)							
ES2413401-001	TP01-L_0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	106	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	112	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5754693)							
ES2413401-097	TP21-P_0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	98.8	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	93.9	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754458)							
ES2413401-001	TP01-L_0.1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	83.1	60.4	142
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754517)							
ES2413401-001	TP01-L_0.1	EP071: C10 - C14 Fraction	----	480 mg/kg	107	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	121	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	110	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754692)							
ES2413401-097	TP21-P_0.1	EP071: C10 - C14 Fraction	----	480 mg/kg	115	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	104	53.0	131

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754692) - continued							
ES2413401-097	TP21-P_0.1	EP071: C29 - C36 Fraction	----	2060 mg/kg	109	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5756923)							
ES2413096-001	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	81.5	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754458)							
ES2413401-001	TP01-L_0.1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	69.9	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754517)							
ES2413401-001	TP01-L_0.1	EP071: >C10 - C16 Fraction	----	860 mg/kg	103	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	122	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	115	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754692)							
ES2413401-097	TP21-P_0.1	EP071: >C10 - C16 Fraction	----	860 mg/kg	104	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	106	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	101	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5756923)							
ES2413096-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	87.4	61.1	142
EP080: BTEXN (QCLot: 5754458)							
ES2413401-001	TP01-L_0.1	EP080: Benzene	71-43-2	2.5 mg/kg	71.0	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	73.1	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	73.4	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	73.8	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	79.1	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	89.7	61.1	115
EP080: BTEXN (QCLot: 5756923)							
ES2413096-001	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	86.4	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	85.4	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	86.2	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	86.4	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	86.3	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	94.7	61.1	115

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2413401**	Page	: 1 of 8
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Telephone	: +61-2-8784 8555
Project	: Gosford	Date Samples Received	: 24-Apr-2024
Site	: ----	Issue Date	: 03-May-2024
Sampler	: MC	No. of samples received	: 105
Order number	: EP3627	No. of samples analysed	: 22

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.**
- **Surrogate recovery outliers exist for all regular sample matrices - please see following pages for full details.**

Outliers : Analysis Holding Time Compliance

- **NO Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

- **NO Quality Control Sample Frequency Outliers exist.**

Regular Sample Surrogates

Sub-Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP075(SIM)S: Phenolic Compound Surrogates	ES2413401-041	TP09-P_0.1	**2-Chlorophenol-D4**	93951-73-6	65.5 %	66.0-122 %	**Recovery less than lower data quality objective**
EP075(SIM)S: Phenolic Compound Surrogates	ES2413401-041	TP09-P_0.1	**2.4.6-Tribromophenol**	118-79-6	38.0 %	40.0-138 %	**Recovery less than lower data quality objective**
EP075(SIM)T: PAH Surrogates	ES2413401-041	TP09-P_0.1	**2-Fluorobiphenyl**	321-60-8	68.4 %	70.0-122 %	**Recovery less than lower data quality objective**

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: **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)							
TP01-L_0.1, TP02-P_0.1, TP03-L_0.1, TP04-P_0.1, TP05-P_0.1, TP06-P_0.1 - received as TP06-L_0.1, TP07-P_0.1, TP08-L_0.1, TP09-P_0.1, TP10-P_0.1, TP11-L_0.1, TP12-P_0.1, TP13-L_0.1, TP14-P_0.1, TP15-P_0.1, TP16-L_0.1, TP17-L_0.1, TP18-L_0.1, TP19-L_0.1, TP20-P_0.1	**24-Apr-2024**	**----**	----	----	**29-Apr-2024**	08-May-2024	✓
Soil Glass Jar - Unpreserved (EA055)							
TP21-P_0.1, TP22-P_0.1	**24-Apr-2024**	**----**	----	----	**30-Apr-2024**	08-May-2024	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)							
TP01-L_0.1, TP02-P_0.1, TP03-L_0.1, TP06-P_0.1 - received as TP06-L_0.1, TP08-L_0.1, TP10-P_0.1, TP14-P_0.1	**24-Apr-2024**	**----**	----	----	**30-Apr-2024**	21-Oct-2024	✓

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
EA200N: Asbestos Quantification (non-NATA)							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)							
TP01-L_0.1, TP02-P_0.1, TP03-L_0.1, TP06-P_0.1 - received as TP06-L_0.1, TP08-L_0.1, TP10-P_0.1, TP14-P_0.1	**24-Apr-2024**	**----**	----	----	**30-Apr-2024**	21-Oct-2024	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
TP01-L_0.1, TP02-P_0.1, TP03-L_0.1, TP04-P_0.1, TP05-P_0.1, TP06-P_0.1 - received as TP06-L_0.1, TP07-P_0.1, TP08-L_0.1, TP09-P_0.1, TP10-P_0.1, TP11-L_0.1, TP12-P_0.1, TP13-L_0.1, TP14-P_0.1, TP15-P_0.1, TP16-L_0.1, TP17-L_0.1, TP18-L_0.1, TP19-L_0.1, TP20-P_0.1	**24-Apr-2024**	**29-Apr-2024**	21-Oct-2024	✓	**01-May-2024**	21-Oct-2024	✓
Soil Glass Jar - Unpreserved (EG005T)							
TP21-P_0.1, TP22-P_0.1	**24-Apr-2024**	**30-Apr-2024**	21-Oct-2024	✓	**01-May-2024**	21-Oct-2024	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
TP01-L_0.1, TP02-P_0.1, TP03-L_0.1, TP04-P_0.1, TP05-P_0.1, TP06-P_0.1 - received as TP06-L_0.1, TP07-P_0.1, TP08-L_0.1, TP09-P_0.1, TP10-P_0.1, TP11-L_0.1, TP12-P_0.1, TP13-L_0.1, TP14-P_0.1, TP15-P_0.1, TP16-L_0.1, TP17-L_0.1, TP18-L_0.1, TP19-L_0.1, TP20-P_0.1	**24-Apr-2024**	**29-Apr-2024**	22-May-2024	✓	**02-May-2024**	22-May-2024	✓
Soil Glass Jar - Unpreserved (EG035T)							
TP21-P_0.1, TP22-P_0.1	**24-Apr-2024**	**30-Apr-2024**	22-May-2024	✓	**02-May-2024**	22-May-2024	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066)							
TP08-L_0.1, TP09-P_0.1, TP14-P_0.1, TP19-L_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**01-May-2024**	09-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP066)							
TP21-P_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**02-May-2024**	09-Jun-2024	✓

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
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
TP01-L_0.1, TP02-P_0.1, TP03-L_0.1, TP04-P_0.1, TP05-P_0.1, TP06-P_0.1 - received as TP06-L_0.1, TP07-P_0.1, TP08-L_0.1, TP09-P_0.1, TP10-P_0.1, TP11-L_0.1, TP12-P_0.1, TP13-L_0.1, TP14-P_0.1, TP15-P_0.1, TP16-L_0.1, TP17-L_0.1, TP18-L_0.1, TP19-L_0.1, TP20-P_0.1, TP21-P_0.1, TP22-P_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**01-May-2024**	09-Jun-2024	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
TP01-L_0.1, TP02-P_0.1, TP03-L_0.1, TP04-P_0.1, TP05-P_0.1, TP06-P_0.1 - received as TP06-L_0.1, TP07-P_0.1, TP08-L_0.1, TP09-P_0.1, TP10-P_0.1, TP11-L_0.1, TP12-P_0.1, TP13-L_0.1, TP14-P_0.1, TP15-P_0.1, TP16-L_0.1, TP17-L_0.1, TP18-L_0.1, TP19-L_0.1, TP20-P_0.1, TP21-P_0.1, TP22-P_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**01-May-2024**	09-Jun-2024	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
TP08-L_0.1, TP09-P_0.1, TP21-P_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**01-May-2024**	09-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
TP14-P_0.1, TP19-L_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**02-May-2024**	09-Jun-2024	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
TP08-L_0.1, TP09-P_0.1, TP14-P_0.1, TP19-L_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**30-Apr-2024**	08-May-2024	✓
Soil Glass Jar - Unpreserved (EP071)							
TP09-P_0.1, TP14-P_0.1, TP19-L_0.1, TP21-P_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**01-May-2024**	09-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP071)							
TP08-L_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**03-May-2024**	09-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP21-P_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**30-Apr-2024**	08-May-2024	✓

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) TP08-L_0.1, TP09-P_0.1, TP14-P_0.1, TP19-L_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**30-Apr-2024**	08-May-2024	✓
Soil Glass Jar - Unpreserved (EP071) TP09-P_0.1, TP14-P_0.1, TP19-L_0.1, TP21-P_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**01-May-2024**	09-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP071) TP08-L_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**03-May-2024**	09-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP080) TP21-P_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**30-Apr-2024**	08-May-2024	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) TP08-L_0.1, TP09-P_0.1, TP14-P_0.1, TP19-L_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**30-Apr-2024**	08-May-2024	✓
Soil Glass Jar - Unpreserved (EP080) TP21-P_0.1	**24-Apr-2024**	**30-Apr-2024**	08-May-2024	✓	**30-Apr-2024**	08-May-2024	✓

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***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	6	58	**10.34**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	4	14	**28.57**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	3	22	**13.64**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	3	5	**60.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	6	57	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	6	60	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	4	17	**23.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	23	**17.39**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	22	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	5	**40.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	3	57	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	60	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	17	**11.76**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	23	**8.70**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	22	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	5	**40.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	3	57	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	60	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	17	**11.76**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	23	**8.70**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	2	14	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	22	**9.09**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	5	**40.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	3	57	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	3	60	**5.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	17	**11.76**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	23	**8.70**	**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).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Asbestos Classification and Quantitation per NEPM 2013	* EA200N	SOIL	Asbestos Classification and Quantitation per NEPM with Confirmation of Identification by AS 4964 - Gravimetric determination of Asbestos Containing Material, Fibrous Asbestos, Asbestos Fines and sample weight and calculation of percentage concentrations per NEPM protocols. Asbestos (Fines and Fibrous FA+AF) is reported as the equivalent weight in the sample received after accounting for sub-sampling (where applicable for the <7mm and/or <2mm fractions).
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 (SnCl2) (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 SnCl2 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)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 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).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique 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.

Preparation Methods	Method	Matrix	Method Descriptions

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.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

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☐ Brisbane: 32 Shand St, Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsenviro.com

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☐ Melbourne: 2-4 Westall Rd, Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsenviro.com

☐ Adelaide: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0690 E: adelaide@alsenviro.com

CLIENT:	**TURNAROUND REQUIREMENTS :** ☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**	
OFFICE:	(Standard TAT may be longer for some tests e.g.. Ultra Trace Organics) ☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact?	Yes No N/A
PROJECT:	**ALS QUOTE NO.:** SYBQ / 210 / 16	Free ice / frozen ice bricks present upon receipt?	Yes No N/A
ORDER NUMBER:	**COC SEQUENCE NUMBER (Circle)** COC: 1 2 3 4 5 6 (10)	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER: **CONTACT PH:**	OF: 1 2 3 4 5 6 7	Other comment:	
SAMPLER: **SAMPLER MOBILE:**	**RELINQUISHED BY:**	**RECEIVED BY:**	**RELINQUISHED BY:**	**RECEIVED BY:**
COC emailed to ALS? (YES / NO) **EDD FORMAT (or default):**	DATE/TIME:	DATE/TIME: 14	DATE/TIME:	DATE/TIME:
Email Reports to (will default to PM if no other addresses are listed):				
Email Invoice to (will default to PM if no other addresses are listed):				

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).					Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-16	EA 200 IF	HOLD			Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
1	TP22-P-2.0	24/4	S	Jar	1			X			Subcon / Forward Lab / Split: QA02 QA04
2	TP22-P-3.0			Jar	1			X			Lab / Analysis: Enviros
3	TP23-L-0.1			Jar/Bag	2	X					Organised By / Date: ES2413401
4	TP23-L-0.5			Jar	1			X			Relinquished By / Date:
5	TP23-L-1.0			Jar	1			X			Courier:
6	TP23-L-2.0			Jar	1			X			WO No: ES2413458
7	TP23-L-3.0			Jar	1			X			Attached By / Received: EMAILED
8	TP24-P-0.1			Jar/Bag	2	X	X				
9	TP24-P-0.5			Jar/Bag	2			X			
10	TP24-P-1.0			Jar/Bag	2			X			
11	TP24-P-2.0			Jar/Bag	2			X			
12	TP24-P-3.0	↓	↓	Jar/Bag	2			X			
				TOTAL							

LAB OF ORIGIN: NEWCASTLE

Environmental Division Sydney
Work Order Reference
ES2413458

Telephone : + 61-2-8784 8555

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreig V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Specia Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Preserved Glass;

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☐ Adelaide: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsenviro.com

CLIENT:	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**
OFFICE:		☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact? Yes No N/A
PROJECT:	**ALS QUOTE NO.:** SYBQ / 210 / 16	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER:		COC: 1 2 3 4 5 6 (1)	Random Sample Temperature on Receipt: °C
PROJECT MANAGER:	**CONTACT PH:**	OF: 1 2 3 4 5 6 7	Other comment:

SAMPLER:	**SAMPLER MOBILE:**	**RELINQUISHED BY:**	**RECEIVED BY:**	**RELINQUISHED BY:** / **RECEIVED BY:**
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):**			
Email Reports to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:	DATE/TIME: / DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):				

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S16	EA200F	Hold						Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
13	TP25_P-0.1	24/4	S	Jar/Bag	2	X								
14	TP25-P-0.5			Jar	1			X						
15	TP25-P-1.0				1			X						
16	TP25-P-2.0				1			X						
17	TP25-P-3.0				1			X						
18	TP26-P-0.1			Bag/Jar	2	X								
19	TP26-P-0.5			Jar	1			X						
20	TP26-P-1.0				1			X						
21	TP26-P-2.0				1			X						
22	TP26-P-3.0				1			X						
23	TP27-L-0.1			Bag/Jar	2	X								
24	TP27_L_0.5			Jar	1			X						
				TOTAL										

E-MAILED

LAB OF ORIGIN: NEWCASTLE

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V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

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CLIENT:	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**
OFFICE:		☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact? Yes / No / N/A
PROJECT:	**ALS QUOTE NO.:** SYBQ / 210 / 16	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes / No / N/A
ORDER NUMBER:		COC: 1 2 3 4 5 6 (12)	Random Sample Temperature on Receipt: °C
PROJECT MANAGER:	**CONTACT PH:**	OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER:	**SAMPLER MOBILE:**	**RELINQUISHED BY:**	**RECEIVED BY:**
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):**		
Email Reports to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):		**RELINQUISHED BY:**	**RECEIVED BY:**
		DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-16	EA 200 F	HM60						Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
25	TP28-P-0.1	24/9	S	Jar/Bag	2	X								
26	TP28-P-0.5			Jar	1			X						
27	TP28-P-1.0			Jar	1			X						
28	~~TP28-P-2.0~~													
29	~~TP28-P-3.0~~													
30	TP29-P-0.1			Bag/Jar	2	X	X							
31	TP29-P-0.5			Jar	1			X						
32	TP29-P-1.0				1			X						
33	TP29-P-2.0				1			X						
34	TP29-P-3.0				1			X						
35	TP30-P-0.1			Bag/Jar	2	X	X							
36	TP30-P-0.5			Jar	1									
				TOTAL										

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V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

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OFFICE:		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes No N/A
PROJECT:	ALS QUOTE NO.: SYBQ / 210 / 16	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 (13)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER:		OF: 1 2 3 4 5 6 7	Random Sample Temperature on Receipt: °C
PROJECT MANAGER:	CONTACT PH:		Other comment:
SAMPLER:	SAMPLER MOBILE:	RELINQUISHED BY:	RECEIVED BY: W
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):	DATE/TIME:	DATE/TIME:
Email Reports to (will default to PM if no other addresses are listed):		RELINQUISHED BY:	RECEIVED BY:
Email Invoice to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field filtered bottle required).									Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer to codes below)	TOTAL BOTTLES	S16	EA 200 F	HOLD							Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
37	TP30-P-1.0	24/4	S	Jar	1			X							
38	TP30-P-2.0				1			X							
39	TP30-P-3.0				1			X							
40	TP31-L-0.1			Jar/Bag	2	X									
41	TP31-L-0.5			Jar	1			X							
42	TP31-L-1.0				1			X							
43	TP31-L-2.0				1			X							
44	TP31-L-3.0				1			X							
45	TP32-P-0.1			Jar/Bag	2	X									
46	TP32-P-0.5			Jar	1			X							
47	TP32-P-1.0			Jar	1			X							
	~~TP32-P-2.0~~														
				TOTAL											

EMAILED

LAB OF ORIGIN: NEWCASTLE

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

ALS Laboratory: **please tick →**

☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsenviro.com

☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304 Ph: 02 4968 9433 E: samples.newcastle@alsenviro.com

☐ Brisbane: 32 Shand St, Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsenviro.com

☐ Townsville: 14-15 Desma Ct, Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsenviro.com

☐ Melbourne: 2-4 Westall Rd, Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsenviro.com

☐ Adelaide: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsenviro.com

CLIENT:	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**
OFFICE:		☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact? Yes / No / N/A
PROJECT:	**ALS QUOTE NO.:** SYBQ / 210 / 16	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes / No / N/A
ORDER NUMBER:		COC: 1 2 3 4 5 6 (14)	Random Sample Temperature on Receipt: °C
PROJECT MANAGER:	**CONTACT PH:**	OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER:	**SAMPLER MOBILE:**	**RELINQUISHED BY:**	**RECEIVED BY:**
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):**	DATE/TIME:	DATE/TIME:
Email Reports to (will default to PM if no other addresses are listed):		**RELINQUISHED BY:**	**RECEIVED BY:**
Email Invoice to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-16	EA 2020 F	HOLD						Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	~~TP32-P-0.0~~	24/4	S											
48	TP33-P-0.1			Jar/Bag	2	X		X						
49	TP33-P-0.5			Jar	1			X						
50	TP33-P-1.0			Jar	1			X						
51	TP33-P-2.0			Jar	1			X						
	~~TP33-P-3.0~~			—										
52	TP34-L-0.1			Bag/Jar	2	X	X							
53	TP34-L-0.5			Jar	1			X						
54	TP34-L-1.0			Jar	1			X						
55	TP34-L-2.0			Jar	1			X						
56	TP34-L-3.0			Jar	1			X						
57	TP35-P-0.1			Jar/Bag	2	X								
				TOTAL										

E-MAILED

LAB OF ORIGIN: NEWCASTLE

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V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

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☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E:samples.sydney@alsenviro.com

☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E:samples.newcastle@alsenviro.com

☐ Brisbane: 32 Shand St, Stafford QLD 4053 Ph:07 3243 7222 E:samples.brisbane@alsenviro.com

☐ Townsville: 14-15 Desma Ct, Bohle QLD 4818 Ph:07 4796 0600 E: townsville.environmental@alsenviro.com

☐ Melbourne: 2-4 Westall Rd, Springvale VIC 3171 Ph: 03 8549 9600 E: samples.melbourne@alsenviro.com

☐ Adelaide: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E:adelaide@alsenviro.com

CLIENT:	**TURNAROUND REQUIREMENTS :** ☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**	
OFFICE:	(Standard TAT may be longer for some tests e.g., Ultra Trace Organics) ☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact?	Yes No N/A
PROJECT:	**ALS QUOTE NO.:** SYBQ / 210 / 16	Free ice / frozen ice bricks present upon receipt?	Yes No N/A
ORDER NUMBER:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 (15)	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER: **CONTACT PH:**	OF: 1 2 3 4 5 6 7	Other comment:	
SAMPLER: **SAMPLER MOBILE:**	**RELINQUISHED BY:**	**RECEIVED BY:**	**RELINQUISHED BY:**	**RECEIVED BY:**
COC emailed to ALS? (YES / NO) **EDD FORMAT (or default):**				
Email Reports to (will default to PM if no other addresses are listed):	DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):				

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-16	EA 200 F	HOLD						Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
58	TP35-P-0.5	24/4	S		1			X						
59	TP35-P-1.0				1			X						
60	TP35-P-2.0				1			X						
61	TP35-P-3.0				1			X						
62	TP36-L-0.1				1	X		X						
63	TP36-L-0.5				1			X						
64	TP36-L-1.0				1			X						
65	TP36-L-2.0				1			X						
66	TP36-L-3.0				1			X						
67	TP37-P-0.1				2	X								
68	TP37-P-0.5				1			X						
69	~~TP37-P-1.0~~													
				TOTAL										

E-MAILED

LAB OF ORIGIN: NEWCASTLE

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

ALS Laboratory: please tick →

☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsenviro.com

☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304 Ph: 02 4968 9433 E: samples.newcastle@alsenviro.com

☐ Brisbane: 32 Shand St, Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsenviro.com

☐ Townsville: 14-15 Desma Ct, Bohle QLD 4818 Ph: 07 4796 0600 E: townsville.environmental@alsenviro.com

☐ Melbourne: 2-4 Westall Rd, Springvale VIC 3171 Ph: 03 8548 9600 E: samples.melbourne@alsenviro.com

☐ Adelaide: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsenviro.com

CLIENT:	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g.. Ultra Trace Organics)	☐ Standard TAT **(List due date):**	**FOR LABORATORY USE ONLY (Circle)**
OFFICE:		☐ Non Standard or urgent TAT **(List due date):**	Custody Seal Intact? Yes No N/A
PROJECT:	**ALS QUOTE NO.:** SYBQ / 210 / 16	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER:		COC: 1 2 3 4 5 6 (16)	Random Sample Temperature on Receipt: °C
PROJECT MANAGER:	**CONTACT PH:**	OF: 1 2 3 4 5 6 7	Other comment:
SAMPLER:	**SAMPLER MOBILE:**	**RELINQUISHED BY:**	**RECEIVED BY:** W
COC emailed to ALS? (YES / NO)	**EDD FORMAT (or default):**	DATE/TIME:	DATE/TIME:
Email Reports to (will default to PM if no other addresses are listed):		**RELINQUISHED BY:**	**RECEIVED BY:**
Email Invoice to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-16	EA 200 F	HOLD						Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
	~~TP37-P-2.0~~	29/4	S	Jar/Bag	2			X						
	~~TP37-P-3.0~~							X						
70	TP38-P-0.1			Bag/Jar	2	X								E-MAILED
71	TP38-P-0.5			Jar										
72	TP38-P-1.0			Jar										
73	TP38-P-2.0			Jar										
(74)	~~TP38-P-3.0~~	Received TP38-P												LAB OF ORIGIN: NEWCASTLE
75	TP39-L-0.1			Jar	1	X		X						
76	TP39-L-0.5				1			X						
77	TP39-L-1.0				1			X						
78	TP39-L-2.0				1			X						
79	TP39-L-3.0				1			X						
				TOTAL										

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP - Airfreight Unpreserved Plastic V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass; Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

ALS Laboratory: **please tick** →

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☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304 Ph:02 4968 9433 E:samples.newcastle@alsenviro.com

☐ Brisbane: 32 Shand St, Stafford QLD 4053 Ph:07 3243 7222 E: samples.brisbane@alsenviro.com

☐ Townsville: 14-15 Desma Ct, Bohle QLD 4818 Ph:07 4796 0600 E: townsville.environmental@alsenviro.com

☐ Melbourne: 2-4 Westall Rd, Springvale VIC 3171 Ph 03 8549 9600 E: samples.melbourne@alsenviro.com

☐ Adelaide: 2-1 Burma Rd, Pooraka SA 5095 Ph: 08 8359 0890 E:adelaide@alsenviro.com

CLIENT:	**TURNAROUND REQUIREMENTS :** ☐ Standard TAT (List due date):	**FOR LABORATORY USE ONLY (Circle)**	
OFFICE:	(Standard TAT may be longer for some tests e.g.. Ultra Trace Organics) ☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact?	Yes / No / N/A
PROJECT:	**ALS QUOTE NO.:** SYBQ / 210 / 16	Free ice / frozen ice bricks present upon receipt?	Yes / No / N/A
ORDER NUMBER:	COC SEQUENCE NUMBER (Circle) COC: 1 2 3 4 5 6 (17) OF: 1 2 3 4 5 6 (18)	Random Sample Temperature on Receipt:	°C
PROJECT MANAGER: **CONTACT PH:**		Other comment:	

SAMPLER: **SAMPLER MOBILE:**	**RELINQUISHED BY:**	**RECEIVED BY:**	**RELINQUISHED BY:**	**RECEIVED BY:**
COC emailed to ALS? (YES / NO) **EDD FORMAT (or default):**				
Email Reports to (will default to PM if no other addresses are listed):	DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:
Email Invoice to (will default to PM if no other addresses are listed):				

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS MATRIX: Solid(S) Water(W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).								Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL BOTTLES	S-16	ET 200 E	Hold	NEPM Screen	W-26				Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
80	TP40-P-0.1	24/4	S	Jar/Bag	2	X							E-MAILED	
81	TP40-P-0.5	↓	↓	Jar	1			X						
82	TP40-P-1.0				1			X					LAB OF ORIGIN: NEWCASTLE	
83	TP40-P-2.0				1			X						
84	TP40-P-3.0				1			X						
85	NEPM-0.2-0.5		S	Jar/Bg	2				X					
86	NEPM-0.1		S	Jar/Bg	2				X					4 11
87	QA01			Jar	1	X								Send QA02
88	QA02			Jar	1									& QA04
88	QA03			Jar	1	X								to eurofins
	QA04			Jar	1									for seconday
89	RW01		W	Bottles	5					X				Analysis for S-16
				TOTAL										

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V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CHAIN OF CUSTODY

ALS Environmental

ALS Laboratory: please tick →

☐ADELAIDE 21 Burma Road Pooraka SA 5095 Ph: 08 8359 0890 E: adelaide@alsglobal.com

☐BRISBANE 32 Shand Street Stafford QLD 4053 Ph: 07 3243 7222 E: samples.brisbane@alsglobal.com

☐GLADSTONE 46 Callemondah Drive Clinton QLD 4680 Ph: 07 7471 5600 E: gladstone@alsglobal.com

☐MACKAY 78 Harbour Road Mackay QLD 4740 Ph: 07 4944 0177 E: mackay@alsglobal.com

☐MELBOURNE 24 Shand Street Stafford QLD 4053 Ph: 03 8549 9600 E: samples.melbourne@alsglobal.com

☐MUDGEE 27 Sydney Road Mudgee NSW 2850 Ph: 02 6372 6735 E: mudgee.mail@alsglobal.com

☐NEWCASTLE 5/585 Maitland Rd Mayfield West NSW 2304 Ph: 02 4968 9433 E: samples.newcastle@alsglobal.com

☐NOWRA 4/92-98 Kinghorne Street Nowra NSW 2541 Ph: 02 4423 2063 E: nowra@alsglobal.com

☐PERTH 10 Hod Way Malaga WA 6090 Ph: 08 9209 7655 E: samples.perth@alsglobal.com

☐SYDNEY 277-289 Woodpark Road Smithfield NSW 2164 Ph: 02 8784 8555 E: samples.sydney@alsglobal.com

☐TOWNSVILLE 14-15 Desma Court Garbutt QLD 4814 Ph: 07 4796 0600 E: townsville.environmental@alsglobal.com

☐WOLLONGONG 99 Kenny Street Wollongong NSW 2500 Ph: 02 4225 3125 E: portkembla@alsglobal.com

CLIENT: EP Risk	**TURNAROUND REQUIREMENTS :** (Standard TAT may be longer for some tests e.g., Ultra Trace Organics)	☐ Standard TAT (List due date): 5 day	**FOR LABORATORY USE ONLY (Circle)**
OFFICE:		☐ Non Standard or urgent TAT (List due date):	Custody Seal Intact? Yes / No / N/A
PROJECT:	**ALS QUOTE NO.:** ES23EPRISK0002	**COC SEQUENCE NUMBER (Circle)**	Free ice / frozen ice bricks present upon receipt? Yes / No / N/A
ORDER NUMBER:		COC: 1 2 3 4 5 6 7 (18)	Random Sample Temperature on Receipt: °C
PROJECT MANAGER:	**CONTACT PH:**	OF: 1 2 3 4 5 6 7 (18)	Other comment:

SAMPLER:	**SAMPLER MOBILE:**	**RELINQUISHED BY:**	**RECEIVED BY:** MJ	**RELINQUISHED BY:** Emma
COC emailed to ALS? (YES .....@eprisk.com.au	**EDD FORMAT (or default):**			
Email Reports to (will default to PM if no other addresses are listed):		DATE/TIME:	DATE/TIME:	DATE/TIME: 24.04.24 17:00
Email Invoice to (will default to PM if no other addresses are listed):				**RECEIVED BY:** DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to attract suite price) Where **Metals** are required, specify **Total** (unfiltered bottle required) or **Dissolved** (field filtered bottle required).										Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE *(refer to codes below)*	TOTAL CONTAINERS	TRH (F1) BTEXN										Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
90	TRIP SPIKE	24/4	S	JV	1	X										
91	TRIP BLANK	L	L	JV	1	X										
92	TSC															
93	TP27_L_1.0															
				TOTAL												

E-MAILED

LAB OF ORIGIN: NEWCASTLE

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V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Phoung Tran

From: Mathew Cheshire <mathew.cheshire@eprisk.com.au>
Sent: Monday, 29 April 2024 9:16 AM
To: Jason Dighton
Cc: Nathan Mcguire
Subject: [EXTERNAL] - FW: SRN for ALS Workorder : ES2413458 | ES2413401
Attachments: ES2413458_0_SRN_240426222846.pdf; ES2413458_COC.pdf; ES2413401_0_SRN_240426222521.pdf

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Hi Jason, How are you ?

Sorry to be a pain but can I change a few things with this analysis:

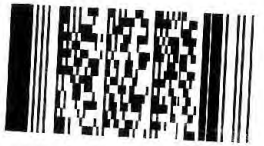
Cancel the s-16 analysis on all samples EXCEPT for the following:

ES2413401
36 TP08-L_0.1
41 TP09-P_0.1
63 TP14-P_0.1
68 TP19-L_0.1
97 TP21-P_0.1
23 TP27-L_0.1 ES2413458
48 TP33-P_0.1
62 TP36-L_0.1
70 TP38-P_0.1
8 TP24-P_0.1

Analyse the following for Metals, OCP and OPP:

ES2413401
1 TP01-L_0.1
6 TP02-P_0.0.1
11 TP03-L_0.1

Environmental Division
Sydney
Work Order Reference
ES2413458



Telephone : +61-2-8784 8555

TP04-P_0.1
TP05-P_0.1
TP06-L_0.1
TP07-P_0.1
TP10-P_0.1
TP11-L_0.1
TP12-P_0.1
TP13-L_0.1
TP15-P_0.1
TP16-L_0.1
TP17-L_0.1
TP18-L_0.1
TP20-P_0.1
TP22-P_0.1
TP23-L_0.1 ES2413458
TP25-P_0.1
TP26-P_0.1
TP28-P_0.1
TP29-P_0.1
TP30-P_0.1
TP31-L_0.1
TP32-P_0.1
TP34-L_0.1
TP35-P_0.1
TP37-P_0.1
TP39-L_0.1
TP40-P_0.1

Change the analysis on the following samples to a NEPM Screen for soil classification (P-22):

NEPM_0.2-0.5
NEPM_0.1

Cancel EA200F Analysis for the following:

ES2413401
(83) TP18-L_0.1
(84) TP19-L_0.1
(41) TP09-P_0.1

Project name is Gosforth not Gosford.

Contact Number is (02) 4048 2845

Thanks very much Jason.

Mathew Cheshire
Graduate Environmental Scientist
M 0431165533 | **E** Mathew.Cheshire@eprisk.com.au

View my profile on LinkedIn

EP Risk Management Pty Ltd | ABN 81 147 147 591
3/19 Bolton Street | Newcastle NSW 2300
T +61240482845 | **W** eprisk.com.au

EP RISK | NEWCASTLE SYDNEY MELBOURNE

From: Nathan Mcguire <nathan.mcguire@eprisk.com.au>
Sent: Friday, April 26, 2024 10:49 PM
To: Mathew Cheshire <mathew.cheshire@eprisk.com.au>
Subject: Fwd: SRN for ALS Workorder : ES2413458 | Your Reference: Gosford

Hey Mat,

SRN 2 of 2 attached.

Same as before can you check missing and extra samples.

The NEPM samples are being analysed for asbestos (the lab think it means NEPM asbestos, but you need to give them the suite code for the NEPM screen for soil classification). And make sure the number of samples and analyses matches the proposal, again there's too many S-16 suites.

From: angel-no-reply@alsglobal.com <angel-no-reply@alsglobal.com>
Sent: Friday, April 26, 2024 10:33 pm
To: Nathan Mcguire <nathan.mcguire@eprisk.com.au>
Subject: SRN for ALS Workorder : ES2413458 | Your Reference: Gosford

Deliverables for ALS Workorder ES2413458

Project: Gosford

Dear NATHAN MCGUIRE (EPRISK),

Please find enclosed the following deliverables for **ES2413458**:

- ES2413458_0_SRN_240426222846.pdf
- ES2413458_COC.pdf

Report Recipients

- NATHAN MCGUIRE (EPRISK)
  - ES2413458_0_SRN_240426222846.pdf (Email)
  - ES2413458_COC.pdf (Email)

www.alsglobal.com

CERTIFICATE OF ANALYSIS

Work Order	: **ES2413458**	Page	: 1 of 30
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Contact	: Jason Dighton
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 4913 5650	Telephone	: +61-2-8784 8555
Project	: Gosforth	Date Samples Received	: 24-Apr-2024 16:15
Order number	: EP3627	Date Analysis Commenced	: 29-Apr-2024
C-O-C number	: ----	Issue Date	: 02-May-2024 18:03
Sampler	: MC		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 90		
No. of samples analysed	: 24		

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

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
- Descriptive 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*
Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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 Contract 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
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EA150H: Soil particle density results fell outside the scope of AS1289.3.6.3. Results should be scrutinised accordingly.
- 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.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above 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.
- EG005T: Poor precision was obtained for Iron on sample ES2413677 # 009. Confirmed by re-digestion and reanalysis.
- EG035: Poor matrix spike recovery was obtained for Mercury on sample ES2413443 # 3. Confirmed by re-analysis.
- EP080: The trip spike and its control have been analysed for volatile TPH and BTEXN only. The trip spike and control were prepared in the lab using reagent grade sand spiked with petrol. The spike was dispatched from the lab and the control retained.
- EA200N: Asbestos weights and percentages are not covered under the Scope of NATA Accreditation.
  Weights of Asbestos are based on extracted bulk asbestos, fibre bundles, and/or ACM and do not include respirable fibres (if present)
  The Asbestos (Fines and Fibrous) weight is calculated from the extracted Fibrous Asbestos and Asbestos Fines as an equivalent weight of 100% Asbestos
  Percentages for Asbestos content in ACM are based on the 2013 NEPM default values.
  All calculations of percentage Asbestos under this method are approximate and should be used as a guide only.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)

- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200N: ALS laboratory procedures and methods used for the identification and quantitation of asbestos are consistent with AS4964-2004 and the requirements of the 2013 NEPM for Assessment of Site Contamination
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- ED007 and ED008: When Exchangeable Al is reported from these methods, it should be noted that Rayment & Lyons (2011) suggests Exchange Acidity by 1M KCl - Method 15G1 (ED005) is a more suitable method for the determination of exchange acidity (H+ + Al3+).
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP23-L_0.1	TP24-P_0.1	TP25-P_0.1	TP26-P_0.1	TP27-L_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413458-003	ES2413458-008	ES2413458-013	ES2413458-018	ES2413458-023
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	24.6	26.8	25.9	26.9	24.5
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	----	----	----
Asbestos Type	1332-21-4	-	--	----	-	----	----	----
Asbestos (Trace)	1332-21-4	-	-	----	No	----	----	----
Sample weight (dry)	----	0.01	g	----	177	----	----	----
Synthetic Mineral Fibre	----	-	--	----	No	----	----	----
Organic Fibre	----	-	--	----	No	----	----	----
APPROVED IDENTIFIER:	----	-	--	----	B.SCHRADER	----	----	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	----	<0.0004	----	----	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	----	<0.001	----	----	----
ø Weight Used for % Calculation	----	0.0001	kg	----	0.177	----	----	----
ø Fibrous Asbestos >7mm	----	0.0004	g	----	<0.0004	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	10	7	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	66	71	90	82	38
Copper	7440-50-8	5	mg/kg	22	17	26	30	5
Lead	7439-92-1	5	mg/kg	6	10	10	9	12
Nickel	7440-02-0	2	mg/kg	31	21	32	48	12
Zinc	7440-66-6	5	mg/kg	29	29	37	39	20
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	<0.1	----	----	<0.1
EP068A: Organochlorine Pesticides (OC)								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP23-L_0.1	TP24-P_0.1	TP25-P_0.1	TP26-P_0.1	TP27-L_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-003	ES2413458-008	ES2413458-013	ES2413458-018	ES2413458-023
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP23-L_0.1	TP24-P_0.1	TP25-P_0.1	TP26-P_0.1	TP27-L_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-003	ES2413458-008	ES2413458-013	ES2413458-018	ES2413458-023
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	<0.5	----	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		----	<0.5	----	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		----	<0.5	----	----	<0.5
Fluorene	86-73-7	0.5	mg/kg		----	<0.5	----	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		----	<0.5	----	----	<0.5
Anthracene	120-12-7	0.5	mg/kg		----	<0.5	----	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		----	<0.5	----	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP23-L_0.1	TP24-P_0.1	TP25-P_0.1	TP26-P_0.1	TP27-L_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413458-003	ES2413458-008	ES2413458-013	ES2413458-018	ES2413458-023
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	----	----	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	----	----	<0.5
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	----	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	<0.5	----	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	<0.5	----	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	----	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	----	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	----	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.5	----	----	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	----	<0.5	----	----	<0.5
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg	----	<0.5	----	----	<0.5
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg	----	**0.6**	----	----	**0.6**
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg	----	**1.2**	----	----	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<10	----	----	<10
C10 - C14 Fraction	----	50	mg/kg	----	<50	----	----	<50
C15 - C28 Fraction	----	100	mg/kg	----	<100	----	----	<100
C29 - C36 Fraction	----	100	mg/kg	----	<100	----	----	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg	----	<50	----	----	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	----	----	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg	----	<10	----	----	<10
>C10 - C16 Fraction	----	50	mg/kg	----	<50	----	----	<50
>C16 - C34 Fraction	----	100	mg/kg	----	<100	----	----	<100
>C34 - C40 Fraction	----	100	mg/kg	----	<100	----	----	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg	----	<50	----	----	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP23-L_0.1	TP24-P_0.1	TP25-P_0.1	TP26-P_0.1	TP27-L_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-003	ES2413458-008	ES2413458-013	ES2413458-018	ES2413458-023
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	<50	----	----	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	<0.2	----	----	<0.2
Toluene	108-88-3	0.5	mg/kg		----	<0.5	----	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		----	<0.5	----	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	<0.5	----	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		----	<0.5	----	----	<0.5
^ Sum of BTEX	----	0.2	mg/kg		----	<0.2	----	----	<0.2
^ Total Xylenes	----	0.5	mg/kg		----	<0.5	----	----	<0.5
Naphthalene	91-20-3	1	mg/kg		----	<1	----	----	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	**94.5**	----	----	**92.7**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		----	**100**	----	----	**98.8**
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		----	**121**	----	----	**114**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	**88.6**	----	----	**86.8**
2-Chlorophenol-D4	93951-73-6	0.5	%		----	**85.0**	----	----	**79.6**
2.4.6-Tribromophenol	118-79-6	0.5	%		----	**56.9**	----	----	**57.3**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	**85.7**	----	----	**76.2**
Anthracene-d10	1719-06-8	0.5	%		----	**98.6**	----	----	**96.0**
4-Terphenyl-d14	1718-51-0	0.5	%		----	**96.1**	----	----	**93.9**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	**72.0**	----	----	**85.6**
Toluene-D8	2037-26-5	0.2	%		----	**70.0**	----	----	**78.3**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP23-L_0.1	TP24-P_0.1	TP25-P_0.1	TP26-P_0.1	TP27-L_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-003	ES2413458-008	ES2413458-013	ES2413458-018	ES2413458-023
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		**----**	**77.5**	**----**	**----**	**72.3**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP28-P_0.1	TP29-P_0.1	TP30-P_0.1	TP31-L_0.1	TP32-P_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413458-025	ES2413458-030	ES2413458-035	ES2413458-040	ES2413458-045
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	18.8	25.2	23.5	19.8	20.6
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	----	No	No	----	----
Asbestos Type	1332-21-4	-	--	----	-	-	----	----
Asbestos (Trace)	1332-21-4	-	-	----	No	No	----	----
Sample weight (dry)	----	0.01	g	----	292	229	----	----
Synthetic Mineral Fibre	----	-	--	----	No	No	----	----
Organic Fibre	----	-	--	----	No	No	----	----
APPROVED IDENTIFIER:	----	-	--	----	B.SCHRADER	B.SCHRADER	----	----
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	----	<0.0004	<0.0004	----	----
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	----	<0.001	<0.001	----	----
ø Weight Used for % Calculation	----	0.0001	kg	----	0.292	0.229	----	----
ø Fibrous Asbestos >7mm	----	0.0004	g	----	<0.0004	<0.0004	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	6	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	19	63	10	17	17
Copper	7440-50-8	5	mg/kg	<5	16	<5	<5	<5
Lead	7439-92-1	5	mg/kg	15	12	20	10	8
Nickel	7440-02-0	2	mg/kg	4	30	4	5	3
Zinc	7440-66-6	5	mg/kg	17	29	18	19	12
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP28-P_0.1	TP29-P_0.1	TP30-P_0.1	TP31-L_0.1	TP32-P_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413458-025	ES2413458-030	ES2413458-035	ES2413458-040	ES2413458-045
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP28-P_0.1	TP29-P_0.1	TP30-P_0.1	TP31-L_0.1	TP32-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-025	ES2413458-030	ES2413458-035	ES2413458-040	ES2413458-045
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP33-P_0.1	TP34-L_0.1	TP35-P_0.1	TP36-L_0.1	TP37-P_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413458-048	ES2413458-052	ES2413458-057	ES2413458-062	ES2413458-067
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**20.6**	**19.4**	**26.7**	**20.7**	**26.8**
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	**----**	**No**	**----**	**----**	**----**
Asbestos Type	1332-21-4	-	--	**----**	**-**	**----**	**----**	**----**
Asbestos (Trace)	1332-21-4	-	-	**----**	**No**	**----**	**----**	**----**
Sample weight (dry)	----	0.01	g	**----**	**314**	**----**	**----**	**----**
Synthetic Mineral Fibre	----	-	--	**----**	**No**	**----**	**----**	**----**
Organic Fibre	----	-	--	**----**	**No**	**----**	**----**	**----**
APPROVED IDENTIFIER:	----	-	--	**----**	**B.SCHRADER**	**----**	**----**	**----**
EA200N: Asbestos Quantification (non-NATA)								
ø Asbestos (Fines and Fibrous <7mm)	1332-21-4	0.0004	g	**----**	<0.0004	**----**	**----**	**----**
ø Asbestos (Fines and Fibrous FA+AF)	----	0.001	% (w/w)	**----**	<0.001	**----**	**----**	**----**
ø Weight Used for % Calculation	----	0.0001	kg	**----**	**0.314**	**----**	**----**	**----**
ø Fibrous Asbestos >7mm	----	0.0004	g	**----**	<0.0004	**----**	**----**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	**5**	<5	<5	**8**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	**16**	**13**	**50**	**11**	**25**
Copper	7440-50-8	5	mg/kg	**7**	<5	**19**	<5	<5
Lead	7439-92-1	5	mg/kg	**13**	**10**	**13**	**11**	**9**
Nickel	7440-02-0	2	mg/kg	**7**	**4**	**27**	**4**	**7**
Zinc	7440-66-6	5	mg/kg	**32**	**20**	**38**	**18**	**7**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	**----**	**----**	<0.1	**----**
EP068A: Organochlorine Pesticides (OC)								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP33-P_0.1	TP34-L_0.1	TP35-P_0.1	TP36-L_0.1	TP37-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-048	ES2413458-052	ES2413458-057	ES2413458-062	ES2413458-067
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP33-P_0.1	TP34-L_0.1	TP35-P_0.1	TP36-L_0.1	TP37-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-048	ES2413458-052	ES2413458-057	ES2413458-062	ES2413458-067
					Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP33-P_0.1	TP34-L_0.1	TP35-P_0.1	TP36-L_0.1	TP37-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-048	ES2413458-052	ES2413458-057	ES2413458-062	ES2413458-067
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	<0.5	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	----	----	<0.5	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg		<0.5	----	----	<0.5	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg		**0.6**	----	----	**0.6**	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg		**1.2**	----	----	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	<10	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	<50	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	<100	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	----	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	<10	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	<10	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	<100	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	<50	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP33-P_0.1	TP34-L_0.1	TP35-P_0.1	TP36-L_0.1	TP37-P_0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413458-048	ES2413458-052	ES2413458-057	ES2413458-062	ES2413458-067
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	----	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	<0.2	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	----	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg	<1	----	----	<1	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**88.3**	----	----	**104**	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**91.6**	----	----	**112**	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**109**	----	----	**138**	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**83.6**	----	----	**86.5**	----
2-Chlorophenol-D4	93951-73-6	0.5	%	**81.6**	----	----	**85.0**	----
2.4.6-Tribromophenol	118-79-6	0.5	%	**54.8**	----	----	**54.7**	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**78.8**	----	----	**80.7**	----
Anthracene-d10	1719-06-8	0.5	%	**93.7**	----	----	**93.8**	----
4-Terphenyl-d14	1718-51-0	0.5	%	**91.3**	----	----	**90.1**	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**83.4**	----	----	**84.4**	----
Toluene-D8	2037-26-5	0.2	%	**79.6**	----	----	**75.6**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP33-P_0.1	TP34-L_0.1	TP35-P_0.1	TP36-L_0.1	TP37-P_0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-048	ES2413458-052	ES2413458-057	ES2413458-062	ES2413458-067
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		**81.1**	**----**	**----**	**76.3**	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP38-P_0.1	TP39-L_0.1	TP40-P_0.1	NEPM-0.2-0.5	NEPM-0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413458-070	ES2413458-075	ES2413458-080	ES2413458-085	ES2413458-086
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	----	----	----	4.1	3.9
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	----	----	----	5.4	5.2
EA010: Conductivity (1:5)								
Electrical Conductivity @ 25°C	----	1	µS/cm	----	----	----	36	39
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	0.1	%	----	----	----	19.7	17.6
Moisture Content	----	1.0	%	20.0	19.1	25.7	----	----
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	----	----	----	41	22
EA152: Soil Particle Density								
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3	----	----	----	2.44	2.18
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	----	----	1.6	0.9
Exchangeable Magnesium	----	0.1	meq/100g	----	----	----	7.4	1.6
Exchangeable Potassium	----	0.1	meq/100g	----	----	----	0.7	1.1
Exchangeable Sodium	----	0.1	meq/100g	----	----	----	1.0	0.3
Cation Exchange Capacity	----	0.1	meq/100g	----	----	----	10.6	4.4
EG005(ED093)T: Total Metals by ICP-AES								
Iron	7439-89-6	0.005	%	----	----	----	2.74	1.41
Arsenic	7440-38-2	5	mg/kg	8	5	<5	----	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg	16	14	90	----	----
Copper	7440-50-8	5	mg/kg	<5	<5	31	----	----
Lead	7439-92-1	5	mg/kg	13	<5	9	----	----
Nickel	7440-02-0	2	mg/kg	4	5	45	----	----
Zinc	7440-66-6	5	mg/kg	11	6	35	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP38-P_0.1	TP39-L_0.1	TP40-P_0.1	NEPM-0.2-0.5	NEPM-0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413458-070	ES2413458-075	ES2413458-080	ES2413458-085	ES2413458-086
				Result	Result	Result	Result	Result
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	----	----
EP004: Organic Matter								
Organic Matter	----	0.5	%	----	----	----	<0.5	**3.3**
Total Organic Carbon	----	0.5	%	----	----	----	<0.5	**1.9**
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	TP38-P_0.1	TP39-L_0.1	TP40-P_0.1	NEPM-0.2-0.5	NEPM-0.1
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit	ES2413458-070	ES2413458-075	ES2413458-080	ES2413458-085	ES2413458-086
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP38-P_0.1	TP39-L_0.1	TP40-P_0.1	NEPM-0.2-0.5	NEPM-0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-070	ES2413458-075	ES2413458-080	ES2413458-085	ES2413458-086
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP38-P_0.1	TP39-L_0.1	TP40-P_0.1	NEPM-0.2-0.5	NEPM-0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-070	ES2413458-075	ES2413458-080	ES2413458-085	ES2413458-086
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	----	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	----	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	----	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**96.4**	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**99.8**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**123**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**86.2**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		**83.5**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.5	%		**57.0**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TP38-P_0.1	TP39-L_0.1	TP40-P_0.1	NEPM-0.2-0.5	NEPM-0.1
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00	24-Apr-2024 00:00
Compound	CAS Number	LOR	Unit		ES2413458-070	ES2413458-075	ES2413458-080	ES2413458-085	ES2413458-086
					Result	Result	Result	Result	Result
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**80.7**	----	----	----	----
Anthracene-d10	1719-06-8	0.5	%		**95.2**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		**92.5**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**78.8**	----	----	----	----
Toluene-D8	2037-26-5	0.2	%		**71.8**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		**72.6**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	TRIP SPIKE	TRIP BLANK	TSC	----	----
				Sampling date / time	15-Apr-2024 00:00	15-Apr-2024 00:00	15-Apr-2024 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2413458-090	ES2413458-091	ES2413458-092	--------	--------
					Result	Result	Result	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	<10	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	<10	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	<10	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		4.3	<0.5	4.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		5.2	<0.5	5.4	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		5.7	<0.5	5.9	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		2.4	<0.5	2.6	----	----
^ Sum of BTEX	----	0.2	mg/kg		17.6	<0.2	18.4	----	----
^ Total Xylenes	----	0.5	mg/kg		8.1	<0.5	8.5	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		78.0	104	83.1	----	----
Toluene-D8	2037-26-5	0.2	%		78.8	101	80.9	----	----
4-Bromofluorobenzene	460-00-4	0.2	%		88.0	106	93.6	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RW01	----	----	----	----
				Sampling date / time	24-Apr-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2413458-089	--------	--------	--------	--------
					Result	----	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
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		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----
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	----	----	----	----
Phenanthrene	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	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RW01	----	----	----	----
				Sampling date / time	24-Apr-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2413458-089	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^ **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		<50	----	----	----	----
C15 - C28 Fraction	----	100	µg/L		<100	----	----	----	----
C29 - C36 Fraction	----	50	µg/L		<50	----	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L		<50	----	----	----	----
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		<100	----	----	----	----
>C34 - C40 Fraction	----	100	µg/L		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		<100	----	----	----	----
^ **>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		<2	----	----	----	----
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		<1	----	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1.0	%		**28.2**	----	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RW01	----	----	----	----
				Sampling date / time	24-Apr-2024 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2413458-089	--------	--------	--------	--------
					Result	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates - Continued									
2-Chlorophenol-D4	93951-73-6	1.0	%		**57.9**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	1.0	%		**43.6**	----	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1.0	%		**61.7**	----	----	----	----
Anthracene-d10	1719-06-8	1.0	%		**60.7**	----	----	----	----
4-Terphenyl-d14	1718-51-0	1.0	%		**85.0**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**105**	----	----	----	----
Toluene-D8	2037-26-5	2	%		**110**	----	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**116**	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	TP24-P_0.1 - 24-Apr-2024 00:00	A soil sample.
EA200: Description	TP29-P_0.1 - 24-Apr-2024 00:00	A soil sample.
EA200: Description	TP30-P_0.1 - 24-Apr-2024 00:00	A soil sample.
EA200: Description	TP34-L_0.1 - 24-Apr-2024 00:00	A soil sample.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
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	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
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	72	143
Toluene-D8	2037-26-5	75	131
4-Bromofluorobenzene	460-00-4	73	137

Inter-Laboratory Testing

Analysis conducted by ALS Newcastle, NATA accreditation no. 825, site no. 1656 (Chemistry) 9854 (Biology).

(SOIL) EA150: Soil Classification based on Particle Size

(SOIL) EA152: Soil Particle Density

(SOIL) EA200N: Asbestos Quantification (non-NATA)

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

QUALITY CONTROL REPORT

Work Order	: **ES2413458**	Page	: 1 of 18
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Contact	: Jason Dighton
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 4913 5650	Telephone	: +61-2-8784 8555
Project	: Gosforth	Date Samples Received	: 24-Apr-2024
Order number	: EP3627	Date Analysis Commenced	: 29-Apr-2024
C-O-C number	: ----	Issue Date	: 02-May-2024
Sampler	: MC		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 90		
No. of samples analysed	: 24		

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

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 Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

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*
Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Brendan Schrader	Laboratory Technician	Newcastle - Asbestos, Mayfield West, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
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
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5757401)									
ES2413401-097	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	118	113	4.2	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	43	43	0.0	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	36	35	4.3	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	9	8	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	40	37	6.8	No Limit
		EG005T: Iron	7439-89-6	50	mg/kg	53700	52400	2.4	0% - 20%
ES2413458-040	TP31-L_0.1	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	17	13	26.3	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	4	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	<5	22.6	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	8	19.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	19	16	16.6	No Limit
		EG005T: Iron	7439-89-6	50	mg/kg	12000	13200	9.6	0% - 20%
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5757403)									
ES2413458-087	QA01	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	86	89	3.9	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	44	46	5.8	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5757403) - continued									
ES2413458-087	QA01	EG005T: Copper	7440-50-8	5	mg/kg	24	26	6.5	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	10	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	24	26	8.4	No Limit
		EG005T: Iron	7439-89-6	50	mg/kg	55200	55800	1.1	0% - 20%
ES2413677-009	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	19	28	39.7	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	6	6	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Iron	7439-89-6	50	mg/kg	17500	# 23100	27.7	0% - 20%
EA001: pH in soil using 0.01M CaCl extract (QC Lot: 5762437)									
ES2412641-014	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	6.4	6.5	2.6	0% - 20%
ES2413704-008	Anonymous	EA001: pH (CaCl2)	----	0.1	pH Unit	7.6	7.3	4.7	0% - 20%
EA010: Conductivity (1:5) (QC Lot: 5757106)									
ES2413458-085	NEPM-0.2-0.5	EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	36	37	4.7	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5757405)									
ES2413458-003	TP23-L_0.1	EA055: Moisture Content	----	0.1 (1.0)*	%	24.6	25.0	1.6	0% - 20%
ES2413458-052	TP34-L_0.1	EA055: Moisture Content	----	0.1 (1.0)*	%	19.4	17.5	9.8	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5757406)									
ES2413458-087	QA01	EA055: Moisture Content	----	0.1 (1.0)*	%	30.7	29.4	4.1	0% - 20%
ES2413677-012	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	11.1	11.6	5.2	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5760393)									
ES2413289-002	Anonymous	EA055: Moisture Content	----	0.1	%	5.1	5.7	12.1	0% - 20%
ED007: Exchangeable Cations (QC Lot: 5761383)									
ES2413458-085	NEPM-0.2-0.5	ED007: Exchangeable Calcium	----	0.1	meq/100g	1.6	1.6	0.0	0% - 50%
		ED007: Exchangeable Magnesium	----	0.1	meq/100g	7.4	7.4	0.0	0% - 20%
		ED007: Exchangeable Potassium	----	0.1	meq/100g	0.7	0.6	0.0	No Limit
		ED007: Exchangeable Sodium	----	0.1	meq/100g	1.0	1.0	0.0	No Limit
		ED007: Cation Exchange Capacity	----	0.1	meq/100g	10.6	10.6	0.0	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5757402)									
ES2413401-097	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2413458-040	TP31-L_0.1	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP004: Organic Matter (QC Lot: 5758046)									
ES2412641-014	Anonymous	EP004: Organic Matter	----	0.5	%	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP004: Organic Matter (QC Lot: 5758046) - continued									
ES2412641-014	Anonymous	EP004: Total Organic Carbon	----	0.5	%	<0.5	<0.5	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 5754653)									
ES2413458-003	TP23-L_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2413458-048	TP33-P_0.1	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 5754652)									
ES2413458-003	TP23-L_0.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2413458-048	TP33-P_0.1	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 5754652) - continued									
ES2413458-048	TP33-P_0.1	EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 5754652)									
ES2413458-003	TP23-L_0.1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2413458-048	TP33-P_0.1	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 5754652) - continued									
ES2413458-048	TP33-P_0.1	EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 5754651)									
ES2413458-003	TP23-L_0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2413458-048	TP33-P_0.1	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 5754651) - continued									
ES2413458-048	TP33-P_0.1	EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5754650)									
ES2413458-003	TP23-L_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2413458-048	TP33-P_0.1	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5754952)									
ES2413655-002	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2413655-004	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5755901)									
ES2413458-003	TP23-L_0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2413458-048	TP33-P_0.1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5754650)									
ES2413458-003	TP23-L_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2413458-048	TP33-P_0.1	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5754952)									
ES2413655-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2413655-004	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5755901)									
ES2413458-003	TP23-L_0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2413458-048	TP33-P_0.1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 5754952)									
ES2413655-002	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2413655-004	Anonymous	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 5755901)									
ES2413458-003	TP23-L_0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES2413458-048	TP33-P_0.1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020T: Total Metals by ICP-MS (QC Lot: 5757368)									
ES2413443-006	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	0.0002	0.0002	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.002	0.002	0.0	No Limit

Sub-Matrix: **WATER**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG020T: Total Metals by ICP-MS (QC Lot: 5757368) - continued									
ES2413443-006	Anonymous	EG020A-T: Copper	7440-50-8	0.001	mg/L	0.101	0.106	5.1	0% - 20%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.005	0.005	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.202	0.211	4.3	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5757372)									
ES2413443-004	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5754311)									
ES2413516-005	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
ES2413516-007	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5754311)									
ES2413516-005	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
ES2413516-007	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 5754311)									
ES2413516-005	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
ES2413516-007	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5757401)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	113	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	101	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	117	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	104	89.0	111
EG005T: Iron	7439-89-6	50	mg/kg	<50	31660 mg/kg	100	89.0	112
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	97.2	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	98.1	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	95.5	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5757403)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	104	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	91.1	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	113	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	100	89.0	111
EG005T: Iron	7439-89-6	50	mg/kg	<50	31660 mg/kg	97.6	89.0	112
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	103	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	96.9	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	90.7	66.0	133
EA002: pH 1:5 (Soils) (QCLot: 5757105)								
EA002: pH Value	----	----	pH Unit	----	4 pH Unit	99.8	98.8	101
				----	7 pH Unit	100	98.8	101
EA010: Conductivity (1:5) (QCLot: 5757106)								
EA010: Electrical Conductivity @ 25°C	----	1	µS/cm	<1	1412 µS/cm	99.9	92.0	108
ED007: Exchangeable Cations (QCLot: 5761383)								
ED007: Exchangeable Calcium	----	0.1	meq/100g	<0.1	1 meq/100g	89.0	75.8	120
ED007: Exchangeable Magnesium	----	0.1	meq/100g	<0.1	1.67 meq/100g	94.6	74.9	115
ED007: Exchangeable Potassium	----	0.1	meq/100g	<0.1	0.51 meq/100g	92.2	80.0	120
ED007: Exchangeable Sodium	----	0.1	meq/100g	<0.1	0.87 meq/100g	86.2	80.0	120
ED007: Cation Exchange Capacity	----	0.1	meq/100g	<0.1	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5757402)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	102	70.0	125

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
				Result	Concentration	LCS	Low	High
EP004: Organic Matter (QCLot: 5758046)								
EP004: Organic Matter	----	0.5	%	<0.5	2.53 %	90.5	82.0	98.0
EP004: Total Organic Carbon	----	0.5	%	<0.5	1.46 %	91.1	81.0	99.0
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5754653)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	105	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 5754652)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	100	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	103	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	93.7	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	107	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.0	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	104	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	107	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	102	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.8	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	102	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.5	62.0	124
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	96.5	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	97.8	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5754652)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	95.1	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.3	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	99.9	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	104	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	101	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	98.5	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	98.7	68.0	120

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5754652) - continued								
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.0	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.2	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.1	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	94.6	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.3	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.7	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	105	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	100	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	100	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	103	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	85.0	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5754651)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	104	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	100	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	104	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	100	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	106	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	108	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	104	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	106	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	94.1	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	92.4	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	106	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	94.5	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	98.2	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	98.7	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	96.1	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754650)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	89.6	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	96.4	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	97.4	71.0	129

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754952)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	77.3	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5755901)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	98.2	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754650)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	108	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	94.8	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	94.9	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754952)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	73.0	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5755901)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	100	72.4	133
EP080: BTEXN (QCLot: 5754952)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	89.4	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	83.4	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	84.3	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	85.0	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	89.9	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	107	78.8	122
EP080: BTEXN (QCLot: 5755901)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	96.7	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	96.9	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	96.1	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	97.6	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	95.1	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	109	78.8	122

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 5757368)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	95.4	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	101	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	98.8	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	94.2	83.0	118

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG020T: Total Metals by ICP-MS (QCLot: 5757368) - continued								
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	92.8	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	95.8	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	96.3	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5757372)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	93.1	77.0	111
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5755261)								
EP075(SIM): Naphthalene	91-20-3	1	µg/L	<1.0	5 µg/L	84.2	50.0	94.0
EP075(SIM): Acenaphthylene	208-96-8	1	µg/L	<1.0	5 µg/L	77.0	63.6	114
EP075(SIM): Acenaphthene	83-32-9	1	µg/L	<1.0	5 µg/L	88.0	62.2	113
EP075(SIM): Fluorene	86-73-7	1	µg/L	<1.0	5 µg/L	115	63.9	115
EP075(SIM): Phenanthrene	85-01-8	1	µg/L	<1.0	5 µg/L	87.2	62.6	116
EP075(SIM): Anthracene	120-12-7	1	µg/L	<1.0	5 µg/L	82.2	64.3	116
EP075(SIM): Fluoranthene	206-44-0	1	µg/L	<1.0	5 µg/L	95.0	63.6	118
EP075(SIM): Pyrene	129-00-0	1	µg/L	<1.0	5 µg/L	94.1	63.1	118
EP075(SIM): Benz(a)anthracene	56-55-3	1	µg/L	<1.0	5 µg/L	109	64.1	117
EP075(SIM): Chrysene	218-01-9	1	µg/L	<1.0	5 µg/L	114	62.5	116
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	<1.0	5 µg/L	81.2	61.7	119
EP075(SIM): Benzo(k)fluoranthene	207-08-9	1	µg/L	<1.0	5 µg/L	112	63.0	115
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	µg/L	<0.5	5 µg/L	114	63.3	117
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	<1.0	5 µg/L	93.9	59.9	118
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	1	µg/L	<1.0	5 µg/L	94.1	61.2	117
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	1	µg/L	<1.0	5 µg/L	99.1	59.1	118
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754311)								
EP080: C6 - C9 Fraction	----	20	µg/L	<20	260 µg/L	86.8	75.0	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5755262)								
EP071: C10 - C14 Fraction	----	50	µg/L	<50	400 µg/L	61.3	53.7	97.0
EP071: C15 - C28 Fraction	----	100	µg/L	<100	600 µg/L	65.1	63.3	107
EP071: C29 - C36 Fraction	----	50	µg/L	<50	400 µg/L	70.2	58.3	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754311)								
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	310 µg/L	84.9	75.0	127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5755262)								
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	500 µg/L	72.2	53.9	95.5
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	700 µg/L	59.3	57.8	110

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5755262) - continued								
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	300 µg/L	72.6	50.5	115
EP080: BTEXN (QCLot: 5754311)								
EP080: Benzene	71-43-2	1	µg/L	<1	10 µg/L	100	68.3	119
EP080: Toluene	108-88-3	2	µg/L	<2	10 µg/L	96.9	73.5	120
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	10 µg/L	98.4	73.8	122
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	10 µg/L	97.3	73.0	122
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	10 µg/L	102	76.4	123
EP080: Naphthalene	91-20-3	5	µg/L	<5	10 µg/L	105	75.5	124

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5757401)							
ES2413401-097	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	75.3	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	91.5	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	85.7	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	96.9	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	90.0	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	91.2	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	87.8	66.0	133
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5757403)							
ES2413458-087	QA01	EG005T: Arsenic	7440-38-2	50 mg/kg	93.6	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	88.9	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	91.1	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	96.6	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	87.7	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	89.4	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	86.6	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5757402)							
ES2413401-097	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	92.6	70.0	130
EP004: Organic Matter (QCLot: 5758046)							
ES2412641-014	Anonymous	EP004: Organic Matter	----	0.92 %	109	70.0	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP004: Organic Matter (QCLot: 5758046) - continued							
ES2412641-014	Anonymous	EP004: Total Organic Carbon	----	0.54 %	106	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5754653)							
ES2413458-003	TP23-L_0.1	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	105	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 5754652)							
ES2413458-003	TP23-L_0.1	EP068: gamma-BHC	58-89-9	0.5 mg/kg	91.5	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	82.3	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	90.0	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	106	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	77.1	70.0	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	78.9	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5754652)							
ES2413458-003	TP23-L_0.1	EP068: Diazinon	333-41-5	0.5 mg/kg	86.7	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	94.1	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	84.9	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	90.9	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	84.1	70.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5754651)							
ES2413458-003	TP23-L_0.1	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	99.4	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	102	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754650)							
ES2413458-003	TP23-L_0.1	EP071: C10 - C14 Fraction	----	480 mg/kg	124	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	125	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	126	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754952)							
ES2413655-002	Anonymous	EP080: C6 - C9 Fraction	----	32.5 mg/kg	86.8	60.4	142
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5755901)							
ES2413458-003	TP23-L_0.1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	80.4	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754650)							
ES2413458-003	TP23-L_0.1	EP071: >C10 - C16 Fraction	----	860 mg/kg	110	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	127	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	120	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754952)							
ES2413655-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	77.6	61.1	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5755901)							
ES2413458-003	TP23-L_0.1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	81.6	61.1	142

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EP080: BTEXN (QCLot: 5754952)							
ES2413655-002	Anonymous	EP080: Benzene	71-43-2	2.5 mg/kg	82.7	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	80.2	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	80.6	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	81.2	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	85.2	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	94.6	61.1	115
EP080: BTEXN (QCLot: 5755901)							
ES2413458-003	TP23-L_0.1	EP080: Benzene	71-43-2	2.5 mg/kg	82.6	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	81.1	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	86.2	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	84.5	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	80.6	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	91.8	61.1	115

Sub-Matrix: **WATER**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	Matrix Spike (MS) Report: SpikeRecovery(%) MS	Matrix Spike (MS) Report: Acceptable Limits (%) Low	Matrix Spike (MS) Report: Acceptable Limits (%) High
EG020T: Total Metals by ICP-MS (QCLot: 5757368)							
ES2413458-089	RW01	EG020A-T: Arsenic	7440-38-2	1 mg/L	90.9	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	96.0	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	98.1	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	91.9	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	92.9	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	91.9	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	90.8	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5757372)							
ES2413443-003	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	# 64.1	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5754311)							
ES2413516-005	Anonymous	EP080: C6 - C9 Fraction	----	325 µg/L	118	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5754311)							
ES2413516-005	Anonymous	EP080: C6 - C10 Fraction	C6_C10	375 µg/L	116	70.0	130
EP080: BTEXN (QCLot: 5754311)							
ES2413516-005	Anonymous	EP080: Benzene	71-43-2	25 µg/L	114	70.0	130
		EP080: Toluene	108-88-3	25 µg/L	110	70.0	130
		EP080: Ethylbenzene	100-41-4	25 µg/L	113	70.0	130

Sub-Matrix: **WATER**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EP080: BTEXN (QCLot: 5754311) - continued							
ES2413516-005	Anonymous	EP080: meta- & para-Xylene	108-38-3 106-42-3	25 µg/L	112	70.0	130
		EP080: ortho-Xylene	95-47-6	25 µg/L	118	70.0	130
		EP080: Naphthalene	91-20-3	25 µg/L	94.0	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2413458**	Page	: 1 of 12
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Telephone	: +61-2-8784 8555
Project	: Gosforth	Date Samples Received	: 24-Apr-2024
Site	: ----	Issue Date	: 02-May-2024
Sampler	: MC	No. of samples received	: 90
Order number	: EP3627	No. of samples analysed	: 24

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 Laboratory Control outliers occur.**
- **Duplicate outliers exist - please see following pages for full details.**
- **Matrix Spike outliers exist - please see following pages for full details.**
- **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 : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EG005(ED093)T: Total Metals by ICP-AES	ES2413677--009	Anonymous	**Iron**	7439-89-6	27.7 %	0% - 20%	**RPD exceeds LOR based limits**

Matrix: **WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG035T: Total Recoverable Mercury by FIMS	ES2413443--003	Anonymous	**Mercury**	7439-97-6	64.1 %	70.0-130%	**Recovery less than lower data quality objective**

Outliers : Analysis Holding Time Compliance

Matrix: **SOIL**

Method / **Container** / Client Sample ID(s)	*Extraction / Preparation*			*Analysis*		
	Date extracted	*Due for extraction*	***Days overdue***	*Date analysed*	*Due for analysis*	***Days overdue***
EA001: pH in soil using 0.01M CaCl extract						
Soil Glass Jar - Unpreserved						
NEPM-0.2-0.5, NEPM-0.1	02-May-2024	01-May-2024	**1**	----	----	----

Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
pH (1:5)	EA002	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	3	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	3	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	3	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	3	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: **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
EA001: pH in soil using 0.01M CaCl extract							
Soil Glass Jar - Unpreserved (EA001)							
NEPM-0.2-0.5, NEPM-0.1	**24-Apr-2024**	**02-May-2024**	01-May-2024	×	**02-May-2024**	02-May-2024	✓
EA002: pH 1:5 (Soils)							
Soil Glass Jar - Unpreserved (EA002)							
NEPM-0.2-0.5, NEPM-0.1	**24-Apr-2024**	**01-May-2024**	01-May-2024	✓	**01-May-2024**	01-May-2024	✓
EA010: Conductivity (1:5)							
Soil Glass Jar - Unpreserved (EA010)							
NEPM-0.2-0.5, NEPM-0.1	**24-Apr-2024**	**01-May-2024**	01-May-2024	✓	**01-May-2024**	29-May-2024	✓
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055)							
TP25-P_0.1, TP37-P_0.1	**24-Apr-2024**	**----**	----	----	**01-May-2024**	08-May-2024	✓
Soil Glass Jar - Unpreserved (EA055)							
TP23-L_0.1, TP24-P_0.1, TP26-P_0.1, TP27-L_0.1, TP28-P_0.1, TP29-P_0.1, TP30-P_0.1, TP31-L_0.1, TP32-P_0.1, TP33-P_0.1, TP34-L_0.1, TP35-P_0.1, TP36-L_0.1, TP38-P_0.1, TP39-L_0.1, TP40-P_0.1, NEPM-0.2-0.5, NEPM-0.1	**24-Apr-2024**	**----**	----	----	**30-Apr-2024**	08-May-2024	✓
EA150: Soil Classification based on Particle Size							
Snap Lock Bag (EA150H)							
NEPM-0.2-0.5, NEPM-0.1	**24-Apr-2024**	**----**	----	----	**02-May-2024**	21-Oct-2024	✓
EA152: Soil Particle Density							
Snap Lock Bag (EA152)							
NEPM-0.2-0.5, NEPM-0.1	**24-Apr-2024**	**----**	----	----	**02-May-2024**	21-Oct-2024	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200)							
TP24-P_0.1, TP29-P_0.1, TP30-P_0.1, TP34-L_0.1	**24-Apr-2024**	**----**	----	----	**30-Apr-2024**	21-Oct-2024	✓

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
EA200N: Asbestos Quantification (non-NATA)								
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200N)								
TP24-P_0.1,	TP29-P_0.1,	**24-Apr-2024**	**----**	----	----	**30-Apr-2024**	21-Oct-2024	✓
TP30-P_0.1,	TP34-L_0.1							
ED007: Exchangeable Cations								
Soil Glass Jar - Unpreserved (ED007)								
NEPM-0.2-0.5,	NEPM-0.1	**24-Apr-2024**	**01-May-2024**	22-May-2024	✓	**01-May-2024**	22-May-2024	✓
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)								
TP23-L_0.1,	TP24-P_0.1,	**24-Apr-2024**	**30-Apr-2024**	21-Oct-2024	✓	**01-May-2024**	21-Oct-2024	✓
TP25-P_0.1,	TP26-P_0.1,							
TP27-L_0.1,	TP28-P_0.1,							
TP29-P_0.1,	TP30-P_0.1,							
TP31-L_0.1,	TP32-P_0.1,							
TP33-P_0.1,	TP34-L_0.1,							
TP35-P_0.1,	TP36-L_0.1,							
TP37-P_0.1,	TP38-P_0.1,							
TP39-L_0.1,	TP40-P_0.1,							
NEPM-0.2-0.5,	NEPM-0.1							
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)								
TP23-L_0.1,	TP24-P_0.1,	**24-Apr-2024**	**30-Apr-2024**	22-May-2024	✓	**02-May-2024**	22-May-2024	✓
TP25-P_0.1,	TP26-P_0.1,							
TP27-L_0.1,	TP28-P_0.1,							
TP29-P_0.1,	TP30-P_0.1,							
TP31-L_0.1,	TP32-P_0.1,							
TP33-P_0.1,	TP34-L_0.1,							
TP35-P_0.1,	TP36-L_0.1,							
TP37-P_0.1,	TP38-P_0.1,							
TP39-L_0.1,	TP40-P_0.1							
EP004: Organic Matter								
Soil Glass Jar - Unpreserved (EP004)								
NEPM-0.2-0.5,	NEPM-0.1	**24-Apr-2024**	**01-May-2024**	22-May-2024	✓	**01-May-2024**	22-May-2024	✓
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
TP24-P_0.1,	TP27-L_0.1,	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
TP33-P_0.1,	TP36-L_0.1,							
TP38-P_0.1								

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
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068)							
TP23-L_0.1, TP24-P_0.1, TP26-P_0.1, TP27-L_0.1, TP28-P_0.1, TP29-P_0.1, TP30-P_0.1, TP31-L_0.1, TP32-P_0.1, TP33-P_0.1, TP34-L_0.1, TP35-P_0.1, TP36-L_0.1, TP37-P_0.1, TP38-P_0.1, TP39-L_0.1, TP40-P_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP068)							
TP25-P_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**02-May-2024**	08-Jun-2024	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068)							
TP23-L_0.1, TP24-P_0.1, TP26-P_0.1, TP27-L_0.1, TP28-P_0.1, TP29-P_0.1, TP30-P_0.1, TP31-L_0.1, TP32-P_0.1, TP33-P_0.1, TP34-L_0.1, TP35-P_0.1, TP36-L_0.1, TP37-P_0.1, TP38-P_0.1, TP39-L_0.1, TP40-P_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP068)							
TP25-P_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**02-May-2024**	08-Jun-2024	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
TP24-P_0.1, TP27-L_0.1, TP33-P_0.1, TP36-L_0.1, TP38-P_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
TRIP BLANK	**15-Apr-2024**	**29-Apr-2024**	29-Apr-2024	✓	**29-Apr-2024**	29-Apr-2024	✓
Soil Glass Jar - Unpreserved (EP071)							
TP24-P_0.1, TP27-L_0.1, TP33-P_0.1, TP36-L_0.1, TP38-P_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP24-P_0.1, TP27-L_0.1, TP33-P_0.1, TP36-L_0.1, TP38-P_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**30-Apr-2024**	08-May-2024	✓

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)							
TRIP BLANK	**15-Apr-2024**	**29-Apr-2024**	29-Apr-2024	✓	**29-Apr-2024**	29-Apr-2024	✓
Soil Glass Jar - Unpreserved (EP071)							
TP24-P_0.1, TP27-L_0.1, TP33-P_0.1, TP36-L_0.1, TP38-P_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP24-P_0.1, TP27-L_0.1, TP33-P_0.1, TP36-L_0.1, TP38-P_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**30-Apr-2024**	08-May-2024	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
TRIP SPIKE, TRIP BLANK, TSC	**15-Apr-2024**	**29-Apr-2024**	29-Apr-2024	✓	**29-Apr-2024**	29-Apr-2024	✓
Soil Glass Jar - Unpreserved (EP080)							
TP24-P_0.1, TP27-L_0.1, TP33-P_0.1, TP36-L_0.1, TP38-P_0.1	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**30-Apr-2024**	08-May-2024	✓

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)							
RW01	**24-Apr-2024**	**30-Apr-2024**	21-Oct-2024	✓	**30-Apr-2024**	21-Oct-2024	✓
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
RW01	**24-Apr-2024**	**----**	----	**----**	**02-May-2024**	22-May-2024	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP075(SIM))							
RW01	**24-Apr-2024**	**29-Apr-2024**	01-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved (EP071)							
RW01	**24-Apr-2024**	**29-Apr-2024**	01-May-2024	✓	**30-Apr-2024**	08-Jun-2024	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
RW01	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**29-Apr-2024**	08-May-2024	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Amber Glass Bottle - Unpreserved (EP071)							
RW01	**24-Apr-2024**	**29-Apr-2024**	01-May-2024	✓	**30-Apr-2024**	08-Jun-2024	✓
Amber VOC Vial - Sulfuric Acid (EP080)							
RW01	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**29-Apr-2024**	08-May-2024	✓

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: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080)							
RW01	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**29-Apr-2024**	08-May-2024	✓

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***	*Evaluation*	
Laboratory Duplicates (DUP)							
Electrical Conductivity (1:5)	EA010	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations	ED007	1	2	**50.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Moisture Content	EA055	5	42	**11.90**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organic Matter	EP004	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	5	**40.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	18	**11.11**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	0	2	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
pH in soil using a 0.01M CaCl2 extract	EA001	2	11	**18.18**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	5	**40.00**	**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	4	38	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	5	**40.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	4	25	**16.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Electrical Conductivity (1:5)	EA010	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations	ED007	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organic Matter	EP004	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
pH (1:5)	EA002	2	2	**100.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	5	**20.00**	**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	2	38	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	25	**8.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Electrical Conductivity (1:5)	EA010	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Exchangeable Cations	ED007	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Organic Matter	EP004	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	5	**20.00**	**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	2	38	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	25	**8.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

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***	*Evaluation*	
Matrix Spikes (MS)							
Organic Matter	EP004	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	**5.56**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	5	**20.00**	**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	2	38	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	25	**8.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard

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 Duplicates (DUP)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	3	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	5	**20.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	3	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (GC/MS - SIM)	EP075(SIM)	0	3	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	5	**20.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	3	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	19	**5.26**	**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
pH in soil using a 0.01M CaCl2 extract	EA001	SOIL	In house: Referenced to Rayment and Lyons 4B3 (mod.) or 4B4 (mod.) 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM Schedule B(3).
pH (1:5)	EA002	SOIL	In house: Referenced to Rayment and Lyons 4A1 and APHA 4500H+. pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM Schedule B(3).
Electrical Conductivity (1:5)	EA010	SOIL	In house: Referenced to Rayment and Lyons 3A1 and APHA 2510. Conductivity is determined on soil samples using a 1:5 soil/water leach. This method is compliant with NEPM Schedule B(3).
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).
Particle Size Analysis by Hydrometer	EA150H	SOIL	Particle Size Analysis by Hydrometer according to AS1289.3.6.3
Soil Particle Density	EA152	SOIL	Soil Particle Density by AS 1289.3.5.1: Methods of testing soils for engineering purposes - Soil classification tests - Determination of the soil particle density of a soil - Standard method
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
Asbestos Classification and Quantitation per NEPM 2013	* EA200N	SOIL	Asbestos Classification and Quantitation per NEPM with Confirmation of Identification by AS 4964 - Gravimetric determination of Asbestos Containing Material, Fibrous Asbestos, Asbestos Fines and sample weight and calculation of percentage concentrations per NEPM protocols. Asbestos (Fines and Fibrous FA+AF) is reported as the equivalent weight in the sample received after accounting for sub-sampling (where applicable for the <7mm and/or <2mm fractions).
Exchangeable Cations	ED007	SOIL	In house: Referenced to Rayment & Lyons Method 15A1. Cations are exchanged from the sample by contact with Ammonium Chloride. They are then quantitated in the final solution by ICPAES and reported as meq/100g of original soil. 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 (SnCl2) (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 SnCl2 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)
Organic Matter	EP004	SOIL	In house: Referenced to AS1289.4.1.1. Dichromate oxidation method after Walkley and Black. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 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).

Analytical Methods	Method	Matrix	Method Descriptions
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique 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 (SnCl2)(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 SnCl2 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	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)
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
pH in soil using a 0.01M CaCl2 extract	EA001-PR	SOIL	In house: Referenced to Rayment and Lyons 4B1, 10 g of soil is mixed with 50 mL of 0.01M CaCl2 and tumbled end over end for 1 hour. pH is measured from the continuous suspension. This method is compliant with NEPM Schedule B(3).
Exchangeable Cations Preparation Method	ED007PR	SOIL	In house: Referenced to Rayment & Lyons method 15A1. A 1M NH4Cl extraction by end over end tumbling at a ratio of 1:20. There is no pretreatment for soluble salts. Extracts can be run by ICP for cations.
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of reagent grade water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.

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).
Organic Matter	EP004-PR	SOIL	In house: Referenced to AS1289.4.1.1. Dichromate oxidation method after Walkley and Black. 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.

Andrew Makar

From: Jack Clifton on behalf of Samples Sydney
Sent: Tuesday, 7 May 2024 12:41 PM
To: Sepan Mahamad; rebatches.sydney; Andrew Makar
Cc: Jason Dighton
Subject: RE: [EXTERNAL] - Work order: ES2413458

Follow Up Flag: Follow up
Flag Status: Flagged

7/5/24
Andrew
14:20

Hi @Andrew,

Can you please process this rebatch?

Kind Regards,

right solutions. right partner.

Jack Clifton
Sample Receipt Coordinator, Environmental
Sydney, NSW

O: +61 2 8784 8555
D: +61 2 8784 8532
Jack.Clifton@alsglobal.com
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

alsglobal.com

Environmental Division
Sydney
Work Order Reference
ES2414714

Telephone : +61-2-8784 8555

EnviroMail 145 Australia - Putting out the fire on emerging contaminants (HBCDs)
EnviroMail 146 Australia - PFAS: Internal Standards, Surrogates & Isotope Dilutions
EnviroMail 147 Australia - PFAS: Emerged or emerging?
EnviroMail 148 Australia - Interpreting TOP Assay
EnviroMail 151 Australia - Expanding the scope of PFAS analysis in soils and waters

From: Sepan Mahamad <Sepan.Mahamad@alsglobal.com>
Sent: Tuesday, May 7, 2024 10:52 AM
To: rebatches.sydney <rebatches.sydney@ALSGlobal.com>
Cc: Jason Dighton <jason.dighton@ALSGlobal.com>
Subject: FW: [EXTERNAL] - Work order: ES2413458

Hi Team,

Could you please organise this rebatch?

Samples 87 and 88 for S-16.

Sydney samples are in trays: asb bags kept at EN as per NC bottles map.
Sydney samples are in trays: S-972 S-973 S-974 S-975 S-976 SV38 V127B M183C Eurofins

Kind regards,

Sep Mahamad
Client Services Coordinator, Environmental
Sydney, NSW

O: +61 2 8784 8555
D: +61 2 8784 8504
Sepan.Mahamad@alsglobal.com
277-289 Woodpark Road
Smithfield NSW 2164 AUSTRALIA

alsglobal.com



EnviroMail 145 Australia - Putting out the fire on emerging contaminants (HBCDs)
EnviroMail 146 Australia - PFAS: Internal Standards, Surrogates & Isotope Dilutions
EnviroMail 147 Australia - PFAS: Emerged or emerging?
EnviroMail 148 Australia - Interpreting TOP Assay
EnviroMail 151 Australia - Expanding the scope of PFAS analysis in soils and waters

From: Mathew Cheshire <mathew.cheshire@eprisk.com.au>
Sent: Tuesday, May 7, 2024 7:31 AM
To: ALSEnviro Sydney <ALSEnviro.Sydney@ALSGlobal.com>
Cc: Jason Dighton <jason.dighton@ALSGlobal.com>
Subject: [EXTERNAL] - Work order: ES2413458

CAUTION: This email originated from outside of ALS. Do not click links or open attachments unless you recognize the sender and are sure content is relevant to you.

Hi,

Can I get the following from work order ES2413458 analysed for s-16:

QA01
QA03

Can I also confirm that samples QA02 and QA04 have been sent for secondary analysis to eurofins for s_16 ?

Standard TAT

Regards,

Mathew Cheshire
Graduate Environmental Scientist
M 0431165533 | **E** Mathew.Cheshire@eprisk.com.au

View my profile on LinkedIn

EP Risk Management Pty Ltd | ABN 81 147 147 591
3/19 Bolton Street | Newcastle NSW 2300
T +61240482845 | **W** eprisk.com.au

EP RISK | NEWCASTLE SYDNEY MELBOURNE

CERTIFICATE OF ANALYSIS

Work Order	: **ES2414714**	Page	: 1 of 8
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Contact	: Jason Dighton
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 4913 5650	Telephone	: +61-2-8784 8555
Project	: Gosforth	Date Samples Received	: 07-May-2024 14:20
Order number	: EP3627	Date Analysis Commenced	: 29-Apr-2024
C-O-C number	: ----	Issue Date	: 14-May-2024 10:34
Sampler	: MC		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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 Contract 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
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- 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.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above 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.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA01	QA03	----	----	----
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2414714-001	ES2414714-002	--------	--------	--------
					Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**29.4**	**24.2**	----	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	**6**	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	----	----	----
Chromium	7440-47-3	2	mg/kg		**85**	**70**	----	----	----
Copper	7440-50-8	5	mg/kg		**24**	**15**	----	----	----
Lead	7439-92-1	5	mg/kg		**10**	**10**	----	----	----
Nickel	7440-02-0	2	mg/kg		**47**	**21**	----	----	----
Zinc	7440-66-6	5	mg/kg		**25**	**26**	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	----	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	----	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA01	QA03	----	----	----
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2414714-001	ES2414714-002	--------	--------	--------
					Result	Result	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	----	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	<0.05	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	<0.05	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	QA01	QA03	----	----	----
			Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES2414714-001	ES2414714-002	--------	--------	--------
				Result	Result	----	----	----
EP068B: Organophosphorus Pesticides (OP) - Continued								
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	----	----	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	mg/kg	<0.5	<0.5	----	----	----
^ **Benzo(a)pyrene TEQ (half LOR)**	----	0.5	mg/kg	**0.6**	**0.6**	----	----	----
^ **Benzo(a)pyrene TEQ (LOR)**	----	0.5	mg/kg	**1.2**	**1.2**	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA01	QA03	----	----	----
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2414714-001	ES2414714-002	--------	--------	--------
					Result	Result	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	----	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	----	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	----	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		<50	<50	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	----	----	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	----	----	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	----	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	----	----	----
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	----	----	----
^ **Total Xylenes**	----	0.5	mg/kg		<0.5	<0.5	----	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	----	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**91.0**	**121**	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**92.9**	**124**	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	QA01	QA03	----	----	----
				Sampling date / time	24-Apr-2024 00:00	24-Apr-2024 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES2414714-001	ES2414714-002	--------	--------	--------
					Result	Result	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**93.4**	**136**	**----**	**----**	**----**
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**87.4**	**92.0**	**----**	**----**	**----**
2-Chlorophenol-D4	93951-73-6	0.5	%		**85.7**	**89.2**	**----**	**----**	**----**
2.4.6-Tribromophenol	118-79-6	0.5	%		**54.9**	**58.1**	**----**	**----**	**----**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**82.4**	**86.3**	**----**	**----**	**----**
Anthracene-d10	1719-06-8	0.5	%		**94.2**	**99.0**	**----**	**----**	**----**
4-Terphenyl-d14	1718-51-0	0.5	%		**93.0**	**96.2**	**----**	**----**	**----**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**79.3**	**87.2**	**----**	**----**	**----**
Toluene-D8	2037-26-5	0.2	%		**72.9**	**83.1**	**----**	**----**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%		**72.6**	**80.2**	**----**	**----**	**----**

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
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	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131

QUALITY CONTROL REPORT

Work Order	: **ES2414714**	Page	: 1 of 7
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Contact	: Jason Dighton
Address	: 3/19 BOLTON STREET NEWCASTLE NSW 2300	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 4913 5650	Telephone	: +61-2-8784 8555
Project	: Gosforth	Date Samples Received	: 07-May-2024
Order number	: EP3627	Date Analysis Commenced	: 29-Apr-2024
C-O-C number	: ----	Issue Date	: 14-May-2024
Sampler	: MC		
Site	: ----		
Quote number	: ES23EPRISK0002 - ES PRIMARY WORK ONLY		
No. of samples received	: 2		
No. of samples analysed	: 2		

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

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 Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

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*
Ankit Joshi	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW

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.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
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
RPD = Relative Percentage Difference
# = Indicates failed QC
* = The final LOR has been raised due to dilution or other sample specific cause; adjusted LOR is shown in brackets. The duplicate ranges for Acceptable RPD% are applied to the final LOR where applicable.

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5778658)									
ES2414421-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	12	15	23.4	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	15	13	13.3	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	11	32.1	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	59	60	0.0	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	88	104	16.9	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	108	122	12.2	0% - 20%
ES2414715-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	18	18	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	19	18	9.8	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	10	10	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	28	26	6.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	25	23	7.6	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	76	66	13.6	0% - 50%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5778668)									
ES2414652-009	Anonymous	EA055: Moisture Content	----	0.1 (1.0)*	%	17.7	19.0	7.6	0% - 50%
ES2414726-003	Anonymous	EA055: Moisture Content	----	0.1	%	8.1	7.8	4.7	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5778659)									
ES2414421-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	1.1	1.5	25.7	0% - 50%
ES2414715-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Acceptable RPD (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5774355)									
ES2414714-001	QA01	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5774355)									
ES2414714-001	QA01	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 5774355)									
ES2414714-001	QA01	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5778658)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	105	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	113	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	120	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	107	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	105	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	104	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	102	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5778659)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	89.6	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5776335)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	105	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 5776334)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	100	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	103	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.6	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.9	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	93.7	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	107	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.0	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	104	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	107	66.0	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	102	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	96.8	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	101	69.0	115
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.5	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	102	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.5	62.0	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP068A: Organochlorine Pesticides (OC) (QCLot: 5776334) - continued								
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	96.5	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	98.2	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	97.8	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5776334)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	95.1	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	99.3	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	99.9	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	104	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	101	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	98.5	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	98.7	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	96.0	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	95.2	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	93.1	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	94.6	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	96.2	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	98.3	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	93.7	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	105	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	100	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	100	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	103	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	85.0	41.0	123
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5776333)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	104	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	100	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	104	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	100	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	106	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	108	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	104	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	106	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	94.1	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	102	75.0	127

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5776333) - continued								
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	92.4	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	106	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	94.5	70.0	126
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	98.2	61.0	121
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	98.7	62.0	118
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	96.1	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5774355)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	74.5	72.2	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5776332)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	90.0	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	96.7	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	97.0	71.0	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5774355)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	74.2	72.4	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5776332)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	108	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	94.8	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	94.7	63.0	131
EP080: BTEXN (QCLot: 5774355)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	83.4	76.0	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	84.8	78.5	121
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	81.1	77.4	121
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	91.1	78.2	121
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	94.1	81.3	121
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	89.0	78.8	122

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	*Sample ID*	*Method: Compound*	*CAS Number*	*Concentration*	*MS*	*Low*	*High*
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5778658)							
ES2414421-001	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	107	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	102	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	104	68.0	132
		EG005T: Copper	7440-50-8	250 mg/kg	105	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	102	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	101	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	106	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5778659)							
ES2414421-001	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	89.7	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5774355)							
ES2414714-001	QA01	EP080: C6 - C9 Fraction	----	32.5 mg/kg	84.2	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5774355)							
ES2414714-001	QA01	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	76.2	61.1	142
EP080: BTEXN (QCLot: 5774355)							
ES2414714-001	QA01	EP080: Benzene	71-43-2	2.5 mg/kg	70.4	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	73.7	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	73.7	67.4	123
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	80.7	66.4	121
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	82.7	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	84.3	61.1	115

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **ES2414714**	Page	: 1 of 5
Client	: **EP RISK MANAGEMENT**	Laboratory	: Environmental Division Sydney
Contact	: MR NATHAN MCGUIRE (EPRISK)	Telephone	: +61-2-8784 8555
Project	: Gosforth	Date Samples Received	: 07-May-2024
Site	: ----	Issue Date	: 14-May-2024
Sampler	: MC	No. of samples received	: 2
Order number	: EP3627	No. of samples analysed	: 2

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: **SOIL**

Method / Container / Client Sample ID(s)	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EA055: Moisture Content (Dried @ 105-110°C)						
Soil Glass Jar - Unpreserved						
QA01, QA03	----	----	----	09-May-2024	08-May-2024	**1**

Outliers : Frequency of Quality Control Samples

Matrix: **SOIL**

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	
Laboratory Duplicates (DUP)						
PAH/Phenols (SIM)	EP075(SIM)	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	2	0.00	10.00	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)						
PAH/Phenols (SIM)	EP075(SIM)	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	0	2	0.00	5.00	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	2	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: **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)							
QA01, QA03	**24-Apr-2024**	**----**	----	**----**	**09-May-2024**	08-May-2024	×
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
QA01, QA03	**24-Apr-2024**	**09-May-2024**	21-Oct-2024	✓	**10-May-2024**	21-Oct-2024	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
QA01, QA03	**24-Apr-2024**	**09-May-2024**	22-May-2024	✓	**13-May-2024**	22-May-2024	✓

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
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) QA01	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
Soil Glass Jar - Unpreserved (EP066) QA03	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**02-May-2024**	08-Jun-2024	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) QA01, QA03	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) QA01, QA03	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) QA01, QA03	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**01-May-2024**	08-Jun-2024	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) QA01, QA03	**24-Apr-2024**	**08-May-2024**	08-May-2024	✓	**08-May-2024**	08-May-2024	✓
Soil Glass Jar - Unpreserved (EP071) QA01, QA03	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**09-May-2024**	08-Jun-2024	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) QA01, QA03	**24-Apr-2024**	**08-May-2024**	08-May-2024	✓	**08-May-2024**	08-May-2024	✓
Soil Glass Jar - Unpreserved (EP071) QA01, QA03	**24-Apr-2024**	**29-Apr-2024**	08-May-2024	✓	**09-May-2024**	08-Jun-2024	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) QA01, QA03	**24-Apr-2024**	**08-May-2024**	08-May-2024	✓	**08-May-2024**	08-May-2024	✓

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***	*Evaluation*	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	19	**10.53**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	0	2	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	2	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	0	2	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	12	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	2	**0.00**	**10.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	2	**50.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	12	**8.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	0	2	**0.00**	**5.00**	×	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	7	**14.29**	**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 (SnCl2) (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 SnCl2 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)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 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).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique 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.

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.

CHAIN OF CUSTODY

check cycle date for TB + TS

CLIENT:	TURNAROUND REQUIREMENTS		FOR LABORATORY USE ONLY (Circle)
OFFICE:			Custody Seal Intact? Yes No N/A
PROJECT:	ALS QUOTE NO.: SYBQ / 2301 16	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER:			Random Sample Temperature on Receipt: 13.6 °C
PROJECT MANAGER:	CONTACT PH:		Other comment:
SAMPLER:	SAMPLER MOBILE:	RELINQUISHED BY:	RECEIVED BY: Elizabeth Brotherton
COC emailed to ALS? YES NO	EDD FORMAT (or default):		
Email Reports to:		DATE/TIME:	DATE/TIME: 30/4 11:30am
Email Invoice to:			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS		CONTAINER INFORMATION			ANALYSIS REQUIRED including SUITES	Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE	TOTAL BOTTLES		
1	TP22-P-20	29/4	S	Jar	1		
2	TP22-P-30						
3	TP23-L-01			Tub/Bag	2		
4	TP23-L-05			Jar	1		
5	TP23-L-10						
6	TP23-L-20						
7	TP23-L-30						
8	TP24-P-01			Jar (S)			
9	TP24-P-05			Tub/Bag			
10	TP24-P-10			Jar/Bag			
11	TP24-P-20						
12	TP24-P-30						

QA02 QA04 | Europins

ES2413401

Subcon / Forward Lab / Split WO:

Lab / Analyst:

Organised By / Date:

Relinquished By / Date:

Courier / Courier:

WO No: ES2413458

Attached By PC

Environmental Division
Sydney
Work Order Reference
ES2413458

Telephone : + 61-2-8784 8555

1092777

CHAIN OF CUSTODY

ALS

CLIENT:	TURNAROUND REQUIREMENTS:	☐ Standard TAT (List due date)	FOR LABORATORY USE ONLY (Circle)
OFFICE:	[illegible]	☐ Non-Standard TAT (List due date)	Custody Seal Intact? Yes No N/A
PROJECT:	ALS QUOTE NO.: SYRQ / 210 / 16	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER:			Random Sample Temperature on Receipt: C
PROJECT MANAGER:	CONTACT PH:		Other comment:
SAMPLER:	SAMPLER MOBILE:	RELINQUISHED BY: / RECEIVED BY:	RELINQUISHED BY: / RECEIVED BY:
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):		
Email Reports to [illegible]		DATE/TIME: / DATE/TIME:	DATE/TIME: / DATE/TIME:
Email Invoice to [illegible]			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES							Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE	TOTAL BOTTLES	[illegible]	[illegible]	[illegible]					
13	TP25_P-0.1	24/7	S	[illegible]	2	X							
14	TP25-P-0.5							X					
15	TP25-P-1.0												
16	TP25-P-2.0												
17	TP25-P-3.0												
18	TP26-P-0.1			[illegible]		X							
19	TP26-P-0.5							X					
20	TP26-P-1.0												
21	TP26-P-2.0							X					
22	TP26-P-3.0												
23	TP27-L-0.1			[illegible]	2	X							
24	TP27-L-0.5							X					
93 *	TP27-L-1.0	Extra											

CHAIN OF CUSTODY

TURNAROUND REQUIREMENTS		FOR LABORATORY USE ONLY (Circle)
ALS QUOTE NO.	SVBC-216715	Custody Seal Intact? Yes No N/A
		Free ice / frozen ice packs present upon receipt? Yes No N/A
		Random Sample Temperature on Receipt °C
		Other comments

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS	CONTAINER INFORMATION	ANALYSIS REQUIRED including SUITES	Additional Information

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE	TOTAL BOTTLES
25	TP28-P-0.1	2/9	S		1
26	TP28-P-0.5				
27	TP28-P-1.0				
28	~~TP28-P-2.0~~				
29	~~TP28-P-3.0~~				
30	TP29-P-0.1				
31	TP29-P-0.5				
32	TP29-P-1.0				
33	TP29-P-2.0				
34	TP29-P-3.0				
35	TP30-P-0.1				
36	TP30-P-0.5				

CHAIN OF CUSTODY

ALS

CLIENT:	TURNAROUND REQUIREMENTS:	☐ Standard TAT (Last due date)	FOR LABORATORY USE ONLY (Circle)
OFFICE:		☐ Non-Standard Standard TAT (Last due date)	Custody Seal Intact? Yes No N/A
PROJECT:	ALS QUOTE NO.: SYBQ / 219 / 16	COC SEQUENCE NUMBER (Circle)	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER:		CAC 1 2 3 4 5 6 (13)	Random Sample Temperature on Receipt: °C
PROJECT MANAGER:	CONTACT PH:	CAC 1 2 3 4 5 6 7	Other comment:
SAMPLER:	SAMPLER MOBILE:	RELINQUISHED BY:	RECEIVED BY:
COC emailed to ALS:	EDD FORMAT (or default):		RELINQUISHED BY:
Email Reports to:		DATE/TIME:	DATE/TIME:
Email Invoice to:			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY	SAMPLE DETAILS			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES					Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE	TOTAL BOTTLES	2-16	EA 200 F	1-360			
37	TP30-P-1.0	29/4	S	Tr							
38	TP30-P-2.0										
39	TP30-P-2.0										
40	TP31-L-0.1			Tr / Bg	2	X					
41	TP31-L-0.5			Tr	1			X			
42	TP31-L-1.0										
43	TP31-L-2.0				1			X			
44	TP31-L-3.0										
45	TP32-P-0.1			Tr / Bg	2	X					
46	TP32-P-0.5			Tr				X			
47	TP32-P-1.0			Tr				X			
	~~TP32-P-2.0~~										

CHAIN OF CUSTODY

ALS

CLIENT	TURNAROUND REQUIREMENTS		FOR LABORATORY USE ONLY (Circle)
OFFICE			Custody Seal Intact? Yes No N/A
PROJECT	ALS QUOTE NO.	TYPO : 218 / 18	Free ice / frozen ice bricks present upon receipt? Yes No N/A
ORDER NUMBER			Random Sample Temperature on Receipt °C
PROJECT MANAGER	CONTACT PH		Other comment
SAMPLER	SAMPLER MOBILE	RELINQUISHED BY	RECEIVED BY
Email Reports to	TDD FORMAT (or default)	DATE/TIME	DATE/TIME
Email Invoice to			

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL

ALS USE ONLY	SAMPLE DETAILS			CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES							Additional Information
SAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE	TOTAL BOTTLES	S-S	EA	[illegible]					
	~~TP32-P-3.0~~	24/4	S	[illegible]									
48	TP33-P-0.1			[illegible]	2	X		X					
49	TP33-P-0.5			[illegible]									
50	TP33-P-1.0			[illegible]									
51	TP33-P-2.0			[illegible]									
	~~TP33-P-3.0~~			[illegible]									
52	TP34-L-0.1			[illegible]	2								
53	TP34-L-0.5			[illegible]									
54	TP34-L-1.0			[illegible]									
55	TP34-L-2.0			[illegible]									
56	TP34-L-3.0			[illegible]									
57	TP35-P-0.1			[illegible]	2	X							

Water Container Codes: [illegible]

CHAIN OF CUSTODY

ALS

CLIENT:	TURNAROUND REQUIREMENTS:	FOR LABORATORY USE ONLY (Circle)	
OFFICE:		Custody Seal Intact?	Yes / No / N/A
PROJECT:	ALS QUOTE NO.: SYBO / 218 / 18	Free ice / freezer ice packs present upon receipt?	Yes / No / N/A
ORDER NUMBER:		Random Sample Temperature on Receipt	°C
PROJECT MANAGER:	CONTACT PH:	Other comments:	
SAMPLER:	SAMPLER MOBILE:		
COC emailed to ALS? (YES / NO)	EDD FORMAT (or default):		
Email Reports to: (will also be emailed to PM)			
Email Invoice to: (will also be emailed to PM)			

SAMPLE CONSIGNMENT NUMBER (Lab use)	RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
1 2 3 4 5 6 7 8 9 10		(15)		
11 12 13 14 15 16 17 18 19 20				
	DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

| ALS USE ONLY | SAMPLE DETAILS | | | CONTAINER INFORMATION | | ANALYSIS REQUIRED including SUITES (NB. Suite Codes must be listed to ensure correct Analysis) | | | |

ALS

CHAIN OF CUSTODY

CLIENT:

OFFICE:

PROJECT:

PROJECT NUMBER:

PROJECT MANAGER:

SAMPLER:

COC HARDCOPY (YES / NO):

Email Reports To:

Email Invoices To:

TURNAROUND REQUIREMENTS:

ALS QUOTE NO.:

CONTACT PH:

SAMPLER MOBILE:

COC EMAIL (or fax):

COC SEQUENCE NUMBER (Circle)

COC	1	2	3	4	5				
OF	1	2	3	4	5	6	7	8	9

10

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice packs present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt		°C	
Other comment:			

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
DATE/TIME:	DATE/TIME:	DATE/TIME:	DATE/TIME:

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY

SAMPLE DETAILS

CONTAINER INFORMATION

ANALYSIS REQUIRED including SUITES (NOTE SUITE CODES must be listed to ensure correct analysis)

Additional Information

	LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE (refer codes above)	TOTAL BOTTLES		
		TP37-[illegible]-20 29/7						
		TP37-[illegible]-3.0						
70		TP38-P-0.1		Soil		2	X	
71		TP38-P-0.5						
72		TP38-P-1.0						
73		TP38-P-2.0						
74		TP-35-2.0 [illegible]						
75		TP39-L-0.1					X	
76		TP39-L-0.5						
77		TP39-L-1.0						
78		TP39-L-2.0						
79		TP39-L-3.0						

Other Comments / Notes:

Additional Information

CHAIN OF CUSTODY

CLIENT:
OFFICE:
PROJECT:
ORDER NUMBER:
PROJECT MANAGER:
SAMPLER:
COC sealed in Al Esk: YES / NO
Email Reports to:
Email Invoice to:

TURNAROUND REQUIREMENTS: Standard (Last due date)
Standard (Last due date)
ALS QUOTE NO.:
SYBC / STL / P

COC SEQUENCE NUMBER (Circle)
Cont: 1 2 3 4 5 6 7 8
Ref: 1 2 3 4 5 6 7 8

CONTACT PH:
SAMPLER MOBILE:
EDD FORMAT (or default):

RELINQUISHED BY: | RECEIVED BY: | RELINQUISHED BY: | RECEIVED BY:
DATE/TIME: | DATE/TIME: | DATE/TIME: | DATE/TIME:

FOR LABORATORY USE ONLY (Circle)
Custody Seal Intact? Yes No N/A
Free ice / frozen ice blocks present upon receipt? Yes No N/A
Random Sample Temperature on Receipt: C
Other comments:

COMMENT/SPECIAL HANDLING/STORAGE OR DISPOSAL

ALS USE ONLY | SAMPLE DETAILS | CONTAINER INFORMATION | ANALYSIS REQUIRED including SUITES | Additional Information

LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE	TOTAL BOTTLES								
80 79	TP40-P-01	28/4	S	Tw / Bg	2	X							
81 80	TP40-P-05			Tw	1			X					
82 81	TP40-P-10				1			X					
83 82	TP40-P-20												
84 83	TP40-P-30				1			X					
85 84	[illegible]			Tw / Bg	2								
86 85	[illegible]			Tw / Bg	2								
87 86	[illegible]			Tw		X							Send QA02
	[illegible]			Tw									& QA04
88 87	[illegible]			Tw		X							to Eurofins
	[illegible]			Tw									for seconds
89 88	[illegible]		W	Bottles	5					X			Analysis for 5-16

Water Container Codes: [illegible]

CHAIN OF CUSTODY

CLIENT: EP Risk

OFFICE:

PROJECT:

ORDER NUMBER:

PROJECT MANAGER:

SAMPLER:

COC emailed to ALS? (Y/N) Email Reports to:

Email Invoice to:

COMMENTS/SPECIAL PANELING/STORAGE OR DISPOSAL:

TURNAROUND REQUIREMENTS:

ALS QUOTE NO.: ES1 (EPR) 960802

CONTACT PH:

SAMPLER MOBILE:

EDD FORMAT (or date int):

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY:

DATE/TIME:

FOR LABORATORY USE ONLY (Circle)

Custody Seal Intact?	Yes	No	N/A
Free ice / frozen ice blocks present upon receipt?	Yes	No	N/A
Random Sample Temperature on Receipt		°C	
Other comment			

RELINQUISHED BY:

DATE/TIME:

RECEIVED BY:

DATE/TIME:

ALS USE	SAMPLE DETAILS MATRIX: SOLID (S) WATER (W)			CONTAINER INFORMATION			ANALYSIS REQUIRED including SUITES (NC)	Additional Information
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE		TOTAL CONTAINERS		
90								
91								
92	TSC							

TOTAL

Water Container Codes:

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd

ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370

Eurofins ProMicro Pty Ltd

ABN: 47 009 120 549

Perth ProMicro
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	EP Risk Management (NSW)
Contact name:	Nathan McGuire
Project name:	GOSFORD
Project ID:	EP3627
Turnaround time:	5 Day
Date/Time received	Apr 30, 2024 11:30 AM
Eurofins reference	1092777

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.
X	Split sample sent to requested external lab.
X	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

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

Bonnie Pu on phone : or by email: BonniePu@eurofins.com

Results will be delivered electronically via email to Nathan McGuire - nathan.mcguire@eprisk.com.au.

Note: A copy of these results will also be delivered to the general EP Risk Management (NSW) email address.

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	NSW 2304
+61 3 8564 5000	+61 3 8564 5000	+61 2 9900 8400	+61 2 6113 8091	T: +61 7 3902 4600	+61 2 4968 8448
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
Site# 2370

Eurofins ProMicro Pty Ltd
ABN: 47 009 120 549

Perth ProMicro
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2561
Site# 2554

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
IANZ# 1327	IANZ# 1308	IANZ# 1290	IANZ# 1402

Company Name: EP Risk Management (NSW)
Address: 80 Mount Street,
North Sydney
NSW 2060

Project Name: GOSFORD
Project ID: EP3627

Order No.: EP3627
Report #: 1092777
Phone: 02 99225021
Fax:

Received: Apr 30, 2024 11:30 AM
Due: May 7, 2024
Priority: 5 Day
Contact Name: Nathan McGuire

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Moisture Set	Suite B10E:TRH/BTEXN/PAH/OCP/OPP/PCB/M8
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	QA02	Apr 24, 2024		Soil	S24-My0003044	X	X
2	QA04	Apr 24, 2024		Soil	S24-My0003045	X	X
Test Counts						2	2

EP Risk Management (NSW)
80 Mount Street,
North Sydney
NSW 2060

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: **Nathan McGuire**

Report **1092777-S**
Project name GOSFORD
Project ID EP3627
Received Date Apr 30, 2024

Client Sample ID			**QA02**	**QA04**
Sample Matrix			**Soil**	**Soil**
Eurofins Sample No.			**S24-My0003044**	**S24-My0003045**
Date Sampled			**Apr 24, 2024**	**Apr 24, 2024**
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons				
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
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	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
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	%	117	73
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5

Client Sample ID			QA02	QA04
Sample Matrix			Soil	Soil
Eurofins Sample No.			S24-My0003044	S24-My0003045
Date Sampled			Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit		
Polycyclic Aromatic Hydrocarbons				
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	72	87
p-Terphenyl-d14 (surr.)	1	%	70	99
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05
a-HCH	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-HCH	0.05	mg/kg	< 0.05	< 0.05
d-HCH	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	95	114
Tetrachloro-m-xylene (surr.)	1	%	70	92
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2

Client Sample ID			QA02	QA04
Sample Matrix			Soil	Soil
Eurofins Sample No.			S24-My0003044	S24-My0003045
Date Sampled			Apr 24, 2024	Apr 24, 2024
Test/Reference	LOR	Unit		
Organophosphorus Pesticides				
Dimethoate	0.2	mg/kg	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	79	107
Polychlorinated Biphenyls				
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	95	114
Tetrachloro-m-xylene (surr.)	1	%	70	92
Heavy Metals				
Arsenic	2	mg/kg	< 2	6.6
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	87	54
Copper	5	mg/kg	21	11
Lead	5	mg/kg	10	8.2
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	40	14
Zinc	5	mg/kg	25	18
Sample Properties				
% Moisture	1	%	40	23

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	May 03, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2010 BTEX and Volatile TRH			
Polycyclic Aromatic Hydrocarbons	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Sydney	May 03, 2024	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Polychlorinated Biphenyls	Sydney	May 03, 2024	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8	Sydney	May 03, 2024	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	May 01, 2024	14 Days
- Method: LTM-GEN-7080 Moisture			

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web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261
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Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2377
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Eurofins ProMicro Pty Ltd
ABN: 47 009 120 549

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46-48 Banksia Road
Welshpool
WA 6106
+61 8 6253 4444
NATA# 2561
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Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Auckland (Focus)	Christchurch	Tauranga
35 O'Rorke Road	Unit C1/4 Pacific Rise,	43 Detroit Drive	1277 Cameron Road,
Penrose,	Mount Wellington,	Rolleston,	Gate Pa,
Auckland 1061	Auckland 1061	Christchurch 7675	Tauranga 3112
+64 9 526 4551	+64 9 525 0568	+64 3 343 5201	+64 9 525 0568
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Company Name: EP Risk Management (NSW)
Address: 80 Mount Street,
North Sydney
NSW 2060

Project Name: GOSFORD
Project ID: EP3627

Order No.: EP3627
Report #: 1092777
Phone: 02 99225021
Fax:

Received: Apr 30, 2024 11:30 AM
Due: May 7, 2024
Priority: 5 Day
Contact Name: Nathan McGuire

Eurofins Analytical Services Manager : Bonnie Pu

Sample Detail						Moisture Set	Suite B10E:TRH/BTEXN/PAH/OCP/OPP/PCB/M8
Sydney Laboratory - NATA # 1261 Site # 18217						X	X
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	QA02	Apr 24, 2024		Soil	S24-My0003044	X	X
2	QA04	Apr 24, 2024		Soil	S24-My0003045	X	X
Test Counts						2	2

Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to the '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 before sample receipt deadlines as stated on the SRA.

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

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

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

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**ppm:** parts per million
µg/L: micrograms per litre	**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
CFU: Colony Forming Unit	**Colour:** Pt-Co Units (CU)	

Terms

APHA	American Public Health Association
CEC	Cation Exchange Capacity
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 moisture has been determined on a solid sample, the result is expressed on a dry weight 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 represents 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 similar compound to the analyte target is reported as percentage recovery. See below for acceptance criteria.
TBTO	Tributyltin oxide (*bis*-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 6.0
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 only be used as a guide 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. SVOCs recoveries 20 – 150%, VOC recoveries 50 – 150%

PFAS field samples containing surrogate recoveries above the QC limit designated in QSM 6.0, where no positive PFAS results have been reported or reviewed, and no data was affected.

QC Data General Comments

1. Where a result is reported as 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 are 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							
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	
TRH C6-C10	mg/kg	< 20			20	Pass	
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							
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	
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							
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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	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	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons							
TRH C6-C9	%	101			70-130	Pass	
TRH C10-C14	%	78			70-130	Pass	
TRH C6-C10	%	98			70-130	Pass	
TRH >C10-C16	%	76			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	105			70-130	Pass	
Toluene	%	109			70-130	Pass	
Ethylbenzene	%	106			70-130	Pass	
m&p-Xylenes	%	106			70-130	Pass	
o-Xylene	%	121			70-130	Pass	
Xylenes - Total*	%	111			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	97			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	98			70-130	Pass	
Acenaphthylene	%	97			70-130	Pass	
Anthracene	%	108			70-130	Pass	
Benz(a)anthracene	%	96			70-130	Pass	
Benzo(a)pyrene	%	99			70-130	Pass	
Benzo(b&j)fluoranthene	%	80			70-130	Pass	
Benzo(g.h.i)perylene	%	100			70-130	Pass	
Benzo(k)fluoranthene	%	117			70-130	Pass	
Chrysene	%	102			70-130	Pass	
Dibenz(a.h)anthracene	%	95			70-130	Pass	
Fluoranthene	%	102			70-130	Pass	
Fluorene	%	100			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	91			70-130	Pass	
Naphthalene	%	95			70-130	Pass	
Phenanthrene	%	92			70-130	Pass	
Pyrene	%	100			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	107			70-130	Pass	
4.4'-DDD	%	104			70-130	Pass	
4.4'-DDE	%	108			70-130	Pass	
4.4'-DDT	%	113			70-130	Pass	
a-HCH	%	102			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	%	107			70-130	Pass	
b-HCH	%	96			70-130	Pass	
d-HCH	%	103			70-130	Pass	
Dieldrin	%	107			70-130	Pass	
Endosulfan I	%	107			70-130	Pass	
Endosulfan II	%	105			70-130	Pass	
Endosulfan sulphate	%	108			70-130	Pass	
Endrin	%	113			70-130	Pass	
Endrin aldehyde	%	112			70-130	Pass	
Endrin ketone	%	106			70-130	Pass	
g-HCH (Lindane)	%	114			70-130	Pass	
Heptachlor	%	112			70-130	Pass	
Heptachlor epoxide	%	101			70-130	Pass	
Hexachlorobenzene	%	105			70-130	Pass	
Methoxychlor	%	112			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	109			70-130	Pass	
Dimethoate	%	90			70-130	Pass	
Ethion	%	102			70-130	Pass	
Fenitrothion	%	87			70-130	Pass	
Methyl parathion	%	102			70-130	Pass	
Mevinphos	%	88			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1016	%	74			70-130	Pass	
Aroclor-1260	%	108			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	113			80-120	Pass	
Cadmium	%	104			80-120	Pass	
Chromium	%	110			80-120	Pass	
Copper	%	107			80-120	Pass	
Lead	%	103			80-120	Pass	
Mercury	%	110			80-120	Pass	
Nickel	%	112			80-120	Pass	
Zinc	%	111			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons				Result 1					
TRH C6-C9	S24-My0001861	NCP	%	110			70-130	Pass	
TRH C10-C14	S24-My0007869	NCP	%	81			70-130	Pass	
TRH C6-C10	S24-My0001861	NCP	%	105			70-130	Pass	
TRH >C10-C16	S24-My0007869	NCP	%	74			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S24-My0001861	NCP	%	112			70-130	Pass	
Toluene	S24-My0001861	NCP	%	128			70-130	Pass	
Ethylbenzene	S24-My0001861	NCP	%	120			70-130	Pass	
m&p-Xylenes	S24-My0001861	NCP	%	124			70-130	Pass	
o-Xylene	S24-My0002148	NCP	%	120			70-130	Pass	
Xylenes - Total*	S24-My0001861	NCP	%	129			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	S24-My0001861	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	N24-Ap0071489	NCP	%	111			70-130	Pass	
Fenitrothion	N24-Ap0071489	NCP	%	93			70-130	Pass	
Methyl parathion	N24-Ap0071489	NCP	%	87			70-130	Pass	
Mevinphos	N24-Ap0071489	NCP	%	104			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S24-My0012803	NCP	%	99			75-125	Pass	
Cadmium	S24-My0012803	NCP	%	102			75-125	Pass	
Chromium	S24-My0012803	NCP	%	97			75-125	Pass	
Copper	S24-My0014055	NCP	%	104			75-125	Pass	
Lead	S24-My0012803	NCP	%	99			75-125	Pass	
Mercury	S24-My0012803	NCP	%	115			75-125	Pass	
Nickel	S24-My0012803	NCP	%	99			75-125	Pass	
Zinc	S24-My0012803	NCP	%	77			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons				Result 1	Result 2	RPD			
TRH C6-C9	W24-My0000863	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S24-My0009519	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S24-My0009519	NCP	mg/kg	86	84	2.4	30%	Pass	
TRH C29-C36	S24-My0009519	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C6-C10	W24-My0000863	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S24-My0009519	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S24-My0009519	NCP	mg/kg	110	100	7.9	30%	Pass	
TRH >C34-C40	S24-My0009519	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	W24-My0000863	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	W24-My0000863	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	W24-My0000863	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	W24-My0000863	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	W24-My0000863	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	W24-My0000863	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	W24-My0000863	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Naphthalene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	N24-Ap0076124	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S24-My0014985	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S24-My0014985	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S24-My0014985	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S24-My0014985	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	S24-My0014985	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S24-My0014985	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	S24-My0014985	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	S24-My0014985	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	S24-My0014985	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	S24-My0014985	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	S24-My0014985	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S24-My0014043	NCP	mg/kg	6.1	6.7	9.8	30%	Pass	
Cadmium	S24-My0014043	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S24-My0014043	NCP	mg/kg	7.3	8.0	9.8	30%	Pass	
Copper	S24-My0014043	NCP	mg/kg	19	19	1.3	30%	Pass	
Lead	S24-My0014043	NCP	mg/kg	9.4	10	9.7	30%	Pass	
Mercury	S24-My0014043	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S24-My0014043	NCP	mg/kg	< 5	5.1	34	30%	Fail	Q15
Zinc	S24-My0014043	NCP	mg/kg	25	27	8.3	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	S24-My0003474	NCP	%	15	16	9.4	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
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:

Nileshni Goundar	Analytical Services Manager
Fang Yee Tan	Senior Analyst-Metal
Roopesh Rangarajan	Senior Analyst-Organic
Roopesh Rangarajan	Senior Analyst-Sample Properties
Roopesh Rangarajan	Senior Analyst-Volatile



Glenn Jackson
Managing Director

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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