Douglas Partners
Geotechnics | Environment | Groundwater

# Report on
# Detailed Site Investigation (Contamination)

New High School in Bungendore
Majara Street, Bungendore

Prepared for
Hindmarsh Construction Pty Ltd

Project 202107.04
July 2022

Integrated Practical Solutions

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The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

| | Signature | | Date |
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| Author | | Peter Storey | 14 July 2022 |
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Douglas Partners Pty Ltd
ABN 75 053 980 117
www.douglaspartners.com.au
Unit 2, 73 Sheppard Street
Hume ACT 2620
PO Box 1487
Fyshwick ACT 2609
Phone (02) 6260 2788

## Executive Summary

The objective of the Detailed Site Investigation (Contamination) (DSI) was to assess the suitability of the site, from a contamination perspective. for the new high school development and whether further investigation and/or management is required. Results from the DSI were also used to assist in providing preliminary in-situ waste classification advice.

The DSI included the following scope of works:

- Conducting a subsurface investigation including the drilling of 52 boreholes with sampling and laboratory testing for the identified contaminants of potential concern as outlined in Sections 7 and 8;
- Revision of a preliminary conceptual site model (CSM) based on the results of the subsurface investigation and laboratory testing; and
- Preparation of this report presenting the findings of the DSI, preliminary in-situ waste classification advice, identification of potential sources of contamination, and an assessment of the need for further investigations and/or management.

Potential sources and areas of contamination were identified on the basis of the available desktop site information, a site walkover, intrusive investigation and laboratory analysis results of selected samples. Based on the findings of the assessment, the potential for gross chemical contamination to be present across the site is considered to be low.

All soil results for TRH, BTEX, PAH, OCP, OPP, PCB and phenols, were below the laboratory's practical quantitation limit (PQL). All soil results for metals were above the PQL but below the SAC with the exception of cadmium, mercury and arsenic in samples discussed in Section 11, which were below the PQL.

The results of the soil contaminant testing were also compared to NSW waste classification criteria in order to provide a preliminary in-situ waste classification for the material that is understood to be excavated and disposed off-site during construction. Concentrations of metals (including the nickel in Bore 112/1.0 m and Bore 131/0.1 m with TCLP testing), TRH, BTEX, PAH, OCP, OPP, PCB and phenols were below the CT1 criteria for General Solid Waste (non-putrescible). Therefore, the material will likely be classified as General Solid Waste (non-putrescible).

Based on the natural material observed from the boreholes and chemical analysis of select samples, the natural material underlying the fill could also be classified as VENM. It should be noted that a VENM classification would be no longer be acceptable should the VENM be mixed with any fill or other potential contaminants.

Based on the results of the investigation, it is considered that the site is suitable, from a contamination perspective, for the proposed development at the site. It is also considered that the fill material is suitable for reuse (from a contamination perspective) at the site with reference to the following recommendations before and during any future development works:

- A Construction Environment Management Plan (CEMP) should also be prepared before future development works including an 'unexpected finds protocol' and asbestos finds protocol (including underground services that may contain ACM) and implemented during the works (i.e.

hydrocarbon staining and/odours observed during works, suspected ACM fragments of asbestos fibres);

- Where practicable, anthropogenic materials should be removed from the fill material and disposed off-site during the construction phase at the site;
- A detailed hazardous building materials (HAZMAT) survey will need to be undertaken for existing structures before any demolition or refurbishment works can occur. The buildings will have to be vacated completely before any detailed HAZMAT surveys can be undertaken and it is understood that this can only happen once the Department of Education receive ownership of the site. Future site works (including civil works) should only be undertaken once a detailed HAZMAT survey has been completed. It is also recommended that if HBM are found to be present in the structures, a validation assessment within the soils of the structure footprints should be undertaken once demolition works have been completed;
- Should suspected asbestos be encountered at the site, the affected area should be fenced off and assessed by an NSW licensed asbestos assessor; and
- Should any fill material be required to be disposed off-site, the material must be stockpiled, assessed in accordance with NSW EPA Waste Classification Guidelines Part 1 Classifying Waste (2014) and assigned a formal waste classification prior to off-site disposal.

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## 1. Introduction

Douglas Partners Pty Ltd (DP) has been engaged by Hindmarsh Construction Pty Ltd (Hindmarsh) to complete this detailed site investigation (contamination) (DSI) and preliminary in-situ waste classification for the new high school at Majara Street, Bungendore (the site). The site is shown on Drawing 1, Appendix A. The DSI was undertaken in accordance with DP's proposal 202107.04.P001.Rev2 dated 23 September 2021.

### 1.1 Background

NSW Department of Education -School Infrastructure is investing in school infrastructure and is committed to delivering new and upgraded schools for communities across NSW. The new high school in Bungendore is part of this program. The project is a state significant development (SSD) and a SSD application has been lodged with the NSW Department of Planning and Environment. As part of the planning process, an assessment of the suitability of the site, from a contamination perspective, is required.

DP has previously conducted a preliminary site investigation (contamination) (PSI) for the site, which identified potential sources and areas of contamination. The PSI is discussed further in Section 6.1. The PSI recommended that intrusive investigation, in the form of a DSI, be conducted to further investigate the potential for contamination to be present at the site.

The DSI has been revised to incorporate comments in submissions made during the exhibition period for the SSD application and to include information within third party reports (commissioned by Transport for NSW) on potential off-site sources of contamination.

### 1.2 Objectives

The objective of the DSI is to assess the suitability of the site, from a contamination perspective, for the proposed development and whether further investigation and/or management is required. Results from the DSI will also assist in providing preliminary in-situ waste classification advice.

This report must be read in conjunction with the notes entitled *'About This Report'* in Appendix B and other explanatory notes, and the report should be kept in its entirety without separation of individual pages or sections.

The following key guidelines were consulted in the preparation of this report:

- NEPC (1999), *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [the "NEPM"]* (NEPC, 2013);

- NSW EPA (1995), 'Contaminated Sites – Sampling Design Guidelines', dated September 1995; and
- NSW EPA (2020), '*Guidelines for Consultants Reporting on Contaminated Land',* (NSW EPA, 2020).

## 2. Proposed Development

The proposed development is for the construction of a new high school in Bungendore. The proposed development will include the demolition of the Bungendore Swimming Pool and the Bungendore Community Centre; repurposing of existing council buildings; and the construction of new school buildings. New facilities for the high school will comprise of numerous learning areas, a gymnasium; library; canteen; outdoor learning and play areas that include two games courts.

A new agricultural plot is also proposed to the north of the main school site including a new agricultural building and scout storage shed, adjacent to the existing scout hall.

Upgrades to nearby road intersections and infrastructure, crossings, footpaths and will also be included in the proposed development.

## 3. Scope of Work

The DSI included the following scope of works:

- Review of previous investigations undertaken at the site;
- Review of service plans, completion of a Dial-Before-You Dig (DBYD) underground services record search, scanning of test locations for buried services and surveying of test locations using a GPS;
- Intrusive sampling from 52 boreholes drilled using a mini-excavator fitted with a 200 mm diameter auger or a hand-held electric post hole digger fitted with a 75 mm diameter auger;
- Collection of soil samples from all test locations at regular depth intervals based on field observations, upon signs of contamination and at changes in strata;
- Logging of encountered soil material and pertinent field information;
- Backfilling of boreholes;
- Laboratory analysis of collected soil samples at a National Association of Testing Authorities (NATA) accredited laboratory for one or all of the following analytes:
  - Total recoverable hydrocarbons (TRH);
  - Benzene, toluene, ethyl benzene and total xylenes (BTEX compounds);
  - Polycyclic aromatic hydrocarbons (PAH);
  - Organochlorine Pesticides and Organophosphate Pesticides (OCP/OPP)
  - Polychlorinated biphenyls (PCBs)

- Phenols;
- Metals (As, Cd, Cr, Cu, Hg, Pb, Ni and Zn); and
- Asbestos.

- Where results of the laboratory analysis indicated it may be required, selected samples were also analysed for toxicity characteristic leachability procedure (TCLP) testing for metals and PAH for preliminary in-situ waste classification purposes; and
- Preparation of this DSI report, including a Data Quality Assessment, an updated conceptual site model (CSM), a discussion of the methods and results of the investigation, an assessment of the risk to the proposed development from contamination, advice on the type and potential extent of contamination and a statement on the site suitability and/or need for further assessment / remediation.

It should be noted that DP's proposal included investigation work within the Bungendore railway station/railway forecourt area. DP was requested not to undertake investigation work within this area as the project will not be undertaking works in the railway station, railway forecourt area.

## 4. Site Information

| | |
|---|---|
| Site Address | 6-14 Butmaroo Street;<br>2 Majara Street;<br>4-6 Majara Street;<br>10 Majara Street; and<br>Butmaroo Street |
| Legal Description | Part of Lot 701 deposited plan (DP) 1027107;<br>Lot 12 DP1139067;<br>Lot 13 DP1139067;<br>Lot 14 DP1139067;<br>Lot 3 DP830878; and<br>Part of Lot 701 DP96240 |
| Approximate Area | 2.53 hectares |
| Zoning | Queanbeyan-Palerang Regional Council (QPRC) |
| | Vacant land (RE1 and SP2);<br>Swimming Pool (RE1);<br>Community Centre (SP2);<br>Council Building (SP2); and<br>Sports Oval (RE1) |

| | |
|---|---|
| | North – Residential and recreational ovals<br>East – Railway line<br>South – Railway forecourt and Bungendore Public School<br>West – Recreational |
| Local Council Area | Queanbeyan-Palerang Regional Council (QPRC) |
| Current Use | Vacant land;<br>Swimming Pool;<br>Community Centre;<br>Council Building;<br>Train Station; and<br>School and Sports Ovals |
| Surrounding Uses | North – Residential and recreational<br>East – Railway line<br>South – Primary school, residential and train station<br>West – Residential and recreational |

## 4.1 Site Description

The proposed development is located within the Bungendore Town Centre within the local government area of Queanbeyan-Palerang Regional Council. The proposal involves the use of land bounded by Bungendore Park, Gibraltar Street, Majara Street, Turallo Terrace and Butmaroo Street, the existing former Palerang Council site at 10 Majara Street, the Majara Street road reserve bounded by Turallo Terrace and Gibraltar Streets and Nos. 2, 4 and 6 Majara Street.

The site is legally described as per the existing Lots and DPs listed in the table above. The school site comprises land which has recently been transferred to the ownership of the Department of Education, being Lots 12 to14 of DP1139067, Lot 3 of DP830878, part of Lot 701 of DP1027107, part of lot 701 of DP96240, and part of the Majara Street Road Reserve. The proposed Lots and DPs are detailed within Table 1 above and are not yet registered at the time of writing of this Amendment Report.

The site is approximately 25,350m2 in area and consists of a relatively flat topography. It contains existing Council buildings. The land is mostly cleared of vegetation with some mature trees intersperse throughout subject lots.

The surrounding area generally comprises low density residential developments to the north and west, an existing rail line to the east and Bungendore Public School and the Bungendore train station to the south and south west respectively.

The site boundary is shown on Figure 1.


Figure 1: Site Location

# 5. Environmental Setting

## 5.1 Topography

The regional topography comprises flat to gently sloped plains with some low foot slopes of alluvium and colluvium. The region typically slopes gently towards Lake George.

The site gently slopes from 698 m in the south-east/east to 694 m in the north-west/west, towards Halfway Creek. The northern portion of the site slopes down in a northerly direction from Turallo Terrace towards Turallo Creek from 696 m to 691 m. All elevations are in reference to levels relative to Australian Height Datum (AHD).

## 5.2 Site Geology

Reference to the Canberra 1:100 000 Geological Sheet 8727 indicates that most of the site (to the west of Majara Street and north of Turallo Terrace) is underlain by Quaternary aged alluvium and part of the eastern side (between Majara Street and the existing railway) is underlain by colluvium, overlying middle to late Ordovician aged Birkenburn beds, which comprises interbedded sandstone, siltstone and shale. It is expected that the Birkenburn beds would underly the alluvium.

## 5.3 Soil Landscapes

The site is underlain by various soil landscape groups. Published mapping indicates it is underlain by the Millpost soil group (mapped across the northernmost portion of the site) and the Hoskinstown soil group (mapped across most of the eastern portion of the site and Mick Sherd Oval).

The Millpost soil group landscape is characterised by flat to very gently inclined plains on Quaternary alluvium of gravel, sand, silty clay and black organic clay. Limitations associated with the Millpost soil group include localised imperfect drainage, localised permanently high-water tables, localised run-on, and seasonal water logging. The soil group is also subject to experiencing localised salinity, infertile dispersible soils and acidic topsoils, localised flooding hazards and engineering hazards.

Hoskinstown soil group landscape is characterised by undulating low hills on Silurian volcanics and sedimentary units of proximal quartz tubidites of sandstone, shale and siltstone, acid and basic volcanics and tuffs. The landscape contains isolated patches of rock outcrop. Limitations associated with the Hoskinstown soil group include localised saline scalds, minor sheet erosion and seasonal water logging. The soil group is also subject to experiencing run-ons and engineering hazards.

## 5.4 Acid Sulfate Soils

Reference to the CSIRO's Atlas of Australian Acid Sulfate Soils online mapping portal, (A S R I S - Atlas of Australian Acid Sulfate Soils (csiro.au)) indicates that the site has a low probability of acid sulfate soils to be present.

## 5.5 Surface Water and Groundwater

On-site stormwater drainage infrastructure is present across the site and expected to flow towards Turallo Creek and Halfway Creek, located approximately 100 m north and 650 m west of the site, respectively. Turrallo Creek flows into Halfway Creek and then into Lake George which is located approximately 7.5 km to the north west of the site. Two unnamed water bodies are located adjacent to Turallo Creek approximately 160 m to the north of the site. Review of the topographic map and the site inspection indicates that the likely direction of surface water drainage would generally be towards the north-west/north.

A search of the publicly available registered groundwater bore database indicated that there were no registered groundwater bores present on the site and six registered groundwater bores within 500 m of the site. The groundwater bores from within 500 m of the site are summarised in Table 1.

**Table 1: Summary of Available Information from Nearby Registered Groundwater Bores**

| Bore ID<br>Authorised Purpose<br>Completion Year Status | Location Relative to Site | Final Depth (m) | Standing Water Level (m bgl) |
|---|---|---|---|
| GW020916 - Domestic- 1952 | 496 m W | 21.9 | N/A |
| GW402023 - Domestic - 2002 | 273 m SE | 22.0 | 10.0 |
| GW403783 - Domestic - 2003 | 226 m SE | 50.0 | 28.0 |
| GW403817 - Domestic - 2007 | 490 m W | 39.0 | 6.0 |
| GW404164 - Domestic - 2004 | 455 m NW | 42.0 | 2.0 |
| GW416600 – Monitoring - 2004 | 150 m E | 5.1 | 4.35 |

Based on the regional topography and the inferred flow direction of nearby water courses, the anticipated flow direction of groundwater beneath the site is to the north-west/west, towards Lake George, the likely receiving surface water body for the groundwater flow path. Given the local geology (i.e. Birkenburn beds), the groundwater in the fractured rock beneath the site is anticipated to be relatively fresh. Accordingly, potential beneficial uses could include irrigation or drinking water.

## 6. Previous Reports

From Douglas Partners' (DP) records, several environmental investigations have been completed by DP for the site or within part of the site which includes:

- Preliminary Site Investigation for a proposed Supported Housing project (report ref: *94328.00.R.001.Rev0*) (DP, 2019);
- Targeted Detailed Site Investigation for Contamination for a proposed Supported Housing project, with five test pits excavated within the proposed housing site (report ref: *94328.01.R.001.Rev0*) (DP, 2020);
- Preliminary Site Investigation with Limited Sampling (Contamination) for a new high school in Bungendore (report ref: *202107.03.R.001.Rev2*) (DP, 2021); and
- Sampling, Analysis and Quality Plan for a new high school in Bungendore (report ref: *202107.04.R.001.Rev0*) (DP, 2021a).

In addition, Environmental Resources Management Australia Pty Ltd (ERM) was engaged by Country Regional Network John Holland Rail Pty Ltd (JHR) on behalf of Transport for New South Wales (TfNSW) to complete a PSI for the rail corridor land through Bungendore and a PSI for Bungendore Station, reported in the following:

- Preliminary Site Investigation, Bungendore Rail Corridor (report ref: 0608750.Rev03, dated 2 March 2022); and
- Preliminary Site Investigation, Bungendore Station (report ref: 0608750.Rev02, dated 3 May 2022).

A brief summary of the findings of the investigations and subsurface conditions encountered during the intrusive investigation are provided below.

### 6.1 Preliminary Site Investigation for Contamination, Proposed Supported Housing, 4 – 6 Majara Street, Bungendore (DP, 2019)

A Preliminary Site Investigation (PSI) was completed by DP in October 2019 (DP, 2019). The work was commissioned by Abbeyfield Australia Limited.

The site history review and site inspection indicated that the site has not previously been developed and was most likely used for agricultural uses in the past. The Southern NSW Train Line was located immediately adjacent to the eastern boundary of the site. The site inspection identified the potential presence of fill material at the site as an embankment was noted in the eastern part of the site and disturbed ground was present in the southern part of the site.

The main sources of potential contamination were considered to be potential impacts from fill associated with the embankment and the disturbed ground.

The results of the PSI indicated that it was considered that the likelihood for gross chemical contamination to be present on the site was low with possible localised areas of chemical contamination. It was recommended that an intrusive subsurface investigation should be undertaken to determine the extent of the potential contamination at the site, targeting the fill material.

### 6.2 Targeted Detailed Site Investigation for Contamination, Proposed Supported Housing, 4 – 6 Majara Street, Bungendore (DP, 2020)

The investigation comprised the excavation of five test pits using a ~5 tonne excavator within the site of the proposed supported housing. These pits generally encountered gravelly sandy clay fill and gravelly clayey sand with trace amounts of anthropogenic material (plastic and concrete) to depths between 0.3 m and 0.4 m below ground level (bgl), underlain by hard silty clay with varying gravel content to depths of 0.6 m bgl, then siltstone bedrock to depths of 0.6 m to 0.7 m bgl.

The results of the laboratory analysis of soil samples indicated that reported concentrations of contaminants of potential concern (COPC) were below the Site Assessment Criteria (SAC) adopted for the site.

Based on the results of the investigation, it was considered that the site was suitable for proposed development at the site, which includes the development of assisted independent living for vulnerable adults.

### 6.3 Preliminary Site Investigation with Limited Sampling (Contamination), New High School in Bungendore, Majara Street, Bungendore (DP, 2021)

The investigation comprised a review of available local topographic, soil, geological, salinity and acid sulfate soils mapping, a review of available historical and government provided information and subsurface investigation (boreholes BH01-T, BH02-T and BH01 – BH10) across the proposed high school area. Additional land was included as part of the site boundary (proposed agricultural plot for the new high school) after intrusive works were undertaken.

The site historical title information suggests that the site was used for recreational and railway purposes from at least 1884. The aerial photographs from between 1961 and 1985 indicates that the site was mostly vacant with some ground disturbance noted across the site at times. The aerial photographs from 1985 and 1992 indicates that placement of fill had occurred within the tributary of Turallo Creek, located in the northern portion of the site. The aerial photograph from 1992 suggests that sometime between 1985 and 1992, the swimming pool and community centre were also constructed. The satellite image from 2007 indicates ground disturbance and placement of fill had occurred north of the council offices, where construction for those offices had commenced sometime before 2007. Planning searches indicated no known sources of contamination across the site. The EPA database searches also indicated that no contaminated sites are located within the current site of investigation.

The site comprised mostly developed lots of land. The northern portion (north of Turallo Terrace) of the site comprised vacant land and was moderately grassed. Between Turallo Terrace and Gibraltar Street, a public swimming pool and associated structures, a community hall, the Queanbeyan-Palerang Regional Council offices and the Mick Sherd Oval were present. Some areas of vacant land were located between the infrastructure on site and comprised of grass coverage and some sporadic tree coverage. The northern portion of the site appeared to have been built up along the northern side of Turallo Terrace and sloped down towards a near flat area, towards Turallo Creek. Along the western boundary of the swimming pool, a mound of fill was present and surface fill/topsoil fill was noted across most areas of the site.

Analytical results of soil samples were generally within the adopted health-based (i.e. HIL-A/HSL-A), ecological (i.e. EIL/ESL) criteria, and management limits for low-density residential with garden access with the exception of:

- Nickel in samples BH05/3.0 m at 10 mg/kg, BH06/3.0 m and BH10/5.0 m at 9 mg/kg and BH10/0.5 m at 8 mg/kg exceeded the EIL of 7 mg/kg. Samples BH05/3.0 m, BH06/3.0 m and BH10/5.0 m are below the top 2 m of soil where likely root zones and animal habitation zones are likely to be located and are considered not to be of concern. Furthermore, there was no sign of stressed flora and fauna within the site;
- A calculation of the $95\%UCL_{average}$ using ProUCL software was undertaken for nickel samples within the upper 2.0 m of the soil and where concentrations above the laboratory Practical Quantification Limit (PQL) were reported. The $95\%UCL_{average}$ was then compared to the assessment criteria. The $95\%UCL_{average}$ for nickel at the site was calculated below the assessment criteria. The outputs from the ProUCL software are presented in Appendix L; and
- Soil results for all cadmium and mercury and a number of arsenic results were less than PQL.

Reported concentrations of metals, TRH, BTEX, PAH, OCP, OPP, PCB and phenols were below the CT1 criteria for General Solid Waste (non-putrescible).

DP concluded that it was considered that the site can be made suitable for the proposed school development subject to recommended further investigation (detailed site investigation for the additional northern portion and site characterisation), subsequent further data analysis and subsequent remediation or management (remedial action plan) if considered necessary based on the findings of the further investigation.

DP also recommended that the following measures should be undertaken at the site before and during any future development works:

- A detailed hazardous building materials (HAZMAT) survey will need to be undertaken for existing structures before any demolition works can occur. The buildings will have to be vacated completely before any detailed HAZMAT surveys can be undertaken and it is understood that this can only happen once the Department of Education receive ownership of the site. Future site works (including civil works) should only be undertaken once a detailed HAZMAT survey has been completed. It is also recommended that if hazardous building materials (HBM) are found to be present in the structures, a validation assessment within the soils of the structure footprints should be undertaken once demolition works have been completed;
- A Construction Environment Management Plan (CEMP) should also be prepared before future development works including an 'unexpected finds protocol' and asbestos finds protocol and implemented during the works (i.e. hydrocarbon staining and/odours observed during works, suspected ACM fragments of asbestos fibres);
- Should suspected asbestos be encountered at the site, the affected area should be fenced off and assessed by an NSW licensed asbestos assessor; and
- Should any fill material be required to be disposed off-site, the material must be assessed in accordance with NSW EPA Waste Classification Guidelines Part 1 Classifying Waste (2014) and assigned a formal waste classification prior to off-site disposal.

Groundwater wells were installed in Boreholes BH02, BH08 and BH09. Groundwater wells were installed for any possible future groundwater monitoring. It should be noted that groundwater monitoring was not part of the scope for the PSI.

The groundwater levels in the monitoring wells were measured on 4 May 2021 and observations summarised in Table 2.

**Table 2: Summary of Groundwater Level Measurements on 4 May 2021**

| Bore No. | Depth (m) | RL (m)* |
|---|---|---|
| BH02 | 5.39 | 691.11 |
| BH08 | 5.84 | 691.16 |
| BH09 | No Groundwater Observed | - |

- *Surface levels given in Table 2 are based on the survey data provided by Project Surveyors Pty Ltd

## 6.4 Sampling, Analysis and Quality Plan (DP, 2021a)

DP were engaged to prepare a Sampling, Analysis and Quality Plan (SAQP) to inform a DSI for the site. The purposes of the SAQP were to document the data quality objectives for sampling at the site, present methods for determining sampling and to define the number, type and locations of soil sampling to ensure the collection of representative, reproducible data to allow conclusions to be drawn on the suitability of the site for the proposed development.

The SAQP presented Data Quality Objectives (presented in Appendix C) and proposed sampling locations, field screening and the laboratory analysis program.

## 6.5 Preliminary Site Investigation, Bungendore Rail Corridor (ERM, 2022)

ERM was engaged by JHR on behalf of TfNSW to complete a PSI of the railway corridor land as it passes through Bungendore. It is understood that the PSI was commissioned to assess possible lead impacts associated with the transport of ores from mining operations in Captains Flat located to the south of Bungendore.

The objectives of the work included collecting information to assess potential sources of contamination and assess the nature and extent of identified contaminants in surface soils. The scope of works for the PSI included a desk top review of historical information for the site and its environmental setting, a site inspection walkover and collection of 119 primary shallow soil samples, in order to develop a conceptual site model.

The review of desktop information indicated that the rail corridor, as it passes through Bungendore, is approximately 2.5 km long and 40 m to 50 wide and three sidings are present. The review of the site history and information obtained from JHR indicated that the line was historically used to transport lead ore from mining operations at the Lake George Mine located in Captains Flat. It was further identified that the lead ore was transferred to larger railway wagons in one of the three sidings, located south of the Bungendore Railway Station buildings (to the south of Malbon Street and east of Majara Street). The ERM conceptual site model for the rail corridor site identified the historical handling and transport of lead ore as a primary potential source of contamination.

A total of 119 primary soil samples were collected during the PSI. The sampling design rationale for the investigation was systematic and judgemental sampling. Systematic sampling was undertaken as transects across the rail corridor at approximately 200 m intervals, and where space allowed, three samples were collected each side of the rail tracks. Judgemental sampling was undertaken across the three siding areas, targeting areas where transfer of ore was understood to have occurred. Soil samples were collected from shallow surface soils to a maximum depth of 0.2 m bgl with deeper soils and groundwater excluded from the investigation.

The results of the soil sampling indicated that reported concentration of lead were generally elevated immediately adjacent to or within rail ballast. The reported lead concentrations generally increased in areas where trains may have been required to slow down or stop (e.g. Bungendore Station area and sidings where ore is understood to have been transferred between railway wagons).

Based on the reported lead concentrations present in surface soils and potentially complete source-pathway-receptor linkages, ER considered that a duty to notify NSW Environment Protection Authority under Section 60 of the Contaminated Land Management Act (1997) had been triggered.

Review of the locations of the soil sampling undertaken by ERM (2022) indicates that several samples were taken within the rail corridor adjacent to the New High School site. Reported concentrations of lead obtained from these areas were above the health investigation level A (HIL-A) applied for the land use setting ‘residential with garden / accessible soil’.

### 6.6 Preliminary Site Investigation, Bungendore Station (ERM, 2022a)

ERM was engaged by JHR on behalf of TfNSW to complete a PSI of Bungendore Station. It is noted that Bungendore Station is located to the south of the new high school site.

The objectives of the work included collecting information to assess for the presence of potential contamination sources and assess the nature and extent of identified contaminants in surface soils, if any. The scope of works for the PSI included a desk top review of historical information for the site and its environmental setting, a site inspection walkover and collection of 15 surface soil samples across the site, in order to develop a conceptual site model. It is noted that the site covers an area of approximately 1.5 hectares and the sampling undertaken by ERM does not meet the minimum sampling density requirements for a detailed site investigation (NSW EPA, 1995).

As for the PSI of the rail corridor (ERM, 2022), the review of desktop information indicated that the transport of lead ore along the rail corridor from the Lake George Mine in Captains Flat was the primary area of environmental concern. The railway station is located immediately adjacent to the rail corridor and to the north of a siding area where ERM (2022) noted that the transfer of lead ore to larger rail wagons occurred.

A total of 15 soil samples (samples SS-STN-01 to SS-STN-15) were collected in an irregular grid pattern across the site. Soil samples were collected from shallow surface soils to a maximum depth of 0.1 m bgl and were submitted for analysis for a range of metals (including lead). The results of the laboratory analysis reported that concentrations of lead in three samples (SS-STN-01, SS-STN-02 and SS-STN-13 were above the adopted HIL-A, applied for the land use setting ‘residential with garden / accessible soil’. Two of the samples (SS-STN-01 and SS-STN-02) were located in the southern portion of the site adjacent to Malbon Street and located just to the north of the railway siding where the transfer of lead ore between rail wagons was noted to occur (ERM, 2022). One of the samples (SS-STN-13) was located in the north-eastern portion of the site.

It is noted that the closest sample to the new high school site (sample SS-STN-15) reported a lead concentration of 14 mg/kg, which is considered to represent background levels.

## 7. Preliminary Conceptual Site Model

A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or the future i.e. it enables an assessment of the potential source – pathway – receptor linkages (complete pathways).

**Potential Sources (S)**

Based on the current investigation, the following potential sources of contamination and associated contaminants of potential concern (COPC) have been identified.

On-site sources

- S1: Fill: Associated with past construction of the swimming pool, ovals, community centre, QPRC building and car parks/roads and ground disturbance/possible fill placement in a tributary in the northern portion of the site.
    - Various COPC and may include metals, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylene (BTEX), polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), organochlorine pesticides (OCP), organophosphate pesticides (OPP), phenols and asbestos.
- S2: Existing buildings and the hazardous building materials (HBM) that may be associated with those structures.
    - COPC include asbestos, synthetic mineral fibres (SMF), lead (in paint) and PCB.

Off-site sources

- S3: Railway corridor land.
    - CoPC include metals, TRH, BTEX, PAH, PCB, OCP, OPP, phenols and asbestos.

**Potential Receptors (R)**

The following potential human receptors have been identified:

- R1: Current users [general public, community workers and council workers];
- R2: Construction and maintenance workers;
- R3: End users [students, teachers and other associated workers on a school site]; and
- R4: Adjacent site users [residential, recreational and students, teachers and other associated workers on a school site (Bungendore Primary School)].

The following potential environmental receptors have been identified:

- R5: Surface water [on-site stormwater drainage lines flowing into Turallo Creek (fresh water)];
- R6: Groundwater; and
- R7: Terrestrial ecology.

**Potential Pathways (P)**

The following potential pathways have been identified:

- P1: Ingestion and dermal contact;
- P2: Inhalation of dust and/or vapours;
- P3: Surface water run-off;
- P4: Lateral migration of groundwater providing base flow to water bodies;
- P5: Leaching of contaminants and vertical migration into groundwater; and
- P6: Contact with terrestrial ecology.

## Summary of Potentially Complete Exposure Pathways

A 'source–pathway–receptor' approach has been used to assess the potential risks of harm being caused to human or environmental receptors from contamination sources on or in the vicinity of the site, via exposure pathways (potential complete pathways). The possible pathways between the above sources (S1 to S2) and receptors (R1 to R7) are provided in below Table 3.

**Table 3: Summary of Potentially Complete Exposure Pathways**

| Source and COPC | Transport Pathway | Receptor | Risk Management Action |
|---|---|---|---|
| S1: Fill, Metals, TRH, BTEX, PAH, OCP, OPP, PCB, Phenols and asbestos | P1: Ingestion and dermal contact<br>P2: Inhalation of dust and/or vapours | R1: Current users [general public, community workers and council workers]<br>R2: Construction and maintenance workers<br>R3: End users [students, teachers and other associated workers on a school site] | Fill was identified during the intrusive work (DP, 2021) historical aerial review of the northern portion of the site.<br><br>Further testing within the additional northern portion of the site is recommended to assess possible contamination including testing of the soils and groundwater, if required.<br><br>Further testing across the remaining portion of the site is also recommended for further site characterisation.<br><br>A groundwater investigation is not recommended at this stage based on the historical assessment. A groundwater investigation may be recommended at a later stage depending on the results of the soil sample assessment. |
| | P2: Inhalation of dust and/or vapours | R4: Adjacent site users [students, teachers and other associated workers on a school site, recreational, students, school workers and residents]. | |
| | P3: Surface water run-off<br>P5: Lateral migration of groundwater providing base flow to water bodies | R5: Surface Water | |
| | P4: Leaching of contaminants and vertical migration into groundwater | R6: Groundwater | |

| Source and COPC | Transport Pathway | Receptor | Risk Management Action |
| --- | --- | --- | --- |
| | P6: Contact with terrestrial ecology | R7: terrestrial ecology | |
| S2: Current and former buildings, asbestos, SMF, lead (in paint) and PCB | P1: Ingestion and dermal contact<br>P2: Inhalation of dust | R1: Current users [general public, community workers and council workers]<br>R2: Construction and maintenance workers<br>R3: End users [students, teachers and other associated workers on a school site] | The results of the laboratory analysis indicated that reported concentrations of contaminants of concern were below the adopted assessment criteria or not detected (asbestos) (DP, 2021).<br><br>Further testing across the site is also recommended for further site characterisation.<br><br>A groundwater investigation is not recommended at this stage based on the historical assessment. A groundwater investigation may be recommended at a later stage depending on the results of the soil sample assessment.<br><br>A HAZMAT survey was recommended in DP (2021). However, DP has not been engaged to undertake a HAZMAT survey within the buildings across the site. |
| | P3: Surface water run-off*<br>P5: Leaching of contaminants and vertical migration into groundwater* | R5: Surface Water. | |
| | P4: Lateral migration of groundwater providing base flow to water bodies*<br>P5: Leaching of contaminants and vertical migration into groundwater* | R4: Adjacent site users [students, teachers and other associated workers on a school site, recreational, students, school workers and residents]<br>R6: Groundwater | |
| | P6: Contact with terrestrial ecology* | R7: Terrestrial ecology | |
| S3: Railway corridor land, Metals, TRH, BTEX, PAH, OCP, OPP, PCB, Phenols and asbestos | P1: Ingestion and dermal contact<br>P2: Inhalation of dust | R1: Current users [general public, community workers and council workers]<br>R2: Construction and maintenance workers<br>R3: End users [students, teachers and other associated | The results of the laboratory analysis undertaken in DP (2021) indicated that reported concentrations of lead within the current development boundary were below the adopted assessment criteria.<br><br>Further testing across the site is also recommended for further site characterisation, particularly targeting areas adjacent to the rail |

| Source and COPC | Transport Pathway | Receptor | Risk Management Action |
|---|---|---|---|
| | | workers on a school site] | corridor, e.g. the proposed agricultural plot.<br><br>A groundwater investigation is not recommended at this stage based on the historical assessment. A groundwater investigation may be recommended at a later stage depending on the results of the soil sample assessment. |
| | P3: Surface water run-off*<br>P5: Leaching of contaminants and vertical migration into groundwater* | R5: Surface Water. | |
| | P4: Lateral migration of groundwater providing base flow to water bodies*<br>P5: Leaching of contaminants and vertical migration into groundwater* | R4: Adjacent site users [students, teachers and other associated workers on a school site, recreational, students, school workers and residents]<br>R6: Groundwater | |
| | P6: Contact with terrestrial ecology* | R7: Terrestrial ecology | |

Note: *Pathway only refers to lead and PCB for S2.

# 8. Sampling and Analysis Quality Plan

## 8.1 Data Quality Objectives

The DSI was devised with reference to the SAQP (DP, 2021a) and the seven-step data quality objective process which is provided in Appendix B Schedule B2, NEPC (2013). The DQO process presented in the SAQP (DP, 2021a) is outlined in Appendix C.

## 8.2 Soil Sampling Rationale

Based on the CSM and data quality objectives (DQO) the following sampling rationale was adopted.

A systematic sampling strategy based on the NSW EPA *Contaminated Sites, Sampling Design Guidelines* (NSW EPA, 1995) to determine borehole locations which was adapted based on areas of access. Borehole locations are shown on Drawings 2 and 3, in Appendix A.

Due to the exclusion of the railway forecourt area, the site area was reduced to approximately 2.92 ha. NSW EPA (1995) recommends a minimum of 40 sampling points for a site of 2.92 ha for site characterisation. DP had already completed 12 boreholes (BH01-T, BH02-T and BH01 – BH10) as part of the PSI and 52 boreholes (Bores 101 – 152) during this DSI which equates to 64 boreholes in total across the site. Therefore, DP considers that this sampling density is appropriate to investigate the presence of gross contamination at the site, based on site accessibility.

It should be noted that Bores 101 – 152 could not be drilled in the building footprints of the Bungendore Community Centre and QPRC building or within the Bungendore Swimming Pool area due to access constraints.

Soil samples were collected from each borehole at depths of approximately 0.1 m, 0.5 m, 1.0 m and every 0.5 m thereafter, and changes in lithology or signs of contamination.

The general sampling methods are described in the field work methodology, included in Appendix D.

## 9. Site Assessment Criteria

The site assessment criteria (SAC) applied in the current investigation are informed by the CSM (Section 7) which identified human and environmental receptors to potential contamination on the site. Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013).

The investigation and screening levels applied in the current investigation comprise levels adopted for a generic low-density residential space with **garden/soil access** (including primary schools/childcare centres) land use scenario. A conservative approach has been adopted due to the proposed agricultural plot of land that is planned to be located within the northern portion of the site (**garden/soil access)**. NSW waste classification criteria (WCC) has also been included. The derivation of the SAC and WCC are included in Appendix E and the adopted SAC and WCC are listed on the summary analytical results tables in Appendix G.

## 10. Results

### 10.1 Field Work Methods

The field work comprised the drilling of 52 boreholes (Bores 101 to 152) using either a CAT 304C CR or Kubota KX033-4 mini-excavator and a Ryobi hand-held power auger at the locations shown on Drawings 2 and 3, Appendix A. The boreholes were drilled through overburden soils and upper weathered rock (where encountered) or to refusal with 200 mm diameter solid flight augers (on the excavator) or 75 mm diameter solid flight augers (hand-held power auger). Bores 101 – 109, 111 – 123, 125 – 141, 143, 149 and 150 were drilled to the limit of investigation depths of 1.0 – 2.0 m. Bore 110 was terminated at 0.6 m due to slow progress in weathered siltstone rock and Bores 124, 142, 144 – 148, 151 and 152 were drilled to refusal depths of 0.5 m to 0.9 m.

The approximate test location coordinates provided on each borehole log were determined on site using a hand-held GPS which is accurate only to approximately 3 – 5 m. The surface levels shown on the borehole logs to Australian Height Datum (AHD) and coordinates to Map Grid of Australia (MGA, Zone 55) were interpolated determined using the provided survey drawings and as such, are approximate only and not to be relied on.

## 10.2 Field Work Results

The boreholes were logged on-site by two environmental scientists. Subsurface conditions encountered are given in the borehole logs in Appendix I, which should be read in conjunction with the notes defining classification methods and descriptive terms.

The succession of strata is broadly summarised below:

- **TOPSOIL FILL:** generally low to medium plasticity silty and sandy clay with a various mixture of rootlets and gravel in all boreholes except for Bore 101, 114, 116 and 131 to depths of between 0.15 m to 0.4 m;
- **FILL:** generally low to high plasticity clayey soils with varying amounts of silt, sand, gravel and trace cobbles and medium dense gravelly/sandy soils in Bores 101 – 109, 115, 118, 126 and 131 from the ground surface to depths of 1.3 m and 0.15 to 1.8 m;
- **NATURAL TOPSOIL:** low plasticity silty clay with rootlets and trace sand in Bore 114 to a depth of 0.2 m;
- **NATURAL CLAY:** generally low to high plasticity clayey residual, extremely weathered siltstone, alluvial and colluvial soils with varying amounts of silt, sand and gravel in all bores from depths of 0.15 m to 1.8 m, refusal depths of 0.5 m to 0.9 m (hand-held power auger) and to the limit of investigation depths of 1.0 m to 2.0 m; and
- **BEDROCK:** variably very low to medium strength, highly to moderately weathered siltstone in Bores 110, 111, 113, 116, 121, 122, 125, 129, 133 – 135 from depths of 0.3 m to the limit of investigation or slow progress depths of 0.6 m to 1.2 m. Very low strength and highly weathered sandstone was observed in Bore 123 at a depth of 0.8 m to the limit of investigation depth of 1.2 m.

There were no other apparent observations of visual or olfactory evidence (e.g. staining, odours, free phase product) to suggest the presence of contamination within the soils or groundwater encountered during this investigation.

There were no other apparent observations of anthropogenic material (e.g. glass, bricks, concrete, asphalt, metal, tiles etc.) to suggest the presence of aesthetic issues or risk for individuals to be injured encountered during this investigation.

No asbestos was observed during the course of the investigation. However, it should be noted that the small footprint of borehole drilling limits the ability to observe potential asbestos in soils and it **cannot** be assumed that there is no asbestos present at the site.

The PID screening indicated that the sub-surface conditions were generally absent of VOC with all recorded values of less than 1 ppm.

No free groundwater was encountered during the drilling and coring of the boreholes. Boreholes were backfilled immediately to avoid trip and fall hazards. DP also notes that groundwater conditions rarely remain constant and can change seasonally due to variations in rainfall, temperature and soil permeability. For these reasons, it is noted that the moisture condition of the site soils may vary considerably from the time of the investigation compared to at the time of construction. It must be noted that due to the topography, sandy nature of the site soils in parts and fractured weathered rock, groundwater seepages must be expected following periods of rainfall.

### 10.3 Laboratory Analytical Results

The results of laboratory analysis are summarised in the following tables in Appendix G:

- Table G1: Summary of Results of Soil Analysis (Metals, TRH, BTEX and PAH);
- Table G2: Summary of Results of Water Analysis (OPP/OCP, phenols, PCB and asbestos);
- Table G3: Summary of Waste Classification Assessment;
- Table G4: Summary of TCLP Results; and
- Tables QA1 – QA5: QA/QC Results.

The laboratory certificates of analysis together with the chain of custody and sample receipt information are provided in Appendix H.

## 11. Discussion

### 11.1 Soils

Analytical results of soil samples were all within the adopted health-based (i.e. HIL-A/HSL-A/B) and ecological (i.e. EIL/ESL) criteria, and management limits for low-density residential space with **garden/soil access** land use scenario.

All soil results for TRH, BTEX, PAH, OCP, OPP and PCB were below the laboratory's practical quantitation limit (PQL). All soil results for metals were above the PQL with the exception of cadmium, mercury and a number of arsenic results (see Table G1), but below the adopted screening criteria.

### 11.2 Preliminary In-Situ Waste Classification

The following Table 4 presents the results of the six-step procedure outlined in NSW EPA (2014) for determining the type of waste and the waste classification. This process applies to the fill (including topsoil fill (surface soils)) at the site, which do not meet the definition of VENM. It should be noted that the preliminary in-situ waste classification can only applied to the site boundary shown in Drawing 1 and depth of the sampling in this DSI.

**Table 4: Six Step Classification Procedure**

| Step | Comments | Rationale |
|---|---|---|
| 1. Is the waste special waste? | No | No asbestos-containing materials (ACM), clinical or related waste, or waste tyres were observed in the boreholes.<br>Asbestos was not detected by the analytical laboratory. |
| 2. Is the waste liquid waste? | No | The fill comprised a soil matrix. |

| Step | Comments | Rationale |
|---|---|---|
| 3. Is the waste "pre-classified"? | No | The fill is not pre-classified with reference to NSW EPA (2014).<br>The natural material, if classified as VENM, is pre-classified as General Solid Waste (non-putrescible). |
| 4. Does the waste possess hazardous waste characteristics? | No | The fill was not observed to contain or considered at risk to contain explosives, gases, flammable solids, oxidising agents, organic peroxides, toxic substances, corrosive substances, coal tar, batteries, lead paint or dangerous goods containers. |
| 5. Determining a wastes classification using chemical assessment | Conducted | Refer to Tables G3 and G4 (Appendix G). |
| 6. Is the waste putrescible or non-putrescible? | Non-putrescible | The fill does not contain materials considered to be putrescible [a]. |

Note: a wastes that are generally not classified as putrescible include soils, timber, garden trimmings, agricultural, forest and crop materials, and natural fibrous organic and vegetative materials (NSW EPA, 2014).

As shown in the attached Tables G3 and G4 (Appendix G), reported concentrations of metals, TRH, BTEX, PAH, OCP, OPP, PCB and phenols were below the CT1 criteria for General Solid Waste (non-putrescible) except for nickel in samples Bore 112/1.0 m at 43 mg/kg and Bore 131/0.1 m at 42 mg/kg. As a result, the two samples were submitted for leachability (TCLP) testing for nickel. The results of the TCLP analysis indicated that the reported concentration of nickel in leachate resulting from TCLP was below the general solid waste criteria (non-putrescible) as defined in NSW EPA (2014).

**Table 5: Preliminary In-Situ Waste Classification Summary**

| Item | Description |
|---|---|
| Based on the observations at the time of sampling and the reported analytical results, the fill described as: | Predominantly sandy and silty CLAY TOPSOIL FILL and sandy and silty CLAY FILL and some clayey SAND FILL and sandy GRAVEL FILL |
| Within the area subject to classification as shown on Drawings 1 – 3, is classified as: | General Solid Waste |

The following Table 6 presents the results of the assessment of natural soils and bedrock at the site with reference to the VENM definition in the POEO Act and the EPA[1] website.

[1] https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/virgin-excavated-natural-material

**Table 6: VENM Classification Procedure**

| Item | Comments | Rationale |
|---|---|---|
| 1. Is the material natural? | Yes | Natural materials logged in the bore holes as silty clay, sandy clay, siltstone and sandstone. These materials underlie the fill at the site.<br>Depth of fill in the northern portion of the site (Bores 101 – 115) ranges from 0.15 m to 1.8 m with an average fill depth of 0.9 m.<br>Depth of fill for the reaming parts of the site (Bores 116 – 152) ranges from 0.15 m to 1.2 m with an average fill depth of 0.25 m. |
| 2. Is the material impacted by manufactured chemicals or process residues? | No | There were no visual or olfactory indicators of chemical contamination of the materials in the boreholes.<br>Concentrations of contaminants were considered to be typical of background concentrations (Table G1, Appendix G). |
| 3. Are the materials acid sulfate soils? | No | Refer to Section 5.4 |
| 4. Are there current or previous land uses that have (or may have) contaminated the materials? | No | Previous land uses may have impacted on surface soils overlying the materials. Low chemical concentrations indicate no likely impact on the natural materials. |

Based on the natural material observed from the boreholes and chemical analysis of select samples, the material underlying the fill could also be classified as VENM. It should be noted that a VENM classification would be voided should the natural material be mixed with any fill or potential contaminants

**Table 7: VENM Classification Summary**

| Item | Description |
|---|---|
| Based on the outcomes presented in Table 6, the natural soils and bedrock that underlie the fill are described as: | Silty CLAY, sandy CLAY, gravelly CLAY , minor clayey GRAVEL, SILTSTONE and minor SANDSTONE |
| Within the area subject to classification as shown on Drawings 1 – 3, is classified as: | VENM |

If any materials are encountered that are different to those sampled and tested or exhibit signs of potential contamination (e.g.: anthropogenic inclusions, staining or odours) this preliminary in-situ waste classification does not apply and the advice of a qualified environmental consultant should be sought.

If during excavation the natural in-situ soil is found to contain possible signs of contamination or is cross-contaminated with any non-VENM materials the excavated natural soil cannot be classified as VENM. In this regard, it is also recommended that care should be taken during the bulk excavation of the VENM to prevent cross contamination between the VENM and non-VENM materials.

Fill material that is proposed to be disposed off-site should be stockpiled first, have the volume measured by a qualified surveyor and a suitably qualified environmental consultant should assess the stockpile to evaluate that the material is consistent with the material that was observed within this investigation. It should be noted that further testing may be warranted once material is excavated and stockpiled. VENM should not be stockpiled or processed in anyway. A site for the use of the VENM should be identified prior to commencement of site excavations and once commenced, the excavated VENM should be transported directly to the reuse site.

Both the receiving site and the site disposing of the material should satisfy the requirements of the licence before disposal of the material is undertaken. Note that appropriate prior arrangement with the receiving site/relevant authorities should be obtained prior to the disposal of any material off site. The receiving site should check to ensure that the material received matches the description provided in this report and contains no cross contamination. The handling, transport and disposal of the materials should be conducted in accordance with regulatory and statutory requirements. DP does not accept liability for the unlawful disposal of waste materials from any site. DP accepts no responsibility for the material tracking, loading, management, transport or disposal of waste from the site.

### 11.3 Data Quality Assurance and Quality Control

The data quality assurance and quality control (QA/QC) results are included in Appendix I. Based on the results of the field QA and field and laboratory QC, and evaluation against the data quality indicators (DQI) it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment.

## 12. Revised Conceptual Site Model

The data collected for this DSI has generally confirmed that certain potential contaminant sources outlined in the CSM outlined in Section 7 pose a potentially complete pathway to the identified receptor(s) whilst others do not. No other sources of contamination have been identified as a result of the testing results. This is summarised in Table 8.

**Table 8: Updated Summary of Potentially Complete Exposure Pathways**

| Source and COPC | Transport Pathway | Receptor | Risk Management Action |
|---|---|---|---|
| S1: Fill, Metals, TRH, BTEX, PAH, OCP, OPP, PCB, Phenols and asbestos | P1: Ingestion and dermal contact<br>P2: Inhalation of dust and/or vapours | R1: Current users [general public, community workers and council workers]<br>R2: Future construction and maintenance workers<br>R3: End users [students, teachers | The results of the laboratory analysis indicated that reported concentrations of contaminants of concern were below the adopted assessment criteria or not detected (asbestos).<br><br>Groundwater testing has not been undertaken as part of this DSI, however, the results of the subsurface investigation and laboratory analysis indicate an absence of gross contamination within the soil |

| Source and COPC | Transport Pathway | Receptor | Risk Management Action |
|---|---|---|---|
| | | and other associated workers on a school site] | encountered. Therefore, the risk to groundwater and surface water is considered to be low.<br><br>From a contamination perspective, it is considered that the fill material would be suitable for reuse at the site.<br><br>A construction environmental management plan (CEMP) is recommended to be prepared and implemented during potential future site works, including an unexpected finds protocol (UFP) and asbestos finds protocol if contamination is suspected (i.e. staining of soil and odours, suspected asbestos containing material (ACM) fragments etc.).<br><br>In addition, should fill material require disposal off-site, further assessment would be required. |
| | P2: Inhalation of dust and/or vapours | R4: Adjacent site users [students, teachers and other associated workers on a school site, recreational, students, school workers and residents]. | |
| | P3: Surface water run-off<br>P5: Lateral migration of groundwater providing base flow to water bodies | R5: Surface Water | |
| | P4: Leaching of contaminants and vertical migration into groundwater | R6: Groundwater | |
| | P6: Contact with terrestrial ecology | R7: terrestrial ecology | |
| S2: Current and former buildings, asbestos, SMF, lead (in paint) and PCB | P1: Ingestion and dermal contact<br>P2: Inhalation of dust | R1: Current users [general public, community workers and council workers]<br>R2: Construction and maintenance workers<br>R3: End users [students, teachers and other associated workers on a school site] | The results of the laboratory analysis indicated that reported concentrations of contaminants of concern were below the adopted assessment criteria or not detected (asbestos).<br><br>DP recommends a HAZMAT survey is conducted for the existing structures that are proposed to be demolished (swimming pool structures and community centre). Potential residual HBM may also be present across the site where structures have been demolished and/or off-cuts may be present from historical construction.<br><br>Should HBM be present in structures that are planned to be demolished, a validation assessment is also |
| | P3: Surface water run-off* | R5: Surface Water. | |

| Source and COPC | Transport Pathway | Receptor | Risk Management Action |
|---|---|---|---|
| | P5: Leaching of contaminants and vertical migration into groundwater* | | recommended within the soil of the building footprints once a current structure has been demolished.<br><br>The recommended CEMP for future works should include an asbestos/HBM finds protocol to address any potential contaminants of concern associated with hazardous building materials (including underground services).<br><br>In addition, should fill material impacted by HBM require off-site disposal, further assessment would be required. |
| | P4: Lateral migration of groundwater providing base flow to water bodies*<br>P5: Leaching of contaminants and vertical migration into groundwater* | R4: Adjacent site users [students, teachers and other associated workers on a school site, recreational, students, school workers and residents]<br>R6: Groundwater | |
| | P6: Contact with terrestrial ecology* | R7: Terrestrial ecology | |
| S3: Railway corridor land, Metals, TRH, BTEX, PAH, OCP, OPP, PCB, Phenols and asbestos | P1: Ingestion and dermal contact<br>P2: Inhalation of dust | R1: Current users [general public, community workers and council workers]<br>R2: Construction and maintenance workers<br>R3: End users [students, teachers and other associated workers on a school site] | Whilst reported concentrations of lead above the HIL were reported within the rail corridor and Bungendore Rail Station adjacent to the east and south of the site, respectively (ERM 2022, and 2022a), the results of the laboratory analysis indicated that reported concentrations of lead were below the adopted assessment criteria within the proposed agricultural plot and areas of the site immediately adjacent to the rail corridor (e.g. boreholes BH131 to BH139). DP therefore considers that on the basis of the current investigation, lead contamination identified in the railway corridor (ERM, 2022 and 2022a), is not impacting the site.<br><br>DP considers that the sampling density undertaken in the areas adjacent to the rail corridor meets the minimum sampling density requirements of the Sampling Design Guidelines (NSW EPA, 1995) From a contamination perspective, DP considers the site suitable for the proposed use.<br><br>A construction environmental management plan (CEMP) is recommended to be prepared and implemented during potential future site works, including an unexpected finds protocol (UFP) and asbestos finds protocol if contamination is suspected |
| | P3: Surface water run-off*<br>P5: Leaching of contaminants and vertical migration into groundwater* | R5: Surface Water. | |

| Source and COPC | Transport Pathway | Receptor | Risk Management Action |
|---|---|---|---|
| | P4: Lateral migration of groundwater providing base flow to water bodies*<br>P5: Leaching of contaminants and vertical migration into groundwater* | R4: Adjacent site users [students, teachers and other associated workers on a school site, recreational, students, school workers and residents]<br>R6: Groundwater | (i.e. staining of soil and odours, suspected asbestos containing material (ACM) fragments etc.). |
| | P6: Contact with terrestrial ecology* | R7: Terrestrial ecology | |

Note: *Pathway only refers to lead and PCB for S2.

## 13. Conclusions and Recommendations

Areas that may be impacted by potential contamination were identified based on the available desktop site information, a site walkover, intrusive investigation and laboratory analysis results of selected samples. Based on the findings of the assessment, the potential for gross chemical contamination to be present within the site is considered to be low.

All soil results for TRH, BTEX, PAH, OCP, OPP, PCB and phenols, were below the laboratory's practical quantitation limit (PQL). All soil results for metals were above the PQL but below the SAC with the exception of cadmium, mercury and arsenic in samples discussed in Section 11, were below the PQL.

The results of the soil contaminant testing were also compared to NSW waste classification criteria in order to provide a preliminary in-situ waste classification for the material that is understood to be excavated and disposed off-site during construction. Concentrations of metals (including the nickel in Bore 112/1.0 m and Bore 131/0.1 m with TCLP testing), TRH, BTEX, PAH, OCP, OPP, PCB and phenols were below the CT1 criteria for General Solid Waste (non-putrescible). Therefore, the material will likely be classified as General Solid Waste (non-putrescible).

Based on the natural material observed from the boreholes and chemical analysis of select samples, the natural material underlying the fill could also be classified as VENM. It should be noted that a VENM classification would be no longer be acceptable should the VENM be mixed with any fill or other potential contaminants.

Based on the results of the investigation, it is considered that the site is suitable, from a contamination perspective, for the proposed development at the site. It is also considered that the fill material is suitable for reuse (from a contamination perspective) at the site with reference to the following recommendations before and during any future development works:

- A Construction Environment Management Plan (CEMP) should also be prepared before future development works including an 'unexpected finds protocol' and asbestos finds protocol (including underground services that may contain ACM) and implemented during the works (i.e. hydrocarbon staining and/odours observed during works, suspected ACM fragments of asbestos fibres);

- Where practicable, anthropogenic materials should be removed from the fill material and disposed off-site during the construction phase at the site;
- A detailed HAZMAT survey will need to be undertaken for existing structures before any demolition or refurbishment works can occur. The buildings will have to be vacated completely before any detailed HAZMAT surveys can be undertaken and it is understood that this can only happen once the Department of Education receive ownership of the site. Future site works (including civil works) should only be undertaken once a detailed HAZMAT survey has been completed. It is also recommended that if HBM are found to be present in the structures, a validation assessment within the soils of the structure footprints should be undertaken once demolition works have been completed;
- Should suspected asbestos be encountered at the site, the affected area should be fenced off and assessed by an NSW licensed asbestos assessor; and
- Should any fill material be required to be disposed off-site, the material must be stockpiled, assessed in accordance with NSW EPA Waste Classification Guidelines Part 1 Classifying Waste (2014) and assigned a formal waste classification prior to off-site disposal.

## 14. References

Bureau of Mineral Resources (1992), 'Geology of Canberra Geological Series Sheet 8727, 1:100 000 scale map', dated 1992.

Douglas Partners Pty Ltd (2019), *Preliminary Site Investigation (Contamination), Proposed Supported Housing, 4 – 6 Majara Street, Bungendore,* dated October 2019.

Douglas Partners Pty Ltd (2020), *Targeted Detailed Site Investigation (Contamination), Proposed Supported Housing, 4 – 6 Majara Street, Bungendore,* dated June 2020.

Douglas Partners Pty Ltd (2021), *Preliminary Site Investigation with Limited Sampling (Contamination), New High School in Bungendore, Majara Street, Bungendore,* dated September 2021.

Douglas Partners Pty Ltd (2021a), *Sampling Analysis Quality Plan, New High School in Bungendore, Majara Street, Bungendore,* dated October 2021.

Environmental Resource Management Australia Pty Ltd (2022), *Preliminary Site Investigation, Bungendore Rail Corridor*, dated March 2022.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

NSW EPA (1995), '*Contaminated Sites – Sampling Design Guidelines*', dated September 1995.

NSW EPA. (2020). *Guidelines for Consultants Reporting on Contaminated Land.* Contaminated Land Guidelines: NSW Environment Protection Authority.

## 15. Limitations

Douglas Partners (DP) has prepared this report for this project at Majara Street, Bungendore in accordance with DP's proposal 202107.04.P.001.Rev2 dated 23 September 2021 and acceptance received from Dean Argiropoulos Ltd dated 29 September 2021. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of Hindmarsh Construction Pty Ltd for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after DP's field testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

The assessment of atypical safety hazards arising from this advice is restricted to the environmental components set out in this report and based on known project conditions and stated design advice and assumptions. While some recommendations for safe controls may be provided, detailed 'safety in design' assessment is outside the current scope of this report and requires additional project data and assessment.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

**Douglas Partners Pty Ltd**

# Appendix A

Drawings 1 to 3


Notes:
1. Drawing projection GDA94 / MGA zone 55
2. Latest available aerial imagery sourced from metromap.com accessed 28/02/2021
3. Test locations shown are approximate only

Legend

- Approximate Site Boundary

Site Features

- Queanbeyan-Palerang Regional Council Offices
- Community Centre
- Swimming Pool

15 0 15 30 45 60 75 m

| | | | |
|---|---|---|---|
| **Douglas Partners** Geotechnics / Environment / Groundwater | CLIENT: Hindmarsh Constructions Pty Ltd | TITLE: **Site Location and Site Layout Plan** | PROJECT No: 202107.04 |
| | OFFICE: Canberra / DRAWN BY: PJS | **New High School** | DRAWING No: 1 |
| | SCALE: 1:1500 @ A3 / DATE: 12.07.2022 | **Majara Street, Bungendore** | REVISION: 0 |


Notes:
1. Drawing projection GDA94 / MGA zone 55
2. Latest available aerial imagery sourced from metromap.com accessed 28/02/2021
3. Test locations shown are approximate only

**Legend**

- Approximate Site Boundary

Site Features
- Queanbeyan-Palerang Regional Council Offices
- Community Centre
- Swimming Pool

Test Locations
- Approximate Borehole Location - PSI
- Approximate Boehole Location - DSI

5 0 5 10 15 20 25 30 m

| | | | | |
|---|---|---|---|---|
| **Douglas Partners** Geotechnics / Environment / Groundwater | CLIENT: Hindmarsh Constructions Pty Ltd | | TITLE: **Test Location and Site Features Pan - North** | PROJECT No: 202107.04 |
| | OFFICE: Canberra | DRAWN BY: PJS | **New High School** | DRAWING No: 2 |
| | SCALE: 1:750 @ A3 | DATE: 12.07.2022 | **Majara Street, Bungendore** | REVISION: 0 |


Notes:
1. Drawing projection GDA94 / MGA zone 55
2. Latest available aerial imagery sourced from metromap.com accessed 28/02/2021
3. Test locations shown are approximate only

Legend

Approximate Site Boundary

Site Features

Queanbeyan-Palerang Regional Council Offices

Community Centre

Swimming Pool

Test Locations

Approximate Borehole Location - PSI

Approximate Boehole Location - DSI

10 0 10 20 30 40 50 m

| | | | |
|---|---|---|---|
| **Douglas Partners** Geotechnics / Environment / Groundwater | CLIENT: Hindmarsh Constructions Pty Ltd | | TITLE: **Test Location and Site Features Pan - South** |
| | OFFICE: Canberra | DRAWN BY: PJS | **New High School** |
| | SCALE: 1:1000 @ A3 | DATE: 12.07.2022 | **Majara Street, Bungendore** |

| | |
|---|---|
| PROJECT No: | 202107.04 |
| DRAWING No: | 3 |
| REVISION: | 0 |

# Appendix B

## About This Report

### Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

### Copyright

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

### Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

### Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;
- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

### Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

# About this Report

## Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

## Information for Contractual Purposes

Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

## Site Inspection

The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.

# Appendix C

Data Quality Objectives

# Appendix C
# Data Quality Objectives (DQO)
# Majara Street, Bungendore

## C1.0 Data Quality Objectives

The DSI has been devised broadly in accordance with the seven-step data quality objective (DQO) process which is provided in Appendix B, Schedule B2 of NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [the 'NEPM']* (NEPC, 2013).

| Step | Summary |
|---|---|
| 1: State the problem | The objective of the investigation is to investigate the contamination status of the site with respect to the proposed land use. The investigation is being undertaken as there will be a change in land use. The site will be developed from a mixture of recreational, transport and special infrastructure land uses to an educational campus (secondary) land use. The report is being conducted as the land is to be redeveloped. The requirements of the regulator, Queanbeyan-Palerang Regional Council, will also be considered by consulting their Development Control Plan (DCP), Local Environment Plan (LEP), Secretary's Environmental Assessment Requirements (SEARs) and any other requirements based on our recent experience with Council on similar sites.<br>A preliminary conceptual site model (CSM) was prepared as part of DP (2021). This has been revised to reflect the findings of the limited intrusive investigation.<br>The project team consisted of experienced environmental engineers and scientists working in the roles of Project Principal, Project Reviewer, Project Manager and Field Staff. |
| 2: Identify the decisions / goal of the study | The site history has identified possible contaminating previous uses which are described in the preliminary CSM (Section 7). The CSM identifies the associated contaminants of potential concern (COPC) and the likely impacted media. The site assessment criteria (SAC) for each of the COPC are detailed in Section 9.<br>The decision is to establish whether or not the results fall below the SAC or whether or not the 95% upper confidence limit of the sample population falls below the SAC. On this basis, an assessment of the site's suitability from a contamination perspective and whether (or not) further assessment and/or remediation will be derived. |
| 3: Identify the information inputs | Inputs to the investigation will be the results of analysis of samples to measure the concentration of COPC identified in the preliminary CSM (Section 7) at the site using NATA accredited laboratories and methods, where possible. The SAC for each of the COPC are detailed in Section 9.<br>A photoionization detector (PID) will be used on-site to screen soils for VOC. PID readings will be used to inform sample selection for laboratory analysis. |
| 4: Define the study boundaries | The lateral boundaries of the investigation area are shown on Drawing 1, Appendix A. The vertical boundaries are to the extent of contamination impact as determined from the site |

| Step | Summary |
|---|---|
| | history assessment and site observations. The assessment is limited to the timeframe over which the field investigation was undertaken. |
| 5: Develop the analytical approach (or decision rule) | The decision rule is to compare all analytical results with SAC (Section 9, based on NEPC (2013)). Where guideline values are absent, other sources of guideline values accepted by NEPC (2013) shall be adopted where possible.<br>Where a sample result exceeds the adopted criterion, a further site-specific assessment will be made as to the risk posed by the presence of that contaminant(s).<br>Initial comparisons will be with individual results then, where required, summary statistics (including mean, standard deviation and 95% upper confidence limit (UCL) of the arithmetic mean (95% UCL) to assess potential risks posed by the site contamination. Quality control results are to be assessed according to their relative percent difference (RPD) values. For field duplicates and laboratory results, RPDs should generally be below 30%; for field blanks and rinsates, results should be at or less than the limits of reporting (Standards Australia 2005, NEPC 2013). A field and laboratory quality assurance assessment will be included in the DSI report. |
| 6: Specify the performance or acceptance criteria | Baseline condition: Contaminants at the site and/or statistical analysis of data (in line with NEPC (2013)) exceed human health and environmental SAC and poses a potentially unacceptable risk to receptors (null hypothesis).<br>Unless conclusive information from the collected data is sufficient to reject the null hypothesis, it is assumed that the baseline condition is true.<br>Uncertainty that may exist due to the above potential decision errors shall be mitigated as follows:<br>• As well as a primary screening exercise, the use of the 95% UCL as per NEPC (2013) may be applied, i.e.: 95% is the defined confidence level associated with the UCL on the geometric mean for contaminant data. The resultant 95% UCL shall subsequently be screened against the corresponding SAC.<br>• The statistical assessment will only be able to be applied to certain data sets, such as those obtained via systematic sampling. Identification of areas for targeted sampling will be via professional judgement and errors will not be able to have a probability assigned to them. |
| 7: Optimise the design for obtaining data | As the purpose of the sampling program is to assess for potential contamination across the site, the sampling program is reliant on professional judgement to identify and sample the potentially affected areas.<br>Further details regarding the proposed sampling plan are presented in Section 8. |

## C2.0 References

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

**Douglas Partners Pty Ltd**

# Appendix D

Field Work Methodology

# Appendix D
# Field Work Methodology
# Majara Street, Bungendore

## D1.0 Guidelines

The following key guidelines were consulted for the field work methodology:

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [the 'NEPM']* (NEPC, 2013).

## D2.0 Soil Sampling

Soil sampling is carried out in accordance with DP standard operating procedures. The general sampling and sample management procedures comprise:

- Collect soil samples directly from the solid flight auger of the mini excavator or electric post hole digger;
- Transfer samples in laboratory-prepared glass jars with Teflon lined lids by hand, capping immediately and minimising headspace within the sample jar;
- Collect replicate samples in zip-lock bags for PID screening;
- Collect ~40 g to 50 g samples in zip-lock bags for asbestos (presence / absence) analysis;
- Wear a new disposable nitrile glove for each sample point thereby minimising potential for cross-contamination;
- Collect 10% replicate samples for quality control (QC) purposes;
- Label sample containers with individual and unique identification details, including project number, sample location and sample depth (where applicable);
- Place samples into a cooled, insulated and sealed container for transport to the laboratory; and
- Use chain of custody documentation.

### D2.1 Field Testing

Field testing is carried out in accordance with DP standard operating procedures. The general sampling and sample management procedures comprise:

PID Field Test

- Calibrate the PID with isobutylene gas at 100 ppm and with fresh air prior to commencement of each successive day's field work;
- Allow the headspace in the PID zip-lock bag samples to equilibrate; and

- Screen using the PID.

## D3.0 References

ASTM D7663-12. (2018). *Standard Practice for Active Soil Gas Sampling in the Vadose Zone for Vapour Intrusion Evaluations.* 2018 e1 (editorial change to 2012 revision): American Society for Testing and Materials.

HEPA. (2020). *PFAS National Environmental Management Plan (NEMP).* Version 2.0: Heads of EPAs Australia and New Zealand and Australian Government Department of the Environment.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

NSW EPA. (2020). *Assessment and Management of Hazardous Ground Gases.* NSW Environment Protection Authority.

USEPA. (1999a). *Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air.* Second Edition: United States Environment Protection Agency.

USEPA. (1999b). *Compendium Method TO-15 Determination of Volatile Organic Compounds (VOCs) In Air Collected in Specially-Prepared Canisters and Analysed By Gas Chromatography Mass Spectrometry (GC/MS).* United States Environment Protection Agency.

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# Appendix E

Site Assessment Criteria

# Appendix E
# Site Assessment Criteria
# Majara Street, Bungendore

## E1.0 Introduction

### E1.1 Guidelines

The following key guidelines were consulted in deriving the site assessment criteria (SAC):

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [the 'NEPM']* (NEPC, 2013); and
- CRC CARE *Health screening levels for petroleum hydrocarbons in soil and groundwater* (CRC CARE, 2011).

### E1.2 General

The SAC applied in the current investigation are informed by the CSM which identified human and environmental receptors to potential contamination at the site. Analytical results are assessed (as a Tier 1 assessment) against the SAC comprising primarily the investigation and screening levels of Schedule B1 of NEPC (2013).

The following inputs are relevant to the selection and/or derivation of the SAC:

- Land use: High School with garden access (agricultural plot).
  - o Corresponding to land use category 'A', residential with garden / accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry)), also includes children's day care centres, preschools and primary schools; and
  - o It should be noted that even though a high school and associated car parking comprise the proposed development, the most conservative land use criteria HIL-A has been adopted for the entire site.
- Soil type: clay.

## E2.0 Soils

### E2.1 Health Investigation and Screening Levels

The generic health investigation levels (HIL) and health screening levels (HSL) are considered to be appropriate for the assessment of human health risk via all relevant pathways of exposure associated with contamination at the site. The adopted soil HIL and HSL for the contaminants of concern are presented in Table 1 and Table 2.

**Table 1: Health Investigation Levels (mg/kg)**

| Contaminant | HIL-A |
|---|---|
| **Metals** | |
| Arsenic | 100 |
| Cadmium | 20 |
| Chromium (VI) | 100 |
| Copper | 6000 |
| Lead | 300 |
| Mercury (inorganic) | 40 |
| Nickel | 400 |
| Zinc | 7400 |
| **PAH** | |
| B(a)P TEQ | 3 |
| Total PAH | 300 |
| **Phenols** | |
| Phenol | 3000 |
| **OCP** | |
| DDT+DDE+DDD | 240 |
| Aldrin and dieldrin | 6 |
| Chlordane | 50 |
| Endosulfan | 270 |
| Endrin | 10 |
| Heptachlor | 6 |
| HCB | 10 |
| Methoxychlor | 300 |
| **OPP** | |
| Chlorpyrifos | 160 |
| **PCB** | |
| PCB | 1 |

**Table 2: Health Screening Levels (mg/kg)**

| Contaminant | HSL-A&B | HSL-A&B | HSL-A&B | HSL-A&B |
|---|---|---|---|---|
| **CLAY** | **0 m to <1 m** | **1 m to <2 m** | **2 m to <4 m** | **4 m+** |

| Contaminant | HSL-A&B | HSL-A&B | HSL-A&B | HSL-A&B |
|---|---|---|---|---|
| Benzene | 0.7 | 1 | 2 | 3 |
| Toluene | 480 | NL | NL | NL |
| Ethylbenzene | NL | NL | NL | NL |
| Xylenes | 110 | 310 | NL | NL |
| Naphthalene | 5 | NL | NL | NL |
| TRH F1 | 50 | 90 | 150 | 290 |
| TRH F2 | 280 | NL | NL | NL |

Notes: TRH F1 is TRH $C_6$-$C_{10}$ minus BTEX

TRH F2 is TRH >$C_{10}$-$C_{16}$ minus naphthalene

The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would results in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'

The HSL for direct contact derived from CRC CARE (2011) are presented in Table 3.

**Table 3: Health Screening Levels for Direct Contact (mg/kg)**

| Contaminant | DC HSL-A | DC HSL-IMW |
|---|---|---|
| Benzene | 100 | 1100 |
| Toluene | 14 000 | 120 000 |
| Ethylbenzene | 4500 | 85 000 |
| Xylenes | 12 000 | 130 000 |
| Naphthalene | 1400 | 29 000 |
| TRH F1 | 4400 | 82 000 |
| TRH F2 | 3300 | 62 000 |
| TRH F3 | 4500 | 85 000 |
| TRH F4 | 6300 | 12 000 |

Notes: TRH F1 is TRH $C_6$-$C_{10}$ minus BTEX

TRH F2 is TRH >$C_{10}$-$C_{16}$ minus naphthalene

IMW intrusive maintenance worker

## E2.2 Asbestos in Soil

Based on the CSM and/or current site access limitations, a detailed asbestos assessment was not considered to be warranted at this stage. However, due to the history of widespread use of ACM products across Australia, ACM can be encountered unexpectedly and sporadically at a site. Therefore, the presence or absence of asbestos at a limit of reporting of 0.1 g/kg (AS:4964) has been adopted for this investigation / assessment as an initial screen. It is noted that this corresponds to the health screening level for residential with garden land use setting (HSL-A) for bonded ACM of 0.01% provided in the NEPM.

### E2.3 Ecological Investigation Levels

Ecological investigation levels (EIL) and added contaminant limits (ACL), where appropriate, have been derived in NEPC (2013) for arsenic, copper, chromium (III), nickel, lead, zinc, DDT and naphthalene. The adopted EIL, derived using the interactive (excel) calculation spreadsheet in the NEPM toolbox website are shown in Table 5, with inputs into their derivation shown in Table 4.

**Table 4: Inputs to the Derivation of the Ecological Investigation Levels**

| Variable | Input | Rationale |
|---|---|---|
| Age of contaminants | "Aged" (>2 years) | Site has been subject to urban development since 1884 |
| pH | 6.9 | Laboratory Analysis |
| CEC | 6.7 $cmol_c/kg$ | Laboratory Analysis |
| Clay Content | 27.5 | Laboratory Analysis |
| Traffic volumes | High | Town established in the 1800's, urban environment including road pavements |
| State / Territory | NSW | Site is within NSW |

**Table 5: Ecological Investigation Levels (mg/kg)**

| Contaminant | EIL-A-B-C |
|---|---|
| **Metals** | |
| Arsenic | 100 |
| Copper | 150 |
| Nickel | 70 |
| Chromium III | 670 |
| Lead | 1100 |
| Zinc | 410 |
| **PAH** | |
| Naphthalene | 170 |
| **OCP** | |
| DDT | 180 |

## E2.4 Ecological Screening Levels

Ecological screening levels (ESL) are used to assess the risk of selected petroleum hydrocarbon compounds, BTEX and benzo(a)pyrene to terrestrial ecosystems. The adopted ESL are shown in Table 6.

**Table 6: Ecological Screening Levels (mg/kg)**

| Contaminant | Soil Type | EIL-A-B-C |
|---|---|---|
| Benzene | Fine | 10 |
| Toluene | Fine | 65 |
| Ethylbenzene | Fine | 40 |
| Xylenes | Fine | 1.6 |
| TRH F1 | Coarse/ Fine | 125* |
| TRH F2 | Coarse/ Fine | 25* |
| TRH F3 | Fine | - |
| TRH F4 | Fine | - |
| B(a)P | Fine | 0.7 |

Notes: ESL are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability
TRH F1 is TRH $C_6$-$C_{10}$ minus BTEX
TRH F2 is TRH >$C_{10}$-$C_{16}$ including naphthalene

## E2.5 Management Limits

In addition to appropriate consideration and application of the HSL and ESL, there are additional considerations which reflect the nature and properties of petroleum hydrocarbons, including:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- Fire and explosion hazards; and
- Effects on buried infrastructure e.g.: penetration of, or damage to, in-ground services.

The adopted management limits are in Table 7.

**Table 7: Management Limits (mg/kg)**

| Contaminant | Soil Type | ML-A-B-C |
|---|---|---|
| TRH F1 | Fine | 800 |
| TRH F2 | Fine | 1000 |
| TRH F3 | Fine | 3500 |
| TRH F4 | Fine | 10 000 |

Notes: TRH F1 is TRH $C_6$-$C_{10}$ including BTEX
TRH F2 is TRH >$C_{10}$-$C_{16}$ including naphthalene

## E2.6 Preliminary Waste Classification Criteria

It is understood that during construction, it is likely that there will be material that will be in surplus and potentially be required to be removed off-site.

For disposal of the material to a suitably licensed waste disposal facility in NSW, classification of the soils should be undertaken with reference to the reference to the NSW EPA *Waste Classification Guidelines, Part 1: Classifying Waste* (NSW EPA, 2014). The waste classification criteria for general waste are shown in Table 8.

**Table 8: Waste Classification of General Solid Waste**

| Analyte | Maximum values of specific contamination concentration (SCC) for classification without TCLP | Maximum values for leachable concentration (TCLP) and total concentration (SCC) when used together | |
|---|---|---|---|
| | General Solid Waste CT1 (mg/kg) | Leachable concentration (TCLP1) (mg/L) | Total concentration (SCC1) (mg/kg) |
| Arsenic | 100 | 5.0 | 500 |
| Cadmium | 20 | 1.0 | 100 |
| Chromium | 100 | 0.5 | 1900 |
| Lead | 100 | 5 | 1500 |
| Mercury | 4 | 0.2 | 50 |
| Nickel | 40 | 2 | 1050 |
| Benzene | 10 | 0.5 | 18 |
| Toluene | 288 | 1.44 | 518 |
| Ethylbenzene | 600 | 14.4 | 1080 |

| Analyte | Maximum values of specific contamination concentration (SCC) for classification without TCLP | Maximum values for leachable concentration (TCLP) and total concentration (SCC) when used together | |
|---|---|---|---|
| | General Solid Waste CT1 (mg/kg) | Leachable concentration (TCLP1) (mg/L) | Total concentration (SCC1) (mg/kg) |
| **Xylene** | 1000 | 50 | 1800 |
| **TRH ($C_6$-$C_9$)** | 650 | NA | 650 |
| **TRH ($C_{10}$-$C_{36}$)** | 10000 | NA | 10000 |
| **Benzo(a)pyrene** | 0.8 | 0.004 | 10 |
| **Total PAHs** | 200 | NC | 200 |
| **Phenol** | 288 | 14.4 | 518 |
| **Total PCBs** | <50 | NC | <50 |
| **Scheduled Chemicals** | <50 | NA | <50 |

## E3.0 References

CRC CARE. (2011). *Health screening levels for petroleum hydrocarbons in soil and groundwater.* Parts 1 to 3, Technical Report No. 10: Cooperative Research Centre for Contamination Assessment and Remediation of the Environment.

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

NSW EPA. (2014). Waste Classification Guidelines, Part 1: Classifying Waste. NSW Environment Protection Authority.

**Douglas Partners Pty Ltd**

# Appendix F

Explanatory Notes and Borehole Logs

### Sampling

Sampling is carried out during drilling or test pitting to allow engineering examination (and laboratory testing where required) of the soil or rock.

Disturbed samples taken during drilling provide information on colour, type, inclusions and, depending upon the degree of disturbance, some information on strength and structure.

Undisturbed samples are taken by pushing a thin-walled sample tube into the soil and withdrawing it to obtain a sample of the soil in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

### Test Pits

Test pits are usually excavated with a backhoe or an excavator, allowing close examination of the in-situ soil if it is safe to enter into the pit. The depth of excavation is limited to about 3 m for a backhoe and up to 6 m for a large excavator. A potential disadvantage of this investigation method is the larger area of disturbance to the site.

### Large Diameter Augers

Boreholes can be drilled using a rotating plate or short spiral auger, generally 300 mm or larger in diameter commonly mounted on a standard piling rig. The cuttings are returned to the surface at intervals (generally not more than 0.5 m) and are disturbed but usually unchanged in moisture content. Identification of soil strata is generally much more reliable than with continuous spiral flight augers, and is usually supplemented by occasional undisturbed tube samples.

### Continuous Spiral Flight Augers

The borehole is advanced using 90-115 mm diameter continuous spiral flight augers which are withdrawn at intervals to allow sampling or in-situ testing. This is a relatively economical means of drilling in clays and sands above the water table. Samples are returned to the surface, or may be collected after withdrawal of the auger flights, but they are disturbed and may be mixed with soils from the sides of the hole. Information from the drilling (as distinct from specific sampling by SPTs or undisturbed samples) is of relatively low reliability, due to the remoulding, possible mixing or softening of samples by groundwater.

### Non-core Rotary Drilling

The borehole is advanced using a rotary bit, with water or drilling mud being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be determined from the cuttings, together with some information from the rate of penetration. Where drilling mud is used this can mask the cuttings and reliable identification is only possible from separate sampling such as SPTs.

### Continuous Core Drilling

A continuous core sample can be obtained using a diamond tipped core barrel, usually with a 50 mm internal diameter. Provided full core recovery is achieved (which is not always possible in weak rocks and granular soils), this technique provides a very reliable method of investigation.

### Standard Penetration Tests

Standard penetration tests (SPT) are used as a means of estimating the density or strength of soils and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289, Methods of Testing Soils for Engineering Purposes - Test 6.3.1.

The test is carried out in a borehole by driving a 50 mm diameter split sample tube under the impact of a 63 kg hammer with a free fall of 760 mm. It is normal for the tube to be driven in three successive 150 mm increments and the 'N' value is taken as the number of blows for the last 300 mm. In dense sands, very hard clays or weak rock, the full 450 mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form.

- In the case where full penetration is obtained with successive blow counts for each 150 mm of, say, 4, 6 and 7 as:

  4,6,7
  N=13

- In the case where the test is discontinued before the full penetration depth, say after 15 blows for the first 150 mm and 30 blows for the next 40 mm as:

  15, 30/40 mm

The results of the SPT tests can be related empirically to the engineering properties of the soils.

### Dynamic Cone Penetrometer Tests / Perth Sand Penetrometer Tests

Dynamic penetrometer tests (DCP or PSP) are carried out by driving a steel rod into the ground using a standard weight of hammer falling a specified distance. As the rod penetrates the soil the number of blows required to penetrate each successive 150 mm depth are recorded. Normally there is a depth limitation of 1.2 m, but this may be extended in certain conditions by the use of extension rods. Two types of penetrometer are commonly used.

- Perth sand penetrometer - a 16 mm diameter flat ended rod is driven using a 9 kg hammer dropping 600 mm (AS 1289, Test 6.3.3). This test was developed for testing the density of sands and is mainly used in granular soils and filling.
- Cone penetrometer - a 16 mm diameter rod with a 20 mm diameter cone end is driven using a 9 kg hammer dropping 510 mm (AS 1289, Test 6.3.2). This test was developed initially for pavement subgrade investigations, and correlations of the test results with California Bearing Ratio have been published by various road authorities.

## Description and Classification Methods

The methods of description and classification of soils and rocks used in this report are generally based on Australian Standard AS1726:2017, Geotechnical Site Investigations. In general, the descriptions include strength or density, colour, structure, soil or rock type and inclusions.

## Soil Types

Soil types are described according to the predominant particle size, qualified by the grading of other particles present:

| Type | Particle size (mm) |
|---|---|
| Boulder | >200 |
| Cobble | 63 - 200 |
| Gravel | 2.36 - 63 |
| Sand | 0.075 - 2.36 |
| Silt | 0.002 - 0.075 |
| Clay | <0.002 |

The sand and gravel sizes can be further subdivided as follows:

| Type | Particle size (mm) |
|---|---|
| Coarse gravel | 19 - 63 |
| Medium gravel | 6.7 - 19 |
| Fine gravel | 2.36 – 6.7 |
| Coarse sand | 0.6 - 2.36 |
| Medium sand | 0.21 - 0.6 |
| Fine sand | 0.075 - 0.21 |

Definitions of grading terms used are:

- Well graded - a good representation of all particle sizes
- Poorly graded - an excess or deficiency of particular sizes within the specified range
- Uniformly graded - an excess of a particular particle size
- Gap graded - a deficiency of a particular particle size with the range

The proportions of secondary constituents of soils are described as follows:

In fine grained soils (>35% fines)

| Term | Proportion of sand or gravel | Example |
|---|---|---|
| And | Specify | Clay (60%) and Sand (40%) |
| Adjective | >30% | Sandy Clay |
| With | 15 – 30% | Clay with sand |
| Trace | 0 - 15% | Clay with trace sand |

In coarse grained soils (>65% coarse)
- with clays or silts

| Term | Proportion of fines | Example |
|---|---|---|
| And | Specify | Sand (70%) and Clay (30%) |
| Adjective | >12% | Clayey Sand |
| With | 5 - 12% | Sand with clay |
| Trace | 0 - 5% | Sand with trace clay |

In coarse grained soils (>65% coarse)
- with coarser fraction

| Term | Proportion of coarser fraction | Example |
|---|---|---|
| And | Specify | Sand (60%) and Gravel (40%) |
| Adjective | >30% | Gravelly Sand |
| With | 15 - 30% | Sand with gravel |
| Trace | 0 - 15% | Sand with trace gravel |

The presence of cobbles and boulders shall be specifically noted by beginning the description with 'Mix of Soil and Cobbles/Boulders' with the word order indicating the dominant first and the proportion of cobbles and boulders described together.

# *Soil Descriptions*

## Cohesive Soils

Cohesive soils, such as clays, are classified on the basis of undrained shear strength. The strength may be measured by laboratory testing, or estimated by field tests or engineering examination. The strength terms are defined as follows:

| Description | Abbreviation | Undrained shear strength (kPa) |
|---|---|---|
| Very soft | VS | <12 |
| Soft | S | 12 - 25 |
| Firm | F | 25 - 50 |
| Stiff | St | 50 - 100 |
| Very stiff | VSt | 100 - 200 |
| Hard | H | >200 |
| Friable | Fr | - |

## Cohesionless Soils

Cohesionless soils, such as clean sands, are classified on the basis of relative density, generally from the results of standard penetration tests (SPT), cone penetration tests (CPT) or dynamic penetrometers (PSP). The relative density terms are given below:

| Relative Density | Abbreviation | Density Index (%) |
|---|---|---|
| Very loose | VL | <15 |
| Loose | L | 15-35 |
| Medium dense | MD | 35-65 |
| Dense | D | 65-85 |
| Very dense | VD | >85 |

## Soil Origin

It is often difficult to accurately determine the origin of a soil. Soils can generally be classified as:

- Residual soil - derived from in-situ weathering of the underlying rock;
- Extremely weathered material – formed from in-situ weathering of geological formations. Has soil strength but retains the structure or fabric of the parent rock;
- Alluvial soil – deposited by streams and rivers;
- Estuarine soil – deposited in coastal estuaries;
- Marine soil – deposited in a marine environment;
- Lacustrine soil – deposited in freshwater lakes;
- Aeolian soil – carried and deposited by wind;
- Colluvial soil – soil and rock debris transported down slopes by gravity;
- Topsoil – mantle of surface soil, often with high levels of organic material.
- Fill – any material which has been moved by man.

## Moisture Condition – Coarse Grained Soils

For coarse grained soils the moisture condition should be described by appearance and feel using the following terms:

- Dry (D) Non-cohesive and free-running.
- Moist (M) Soil feels cool, darkened in colour.
  Soil tends to stick together.
  Sand forms weak ball but breaks easily.
- Wet (W) Soil feels cool, darkened in colour.
  Soil tends to stick together, free water forms when handling.

## Moisture Condition – Fine Grained Soils

For fine grained soils the assessment of moisture content is relative to their plastic limit or liquid limit, as follows:

- 'Moist, dry of plastic limit' or 'w <PL' (i.e. hard and friable or powdery).
- 'Moist, near plastic limit' or 'w ≈ PL (i.e. soil can be moulded at moisture content approximately equal to the plastic limit).
- 'Moist, wet of plastic limit' or 'w >PL' (i.e. soils usually weakened and free water forms on the hands when handling).
- 'Wet' or 'w ≈LL' (i.e. near the liquid limit).
- 'Wet' or 'w >LL' (i.e. wet of the liquid limit).

## Rock Strength

Rock strength is defined by the Unconfined Compressive Strength and it refers to the strength of the rock substance and not the strength of the overall rock mass, which may be considerably weaker due to defects.

The Point Load Strength Index $Is_{(50)}$ is commonly used to provide an estimate of the rock strength and site specific correlations should be developed to allow UCS values to be determined. The point load strength test procedure is described by Australian Standard AS4133.4.1-2007. The terms used to describe rock strength are as follows:

| Strength Term | Abbreviation | Unconfined Compressive Strength MPa | Point Load Index * $Is_{(50)}$ MPa |
|---|---|---|---|
| Very low | VL | 0.6 - 2 | 0.03 - 0.1 |
| Low | L | 2 - 6 | 0.1 - 0.3 |
| Medium | M | 6 - 20 | 0.3 - 1.0 |
| High | H | 20 - 60 | 1 - 3 |
| Very high | VH | 60 - 200 | 3 - 10 |
| Extremely high | EH | >200 | >10 |

* Assumes a ratio of 20:1 for UCS to $Is_{(50)}$. It should be noted that the UCS to $Is_{(50)}$ ratio varies significantly for different rock types and specific ratios should be determined for each site.

## Degree of Weathering

The degree of weathering of rock is classified as follows:

| Term | Abbreviation | Description |
|---|---|---|
| Residual Soil | RS | Material is weathered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are no longer visible, but the soil has not been significantly transported. |
| Extremely weathered | XW | Material is weathered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are still visible |
| Highly weathered | HW | The whole of the rock material is discoloured, usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable. Rock strength is significantly changed by weathering. Some primary minerals have weathered to clay minerals. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores. |
| Moderately weathered | MW | The whole of the rock material is discoloured , usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable, but shows little or no change of strength from fresh rock. |
| Slightly weathered | SW | Rock is partially discoloured with staining or bleaching along joints but shows little or no change of strength from fresh rock. |
| Fresh | FR | No signs of decomposition or staining. |
| *Note: If HW and MW cannot be differentiated use DW (see below)* | | |
| Distinctly weathered | DW | Rock strength usually changed by weathering. The rock may be highly discoloured, usually by iron staining. Porosity may be increased by leaching or may be decreased due to deposition of weathered products in pores. |

# Rock Descriptions

## Degree of Fracturing

The following classification applies to the spacing of natural fractures in diamond drill cores. It includes bedding plane partings, joints and other defects, but excludes drilling breaks.

| Term | Description |
|---|---|
| Fragmented | Fragments of <20 mm |
| Highly Fractured | Core lengths of 20-40 mm with occasional fragments |
| Fractured | Core lengths of 30-100 mm with occasional shorter and longer sections |
| Slightly Fractured | Core lengths of 300 mm or longer with occasional sections of 100-300 mm |
| Unbroken | Core contains very few fractures |

## Rock Quality Designation

The quality of the cored rock can be measured using the Rock Quality Designation (RQD) index, defined as:

$$\text{RQD \%} = \frac{\text{cumulative length of 'sound' core sections} \geq 100 \text{ mm long}}{\text{total drilled length of section being assessed}}$$

where 'sound' rock is assessed to be rock of low strength or stronger. The RQD applies only to natural fractures. If the core is broken by drilling or handling (i.e. drilling breaks) then the broken pieces are fitted back together and are not included in the calculation of RQD.

## Stratification Spacing

For sedimentary rocks the following terms may be used to describe the spacing of bedding partings:

| Term | Separation of Stratification Planes |
|---|---|
| Thinly laminated | < 6 mm |
| Laminated | 6 mm to 20 mm |
| Very thinly bedded | 20 mm to 60 mm |
| Thinly bedded | 60 mm to 0.2 m |
| Medium bedded | 0.2 m to 0.6 m |
| Thickly bedded | 0.6 m to 2 m |
| Very thickly bedded | > 2 m |

# Symbols & Abbreviations

Douglas Partners

## Introduction

These notes summarise abbreviations commonly used on borehole logs and test pit reports.

## Drilling or Excavation Methods

| | |
|---|---|
| C | Core drilling |
| R | Rotary drilling |
| SFA | Spiral flight augers |
| NMLC | Diamond core - 52 mm dia |
| NQ | Diamond core - 47 mm dia |
| HQ | Diamond core - 63 mm dia |
| PQ | Diamond core - 81 mm dia |

## Water

| | |
|---|---|
| ▷ | Water seep |
| ▽ | Water level |

## Sampling and Testing

| | |
|---|---|
| A | Auger sample |
| B | Bulk sample |
| D | Disturbed sample |
| E | Environmental sample |
| $U_{50}$ | Undisturbed tube sample (50mm) |
| W | Water sample |
| pp | Pocket penetrometer (kPa) |
| PID | Photo ionisation detector |
| PL | Point load strength Is(50) MPa |
| S | Standard Penetration Test |
| V | Shear vane (kPa) |

## Description of Defects in Rock

The abbreviated descriptions of the defects should be in the following order: Depth, Type, Orientation, Coating, Shape, Roughness and Other. Drilling and handling breaks are not usually included on the logs.

### Defect Type

| | |
|---|---|
| B | Bedding plane |
| Cs | Clay seam |
| Cv | Cleavage |
| Cz | Crushed zone |
| Ds | Decomposed seam |
| F | Fault |
| J | Joint |
| Lam | Lamination |
| Pt | Parting |
| Sz | Sheared Zone |
| V | Vein |

### Orientation

The inclination of defects is always measured from the perpendicular to the core axis.

| | |
|---|---|
| h | horizontal |
| v | vertical |
| sh | sub-horizontal |
| sv | sub-vertical |

### Coating or Infilling Term

| | |
|---|---|
| cln | clean |
| co | coating |
| he | healed |
| inf | infilled |
| stn | stained |
| ti | tight |
| vn | veneer |

### Coating Descriptor

| | |
|---|---|
| ca | calcite |
| cbs | carbonaceous |
| cly | clay |
| fe | iron oxide |
| mn | manganese |
| slt | silty |

### Shape

| | |
|---|---|
| cu | curved |
| ir | irregular |
| pl | planar |
| st | stepped |
| un | undulating |

### Roughness

| | |
|---|---|
| po | polished |
| ro | rough |
| sl | slickensided |
| sm | smooth |
| vr | very rough |

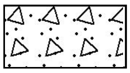
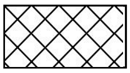
### Other

| | |
|---|---|
| fg | fragmented |
| bnd | band |
| qtz | quartz |

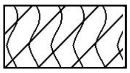
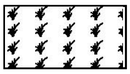
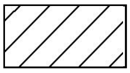
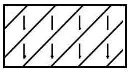
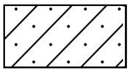
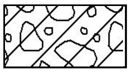
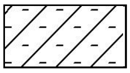
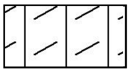
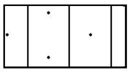
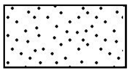
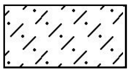
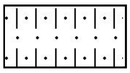
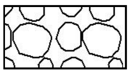
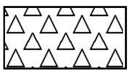
# Symbols & Abbreviations

## Graphic Symbols for Soil and Rock

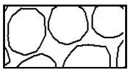
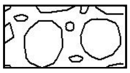
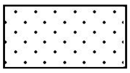
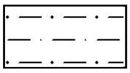
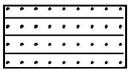
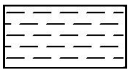
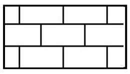
### General

| | |
|---|---|
|  | Asphalt |
|  | Road base |
|  | Concrete |
|  | Filling |

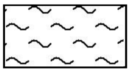
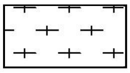
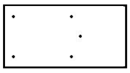
### Soils

| | |
|---|---|
|  | Topsoil |
|  | Peat |
|  | Clay |
|  | Silty clay |
|  | Sandy clay |
|  | Gravelly clay |
|  | Shaly clay |
|  | Silt |
|  | Clayey silt |
|  | Sandy silt |
|  | Sand |
|  | Clayey sand |
|  | Silty sand |
|  | Gravel |
|  | Sandy gravel |
|  | Cobbles, boulders |
|  | Talus |

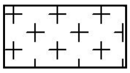
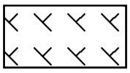
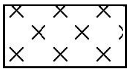
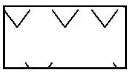
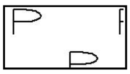
### Sedimentary Rocks

| | |
|---|---|
|  | Boulder conglomerate |
|  | Conglomerate |
|  | Conglomeratic sandstone |
|  | Sandstone |
|  | Siltstone |
|  | Laminite |
|  | Mudstone, claystone, shale |
|  | Coal |
|  | Limestone |

### Metamorphic Rocks

| | |
|---|---|
|  | Slate, phyllite, schist |
|  | Gneiss |
|  | Quartzite |

### Igneous Rocks

| | |
|---|---|
|  | Granite |
|  | Dolerite, basalt, andesite |
|  | Dacite, epidote |
|  | Tuff, breccia |
|  | Porphyry |

# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 692.50 AHD
**EASTING:** 722628
**NORTHING:** 6096276
**DIP/AZIMUTH:** 90°/--

**BORE No:** 101
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | FILL/Sandy CLAY (CL/CI): low to medium plasticity, brown, fine to coarse grained sand, with rootlets, trace fine gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 0.1 | | PID < 1ppm | | |
| 692 | 0.3 | FILL/Silty CLAY (CL/CI): low to medium plasticity, dark brown, with fine to coarse grained sand, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 0.5 | | PID < 1ppm | | |
| | 0.8 | FILL/Silty CLAY (CI/CH): medium to high plasticity, brown/dark brown, with fine to coarse grained sand, fine to coarse angular gravel, moist to dry, estimated very stiff, FILL | | E | 1.0 | | PID < 1ppm | | |
| 691 | 1.3 | Silty CLAY (CL): low plasticity, dark brown, with fine grained sand, moist to dry, w<PL, estimated very stiff, alluvial | | E | 1.6 | | PID < 1ppm | | |
| | 1.8 | Silty CLAY (CL/CI): low to medium plasticity, yellow-brown, with fine grained sand, moist, w~PL, estimated stiff, alluvial | | | | | | | |
| | 2.0 | Bore discontinued at 2.0m -limit of investigation | | | | | | | |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA

**TYPE OF BORING:** 200mm auger

**WATER OBSERVATIONS:** No free groundwater observed

**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 692.50 AHD
**EASTING:** 722650
**NORTHING:** 6096273
**DIP/AZIMUTH:** 90°/--

**BORE No:** 102
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with rootlets, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.15 | FILL/Silty CLAY (CL/CI): low to medium plasticity, yellow-brown, with fine to coarse grained sand, trace fine to coarse angular gravel, moist, w~PL, estimated stiff to very stiff, FILL | | | | | | | |
| 692 | | | | E | 0.5 | | PID < 1ppm | | |
| | 0.8 | FILL/Silty CLAY (CL): low plasticity, brown mottled orange, with fine grained sand, trace fine to coarse angular gravel, wet, w>PL, estimated firm, FILL | | | | | | | |
| | 1 | | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.2 | Silty CLAY (CL): low plasticity, brown, with fine grained sand, moist to dry, w<PL, estimated very stiff, alluvial | | | | | | | |
| 691 | 1.5 | Bore discontinued at 1.5m<br>-limit of investigation | | E | 1.5 | | PID < 1ppm | | |
| | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 692.00 AHD
**EASTING:** 722674
**NORTHING:** 6096270
**DIP/AZIMUTH:** 90°/--

**BORE No:** 103
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 692 | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with rootlets, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.15 | FILL/Sandy CLAY (CL/CI): low to medium plasticity, brown, fine to coarse grained sand, with fine to coarse gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 0.5 | | PID < 1ppm | | |
| | 0.8 | Silty CLAY (CL): low plasticity, dark brown, with fine grained sand, moist to dry, w<PL, estimated very stiff, alluvial | | | | | | | |
| 691 | 1 | | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.1 | Silty CLAY (CL): low plasticity, yellow-brown, trace sub-rounded gravel, moist to dry, w<PL, estimated very stiff, alluvial | | | | | | | |
| | 1.3 | Bore discontinued at 1.3m<br>-limit of investigation | | | | | | | |
| 690 | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 692.75 AHD
**EASTING:** 722634
**NORTHING:** 6096261
**DIP/AZIMUTH:** 90°/--

**BORE No:** 104
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with rootlets, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.15 | FILL/Silty CLAY (CL/CI): low to medium plasticity, brown, with fine to coarse grained sand and fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 0.5 | | PID < 1ppm | | |
| 692 | 0.7 | FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, trace fine angular gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 1.0 | | PID < 1ppm | | |
| | 1 | | | | | | | | 1 |
| 691 | 1.5 | Silty CLAY (CI): medium plasticity, dark brown, trace fine grained sand, moist, w~PL, stiff, alluvial | | E | 1.6 | | PID < 1ppm | | |
| | 1.8 | Bore discontinued at 1.8m<br>-limit of investigation | | | | | | | |
| | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA

**TYPE OF BORING:** 200mm auger

**WATER OBSERVATIONS:** No free groundwater observed

**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 692.50 AHD
**EASTING:** 722659
**NORTHING:** 6096256
**DIP/AZIMUTH:** 90°/--

**BORE No:** 105
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with rootlets, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 692 | 0.15 | FILL/Silty CLAY (CL/CI): low to medium plasticity, brown, with fine to coarse grained sand, trace fine angular gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 0.5 | | PID < 1ppm R101 and RR101 | | |
| | 0.8 / 1 | FILL/Sandy CLAY (CL/CI): low to medium plasticity, brown, fine to coarse grained sand, with fine to coarse sub-rounded to angular gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 1.0 | | PID < 1ppm | | 1 |
| 691 | 1.5 | Silty CLAY (CI): medium plasticity, dark brown, trace fine grained sand, moist, w~PL, stiff, alluvial | | E | 1.6 | | PID < 1ppm | | |
| | 1.8 / 2 | Bore discontinued at 1.8m<br>-limit of investigation | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 693.00 AHD
**EASTING:** 722620
**NORTHING:** 6096248
**DIP/AZIMUTH:** 90°/--

**BORE No:** 106
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 693 | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with rootlets, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.15 | FILL/Sandy CLAY (CL/CI): low to medium plasticity, brown, fine to coarse grained sand, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 0.5 | | PID < 1ppm | | |
| | | -from 0.7m, moist, w>PL, estimated stiff to firm | | | | | | | |
| 692 | 1 | | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.8 | Silty CLAY (CL): low plasticity, dark grey, with fine grained sand, moist, w~PL, estimated stiff, alluvial | | | | | | | |
| 691 | 2 2.0 | Bore discontinued at 2.0m<br>-limit of investigation | | E | 2.0 | | PID < 1ppm | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA

**TYPE OF BORING:** 200mm auger

**WATER OBSERVATIONS:** No free groundwater observed

**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 692.75 AHD
**EASTING:** 722644
**NORTHING:** 6096244
**DIP/AZIMUTH:** 90°/--

**BORE No:** 107
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with rootlets and fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.15 | FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with fine angular gravel, moist, w~PL, stiff, FILL | | E | 0.5 | | PID < 1ppm | | |
| 692 | | -from 0.8m, with coarse angular gravel | | | | | | | |
| | 1 | -from 1.0m, fine grained sand | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.4 | Silty CLAY (CI): medium plasticity, dark brown, trace fine grained sand, moist, w~PL, stiff, alluvial | | E | 1.5 | | PID < 1ppm | | |
| | 1.6 | Bore discontinued at 1.6m<br>-limit of investigation | | | | | | | |
| 691 | | | | | | | | | |
| | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 693.00 AHD
**EASTING:** 722628
**NORTHING:** 6096235
**DIP/AZIMUTH:** 90°/--

**BORE No:** 108
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 693 | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with rootlets, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with silt, trace fine to coarse angular gravel, moist, w~PL, estimated stiff, FILL | | E | 0.5 | | PID < 1ppm | | |
| 692 | 0.6 | FILL/Silty CLAY (CI): medium plasticity, yellow-brown mottled grey, with fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.3 | Silty CLAY (CL): low plasticity, orange-brown, trace fine grained sand, moist, w~PL, estimated stiff to very stiff, alluvial | | E | 1.5 | | PID < 1ppm | | |
| 691 | 1.5 | Bore discontinued at 1.5m<br>-limit of investigation | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 692.75 AHD
**EASTING:** 722655
**NORTHING:** 6096229
**DIP/AZIMUTH:** 90°/--

**BORE No:** 109
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with rootlets and fine angular gravel, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.15 | FILL/Sandy CLAY (CL/CI): low to medium plasticity, brown, fine to coarse grained sand, with fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 0.5 | | PID < 1ppm | | |
| 692 | 1 | | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.1 | Silty CLAY (CL): low plasticity, pale brown, with fine grained sand, moist, w~PL, estimated stiff, alluvial | | | | | | | |
| | 1.3 | Silty CLAY (CI): medium plasticity, yellow-brown, with fine grained sand, moist to dry, w<PL, estimated very stiff, alluvial | | | | | | | |
| | 1.5 | Bore discontinued at 1.5m<br>-limit of investigation | | E | 1.5 | | PID < 1ppm | | |
| 691 | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 694.50 AHD
**EASTING:** 722613
**NORTHING:** 6096217
**DIP/AZIMUTH:** 90°/--

**BORE No:** 110
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with rootlets and fine angular gravel, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm R103 and RR103 | | |
| | 0.15 | Silty CLAY (CI): medium plasticity, yellow-brown, moist to dry, w<PL, estimated very stiff, residual | | | | | | | |
| | 0.3 | SILTSTONE: fine grained, red-brown, dry, low to medium strength, highly to moderately weathered, estimated fractured to slightly fractured | | | | | | | |
| 694 | | | | E | 0.5 | | PID < 1ppm | | |
| | 0.6 | Bore discontinued at 0.6m<br>-slow progress | | | | | | | |
| | 1 | | | | | | | | 1 |
| 693 | | | | | | | | | |
| | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 694.25 AHD
**EASTING:** 722627
**NORTHING:** 6096214
**DIP/AZIMUTH:** 90°/--

**BORE No:** 111
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with fine grained sand and rootlets, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 694 | 0.2 | Silty CLAY (CH): high plasticity, pale red-brown, dry to moist, w<PL, estimated very stiff to hard, extremely weathered siltstone | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | SILTSTONE: fine grained, red-brown, dry, low strength, highly weathered, estimated fractured to slightly fractured | | | | | | | |
| | 1 1.0 | Bore discontinued at 1.0m<br>-limit of investigation | | E | 1.0 | | PID < 1ppm | | 1 |
| 693 | | | | | | | | | |
| | 2 | | | | | | | | 2 |
| 692 | | | | | | | | | |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 695.75 AHD
**EASTING:** 722609
**NORTHING:** 6096201
**DIP/AZIMUTH:** 90°/--

**BORE No:** 112
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, dark brown, with rootlets, trace fine grained sand, moist, w~PL, estimated stiff to very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CL): low plasticity, pale brown, trace fine grained sand, moist, w~PL, estimated stiff, possible alluvial | | | | | | | |
| | 0.4 | Silty CLAY (CH): high plasticity, red-brown mottled orange, dry to moist, w<PL, estimated hard, residual | | E | 0.5 | | PID < 1ppm | | |
| 695 | 0.8 | Silty CLAY (CL): low plasticity, pale red-brown, dry to moist, w<PL, estimated very stiff to hard, extremely weathered siltstone | | E | 1.0 | | PID < 1ppm | | |
| | 1.2 | Bore discontinued at 1.2m<br>-limit of investigation | | | | | | | |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 695.25 AHD
**EASTING:** 722623
**NORTHING:** 6096200
**DIP/AZIMUTH:** 90°/--

**BORE No:** 113
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 695 | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with fine grained sand and rootlets, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CI/CH): medium to high plasticity, red-brown mottled grey, dry to moist, w<PL, estimated very stiff to hard, residual | | | | | | | |
| | 0.4 | Silty CLAY (CL): low plasticity, pale red-brown, dry to moist, w<PL, estimated very stiff to hard, extremely weathered siltstone | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | SILTSTONE: fine grained, yellow-brown, dry, low strength, highly weathered, estimated fractured | | | | | | | |
| | 1.0 | Bore discontinued at 1.0m -limit of investigation | | E | 1.0 | | PID < 1ppm | | |
| 694 | | | | | | | | | |
| | 2 | | | | | | | | |
| 693 | | | | | | | | | |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.00 AHD
**EASTING:** 722609
**NORTHING:** 6096191
**DIP/AZIMUTH:** 90°/--

**BORE No:** 114
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 696 | | TOPSOIL/Silty CLAY (CL): low plasticity, dark brown, with rootlets, trace fine grained sand, moist, w~PL, estimated stiff, TOPSOIL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CL): low plasticity, pale brown, trace fine grained sand, moist, w~PL, estimated stiff, possible alluvial | | | | | | | |
| | 0.4 | Silty CLAY (CI/CH): medium to high plasticity, yellow-brown, trace fine to coarse grained quartz sand, moist to dry, w<PL, estimated very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.8 | Silty CLAY (CL): low plasticity, yellow-brown, moist to dry, w<PL, estimated very stiff, extremely weathered siltstone | | | | | | | |
| 695 | 1 | | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |
| 694 | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.00 AHD
**EASTING:** 722606
**NORTHING:** 6096182
**DIP/AZIMUTH:** 90°/--

**BORE No:** 115
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 696 | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with rootlets, trace fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.15 | FILL/Sandy CLAY (CL): low plasticity, brown, fine to coarse grained sand, with silt, trace fine to coarse angular gravel, moist, w~PL, estimated stiff, FILL | | | | | | | |
| | 0.3 | Silty CLAY (CI): medium plasticity, red-brown mottled yellow, moist to dry, w<PL, estimated very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| 695 | 0.8 | Gravelly CLAY (CI/CH): medium to high plasticity, red-brown, fine to coarse angular quartz gravel, moist to dry, w<PL, estimated very stiff, residual | | E | 1.0 | | PID < 1ppm R105 and RR105 | | 1 |
| | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |
| 694 | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.00 AHD
**EASTING:** 722549
**NORTHING:** 6096190
**DIP/AZIMUTH:** 90°/--

**BORE No:** 116
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 696 | | Silty CLAY (CL): low plasticity, red-brown, trace fine grained sand, dry to moist, w<PL, estimated hard, possible alluvial | | E | 0.1 | | PID < 1ppm | | |
| | 0.3 | Silty CLAY (CL): low plasticity, pale yellow-brown, dry to moist, w<PL, estimated hard, extremely weathered siltstone | | E | 0.5 | | PID < 1ppm | | |
| 695 | 0.8 | SILTSTONE: fine grained, yellow-brown, dry, low strength, highly weathered | | E | 1.0 | | PID < 1ppm | | |
| | 1.2 | Bore discontinued at 1.2m<br>-limit of investigation | | | | | | | |
| 694 | 2 | | | | | | | | |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.00 AHD
**EASTING:** 722533
**NORTHING:** 6096170
**DIP/AZIMUTH:** 90°/--

**BORE No:** 117
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 696 | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with rootlets, moist, w~PL, estimated stiff to very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CL): low plasticity, pale brown, trace fine grained sand, moist, w>PL, estimated firm to stiff, possible alluvial | | | | | | | |
| | 0.4 | Gravelly CLAY (CI/CH): medium to high plasticity, red-brown, fine to coarse angular quartz gravel, moist to dry, w<PL, estimated very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | Silty CLAY (CL): low plasticity, yellow-brown, dry to moist, w<PL, estimated very stiff to hard, extremely weathered siltstone | | | | | | | |
| 695 | 1 | | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |
| 694 | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 695.25 AHD
**EASTING:** 722503
**NORTHING:** 6096177
**DIP/AZIMUTH:** 90°/--

**BORE No:** 118
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 695 | 0.2 | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with rootlets, moist, w~PL, estimated stiff to very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.6 | FILL/Silty CLAY (CI/CH): medium to high plasticity, yellow-brown and red-brown, with fine to coarse angular gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 0.5 | | PID < 1ppm | | |
| 694 | 1 / 1.2 | Silty CLAY (CI): medium plasticity, pale yellow-grey, trace siltstone gravel, moist to dry, w<PL, estimated very stiff, extremely weathered siltstone | | E | 1.0 | | PID < 1ppm | | 1 |
| 693 | 2 | Bore discontinued at 1.2m<br>-limit of investigation | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 694.50 AHD
**EASTING:** 722468
**NORTHING:** 6096184
**DIP/AZIMUTH:** 90°/--

**BORE No:** 119
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, with fine to medium sub-angular gravel and rootlets, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 694 | 0.3 | Silty CLAY (CI/CH): medium to high plasticity, pale grey-brown, fry to moist, w<PL, estimated hard, residual<br>-from 0.5m, yellow-brown | | E | 0.5 | | PID < 1ppm | | |
| | 0.8 | Silty CLAY (CL/CI): low to medium plasticity, pale yellow-brown, dry to moist, w<PL, estimated hard, extremely weathered siltstone | | | | | | | |
| 693 | 1 1.0 | Bore discontinued at 1.0m<br>-limit of investigation | | E | 1.0 | | PID < 1ppm | | |
| | 2 | | | | | | | | |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 694.25 AHD
**EASTING:** 722447
**NORTHING:** 6096187
**DIP/AZIMUTH:** 90°/--

**BORE No:** 120
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with fine grained sand and rootlets, trace fine gravel, moist, w~PL, very stiff to stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm R107 and RR107 | | |
| 694 | 0.2 | Silty CLAY (CL): low plasticity, pale orange-brown, with fine grained sand, moist, w~PL, estimated stiff to very stiff, possible alluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | Silty CLAY (CH): high plasticity, yellow-brown, dry to moist, estimated hard, residual | | E | 1.0 | | PID < 1ppm | | |
| | 1 | | | | | | | | 1 |
| | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |
| 693 | | | | | | | | | |
| | 2 | | | | | | | | 2 |
| 692 | | | | | | | | | |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

| | | | | | |
|---|---|---|---|---|---|
| **CLIENT:** | Hindmarsh Construction Pty Ltd | **SURFACE LEVEL:** | 694.75 AHD | **BORE No:** | 121 |
| **PROJECT:** | Proposed New High School In Bungendore | **EASTING:** | 722470 | **PROJECT No:** | 202107.04 |
| **LOCATION:** | Majara Street, Bungendore | **NORTHING:** | 6096170 | **DATE:** | 8/10/2021 |
| | | **DIP/AZIMUTH:** | 90°/-- | **SHEET** | 1 OF 1 |

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with rootlets, moist, w~PL, estimated stiff to very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CL): low plasticity, pale brown, trace fine grained sand, moist to dry, w<PL, estimated very stiff, possible alluvial | | E | 0.5 | | PID < 1ppm | | |
| 694 | 0.6 | Silty CLAY (CH): high plasticity, pale grey-brown, trace fine grained sand, dry to moist, w<PL, estimated hard, residual/extremely weathered siltstone | | | | | | | |
| | 0.8 | SILTSTONE: fine grained, yellow-brown, dry, low to medium strength, highly to moderately weathered | | E | 1.0 | | PID < 1ppm | | |
| 693 | 1.2 | Bore discontinued at 1.2m<br>-limit of investigation | | | | | | | |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA

**TYPE OF BORING:** 200mm auger

**WATER OBSERVATIONS:** No free groundwater observed

**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 695.00 AHD
**EASTING:** 722487
**NORTHING:** 6096167
**DIP/AZIMUTH:** 90°/--

**BORE No:** 122
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 695 | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, brown, with fine to medium sub-angular gravel and rootlets, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CL): low plasticity, brown, with fine grained sand, moist to wet, w>PL, estimated firm to stiff, possible alluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.6 | Silty CLAY (CI/CH): medium to high plasticity, yellow-brown, dry to moist, w<PL, estimated hard, residual | | | | | | | |
| 694 | 0.9 / 1 | SILTSTONE: fine grained, yellow-brown, dry, low to medium strength, highly to moderately weathered | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.1 | Bore discontinued at 1.1m -limit of investigation | | | | | | | |
| 693 | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 695.50 AHD
**EASTING:** 722501
**NORTHING:** 6096169
**DIP/AZIMUTH:** 90°/--

**BORE No:** 123
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with rootlets, moist, w~PL, estimated stiff to very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CL): low plasticity, pale brown, with fine grained sand, moist, w~PL, estimated stiff to very stiff, possible alluvial | | | | | | | |
| 695 | 0.4 | Silty CLAY (CI/CH): medium to high plasticity, brown, moist to dry, w<PL, estimated very stiff, possible alluvial or residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.8 | SANDSTONE: fine grained, red-brown, dry, very low strength, highly weathered, estimated fractured | | | | | | | |
| | 1 | | | E | 1.0 | | PID < 1ppm | | |
| | 1.2 | Bore discontinued at 1.2m<br>-limit of investigation | | | | | | | |
| 694 | | | | | | | | | |
| | 2 | | | | | | | | |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA

**TYPE OF BORING:** 200mm auger

**WATER OBSERVATIONS:** No free groundwater observed

**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.25 AHD
**EASTING:** 722535
**NORTHING:** 6096156
**DIP/AZIMUTH:** 90°/--

**BORE No:** 124
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Clayey SAND (SC): fine to medium grained sand, brown, low plasticity clay, with rootlets, trace gravel, moist to wet, medium dense, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 696 | 0.3 | Silty CLAY (CL): low plasticity, pale brown, trace fine to coarse grained sand, trace fine gravel up to 10mm in size, moist to dry, w<PL, stiff, possible colluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.6 | Bore discontinued at 0.6m<br>-refusal | | | | | | | |
| 695 | 1 | | | | | | | | 1 |
| 694 | 2 | | | | | | | | 2 |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 694.75 AHD
**EASTING:** 722466
**NORTHING:** 6096147
**DIP/AZIMUTH:** 90°/--

**BORE No:** 125
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, pale brown, with rootlets, trace fine grained sand, moist, w~PL, estimated stiff to very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.15 | Silty CLAY (CL): low plasticity, pale brown, trace fine grained sand, moist, w~PL, estimated very stiff, possible alluvial | | E | 0.5 | | PID < 1ppm | | |
| 694 | 0.6 | Silty CLAY (CI): medium plasticity, red-brown, trace fine to coarse quartz gravel, moist, w~PL, estimated very stiff, residual | | | | | | | |
| | 0.9 | SILTSTONE: fine grained, yellow-brown, dry, low strength, highly weathered, estimated fractured | | E | 1.0 | | PID < 1ppm | | |
| | 1 | | | | | | | | 1 |
| | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |
| 693 | | | | | | | | | |
| | 2 | | | | | | | | 2 |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.00 AHD
**EASTING:** 722481
**NORTHING:** 6096147
**DIP/AZIMUTH:** 90°/--

**BORE No:** 126
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 696 | | FILL/Clayey SAND (SC): fine to coarse grained sand, orange-brown, low plasticity clay, with fine to coarse gravel, dry to moist, estimated medium dense, FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.3 | FILL/Sandy CLAY (CL/CI): low to medium plasticity, orange-brown, fine to coarse grained sand, with fine to coarse gravel, moist to dry, w<PL, estimated very stiff, FILL | | E | 0.5 | | PID < 1ppm | | |
| 695 | 1 | | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.2 | Silty CLAY (CL): low plasticity, brown, with rootlets, moist, w~PL, stiff to very stiff, remnant TOPSOIL | | | | | | | |
| | 1.4 | Silty CLAY (CL): low plasticity, pale brown, trace fine grained sand, moist, w~PL, estimated stiff, possible alluvial | | E | 1.5 | | PID < 1ppm | | |
| | 1.6 | Bore discontinued at 1.6m -limit of investigation | | | | | | | |
| 694 | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 695.25 AHD
**EASTING:** 722476
**NORTHING:** 6096133
**DIP/AZIMUTH:** 90°/--

**BORE No:** 127
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 695 | 0.15 | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, orange-brown, fine to coarse grained sand, with fine gravel and rootlets, moist to dry, w<PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.6 | Silty CLAY (CL): low plasticity, pale brown, trace fine grained sand, moist, w~PL, estimated very stiff, possible alluvial | | E | 0.5 | | PID < 1ppm | | |
| | 1.2 | Gravelly CLAY (CI): medium plasticity, yellow-brown, fine siltstone gravel, moist, w~PL, estimated stiff to very stiff, residual | | E | 1.0 | | PID < 1ppm | | |
| 694 | | Bore discontinued at 1.2m -limit of investigation | | | | | | | |
| 693 | 2 | | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.50 AHD
**EASTING:** 722531
**NORTHING:** 6096120
**DIP/AZIMUTH:** 90°/--

**BORE No:** 128
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL/CI): low to medium plasticity, pale brown, trace fine grained sand and rootlets, moist to dry, w<PL, stiff, TOPSOIL FILL<br>-from 0.2m, moist, w=PL, stiff | | E | 0.1 | | PID < 1ppm | | |
| 696 | 0.4 | Sandy CLAY (CL): low plasticity, pale brown, fine to coarse grained sand, trace fine gravel up to 5mm in size and cobbles, moist to dry, w=PL, stiff, colluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.6 | Silty CLAY (CI): medium plasticity, pale yellow-brown, with fine to coarse grained sand, trace fine gravel up to 20mm in size and cobbles, moist to dry, w<PL, colluvial | | | | | | | |
| | 1 1.0 | Bore discontinued at 1.0m<br>-limit of investigation | | | | | | | 1 |
| 695 | | | | | | | | | |
| | 2 | | | | | | | | 2 |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.25 AHD
**EASTING:** 722569
**NORTHING:** 6096145
**DIP/AZIMUTH:** 90°/--

**BORE No:** 129
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 697 | | TOPSOIL FILL/Clayey SAND (SC): fine to medium grained sand, brown, low plasticity clay, with rootlets, trace gravel, moist to wet, medium dense, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Gravelly CLAY (CL): low plasticity, orange-brown, coarse siltstone gravel, moist to dry, w<PL, estimated very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.6 | SILTSTONE: fine grained, yellow-brown/grey, dry, very low to low strength, highly weathered, some medium to high strength, moderately weathered seams, estimated fractured | | | | | | | |
| | 1 — 1.0 | Bore discontinued at 1.0m<br>-limit of investigation | | E | 1.0 | | PID < 1ppm | | 1 |
| 696 | | | | | | | | | |
| | 2 | | | | | | | | 2 |
| 695 | | | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.25 AHD
**EASTING:** 722567
**NORTHING:** 6096125
**DIP/AZIMUTH:** 90°/--

**BORE No:** 130
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Clayey SAND (SC): fine to medium grained sand, brown, low plasticity clay, with rootlets, trace gravel, moist to wet, medium dense, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 697 | 0.2 | Gravelly CLAY (CL): low plasticity, yellow-brown mottled grey and orange, moist to dry, w<PL, estimated very stiff, possible FILL | | E | 0.5 | | PID < 1ppm R108 and RR108 | | |
| | 0.6 | Gravelly CLAY (CL): low plasticity, orange-brown, coarse siltstone gravel, moist to dry, w<PL, estimated very stiff, residual | | E | 1.0 | | PID < 1ppm | | |
| | 1 | | | | | | | | 1 |
| 696 | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |
| | 2 | | | | | | | | 2 |
| 695 | | | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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Geotechnics / Environment / Groundwater

# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.00 AHD
**EASTING:** 722562
**NORTHING:** 6096109
**DIP/AZIMUTH:** 90°/--

**BORE No:** 131
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 697 | | FILL/Sandy GRAVEL (GP): poorly graded, gravel up to 30mm in size, grey, fine to coarse grained sand, trace low plasticity clay, moist, medium dense, FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CL): low plasticity, pale grey-brown, trace fine grained sand, moist, w~PL, estimated stiff to very stiff, possible alluvial | | | | | | | |
| | 0.4 | Silty CLAY (CI): medium plasticity, grey-brown mottled orange, moist, w~PL, estimated very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | Silty CLAY (CL/CI): low to medium plasticity, yellow-brown mottled red, moist, w~PL, estimated stiff, extremely weathered siltstone | | | | | | | |
| 696 | 1 | | | E | 1.0 | | PID < 1ppm | | 1 |
| | 1.2 | Bore discontinued at 1.2m<br>-limit of investigation | | | | | | | |
| 695 | 2 | | | | | | | | 2 |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.25 AHD
**EASTING:** 722576
**NORTHING:** 6096102
**DIP/AZIMUTH:** 90°/--

**BORE No:** 132
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 697 | 0.0–0.3 | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, trace fine grained sand and fine gravel, moist, w~PL, estimated stiff to very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.3–0.6 | Silty CLAY (CL): low plasticity, pale grey-brown, trace fine grained sand, moist to wet, w>PL, estimated firm to stiff, possible alluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.6–1.1 | Silty CLAY (CL/CI): low to medium plasticity, yellow-brown mottled red, moist, w~PL, estimated stiff, extremely weathered siltstone | | E | 1.0 | | PID < 1ppm | | |
| 696 | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |
| 695 | 2 | | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.50 AHD
**EASTING:** 722594
**NORTHING:** 6096104
**DIP/AZIMUTH:** 90°/--

**BORE No:** 133
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with fine grained sand, trace course gravel, moist to wet, w>PL, estimated firm to stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 697 | 0.3 | Silty CLAY (CI): medium plasticity, yellow-brown, mottled grey and orange, moist, w~PL, estimated very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | SILTSTONE: fine grained, yellow-brown, dry, low to medium strength, highly to moderately weathered, estimated fractured | | E | 1.0 | | PID < 1ppm | | |
| 696 | 1.2 | Bore discontinued at 1.2m<br>-limit of investigation | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA

**TYPE OF BORING:** 200mm auger

**WATER OBSERVATIONS:** No free groundwater observed

**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.75 AHD
**EASTING:** 722592
**NORTHING:** 6096093
**DIP/AZIMUTH:** 90°/--

**BORE No:** 134
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with fine grained sand, trace course gravel, moist to wet, w>PL, estimated firm to stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.25 | Silty CLAY (CI): medium plasticity, yellow-brown, trace siltstone gravel, dry to moist, w<PL, estimated hard, extremely weathered siltstone | | E | 0.5 | | PID < 1ppm | | |
| 697 | 0.6 | SILTSTONE: fine grained, yellow-brown, dry, low strength, highly weathered<br>-from 0.8m, grey, medium strength, moderately weathered | | E | 1.0 | | PID < 1ppm | | |
| | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |
| 696 | 2 | | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.25 AHD
**EASTING:** 722575
**NORTHING:** 6096093
**DIP/AZIMUTH:** 90°/--

**BORE No:** 135
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with fine grained sand, trace course gravel, moist to wet, w>PL, estimated firm to stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm R106 and RR106 | | |
| 697 | 0.25 | Silty CLAY (CL): low plasticity, pale grey-brown, trace fine grained sand, moist to wet, w>PL, estimated firm to stiff, possible alluvial | | | | | | | |
| | 0.4 | Silty CLAY (CI): medium plasticity, orange-brown, trace siltstone gravel, moist, w~PL, estimated stiff to very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | SILTSTONE: fine grained, yellow-brown, dry, low strength, highly weathered, estimated fractured | | E | 1.0 | | PID < 1ppm | | |
| 696 | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |

Depth scale: 1, 2. RL scale: 697, 696, 695.

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.00 AHD
**EASTING:** 722559
**NORTHING:** 6096098
**DIP/AZIMUTH:** 90°/--

**BORE No:** 136
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 697 | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with fine grained sand, moist to wet, w>PL, estimated firm to stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CL): low plasticity, brown mottled orange, trace fine grained sand, moist to wet, w>PL, estimated firm to stiff, possible alluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.6 | Silty CLAY (CL/CI): low to medium plasticity, yellow-brown, trace siltstone gravel, moist to dry, w<PL, estimated very stiff, residual | | | | | | | |
| 696 | 1 1.0 | Bore discontinued at 1.0m<br>-limit of investigation | | E | 1.0 | | PID < 1ppm | | 1 |
| 695 | 2 | | | | | | | | 2 |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.25 AHD
**EASTING:** 722561
**NORTHING:** 6096084
**DIP/AZIMUTH:** 90°/--

**BORE No:** 137
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with fine grained sand, moist to wet, w>PL, estimated firm to stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 697 | 0.2 | Silty CLAY (CL): low plasticity, pale grey-brown, trace fine grained sand, moist, w~PL, estimated stiff, possible alluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.6 | Silty CLAY (CI): medium plasticity, yellow-brown, with quartz and siltstone gravel, moist to dry, w<PL, estimated very stiff, extremely weathered siltstone | | E | 1.0 | | PID < 1ppm | | |
| | 1 | | | | | | | | 1 |
| 696 | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |
| | 2 | | | | | | | | 2 |
| 695 | | | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.25 AHD
**EASTING:** 722572
**NORTHING:** 6096082
**DIP/AZIMUTH:** 90°/--

**BORE No:** 138
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Sandy CLAY (CL): low plasticity, dark brown, fine to coarse grained sand, with silt and rootlets, trace gravel, moist, w~PL, estimated very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 697 | 0.2 | Silty CLAY (CL): low plasticity, pale grey-brown, trace fine grained sand, moist, w~PL, estimated stiff, possible alluvial | | | | | | | |
| | 0.4 | Silty CLAY (CI): medium plasticity, yellow-brown mottled grey and orange, moist to dry, w<PL, estimated very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | Silty CLAY (CL): low plasticity, grey yellow-brown, moist to dry, w<PL, estimated very stiff, extremely weathered siltstone | | | | | | | |
| | 1 1.0 | Bore discontinued at 1.0m<br>-limit of investigation | | E | 1.0 | | PID < 1ppm | | 1 |
| 696 | | | | | | | | | |
| | 2 | | | | | | | | 2 |
| 695 | | | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.50 AHD
**EASTING:** 722586
**NORTHING:** 6096083
**DIP/AZIMUTH:** 90°/--

**BORE No:** 139
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, dark brown mottled red, with rootlets, trace fine grained sand, moist, w~PL, estimated stiff to very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Sandy CLAY (CL): low plasticity, yellow-brown mottled red, fine to coarse grained sand, trace quartz gravel, moist to dry, w<PL, estimated very stiff, residual | | | | | | | |
| 697 | 0.4 | Silty CLAY (CL): low plasticity, yellow-brown, with quartz gravel, moist to dry, w<PL, estimated very stiff, extremely weathered siltstone | | E | 0.5 | | PID < 1ppm | | |
| | 0.8 | SILTSTONE: fine grained, red-brown, dry, low strength, highly weathered, estimated fractured | | E | 1.0 | | PID < 1ppm | | |
| 696 | 1.2 | Bore discontinued at 1.2m<br>-limit of investigation | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.00 AHD
**EASTING:** 722505
**NORTHING:** 6096103
**DIP/AZIMUTH:** 90°/--

**BORE No:** 140
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 696 | | TOPSOIL FILL/Silty CLAY (CI): medium plasticity, grey dark brown, trace fine to coarse grained sand and rootlets, moist to dry, w<PL, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.3 | Silty CLAY (CL): low plasticity, pale brown, trace fine to coarse grained sand, trace fine gravel, moist, w<PL, stiff, possible colluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | Silty CLAY (CL/CI): low to medium plasticity, yellow-brown, trace fine to coarse grained sand and fine gravel up to 10mm in size, moist, w~PL, very stiff, residual | | | | | | | |
| 695 | 1 / 1.0 | Bore discontinued at 1.0m<br>-limit of investigation | | E | 1.0 | | PID < 1ppm | | 1 |
| 694 | 2 | | | | | | | | 2 |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.50 AHD
**EASTING:** 722529
**NORTHING:** 6096099
**DIP/AZIMUTH:** 90°/--

**BORE No:** 141
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | 0.0–0.15 | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, trace fine grained sand and fine gravel, moist, w~PL, estimated stiff to very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.15–0.4 | Silty CLAY (CL): low plasticity, pale brown, trace fine grained sand, moist, w~PL, estimated very stiff, possible alluvial | | | | | | | |
| 696 | 0.4–0.8 | Silty CLAY (CI): medium plasticity, yellow-brown, moist, w~PL, estimated stiff to very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.8–1.1 | Silty CLAY (CL): low plasticity, yellow grey-brown, trace fine siltstone gravel, moist, w~PL, estimated stiff to very stiff, extremely weathered siltstone | | E | 1.0 | | PID < 1ppm | | |
| | 1.1 | Bore discontinued at 1.1m<br>-limit of investigation | | | | | | | |
| 695 | | | | | | | | | |
| | 2 | | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.00 AHD
**EASTING:** 722502
**NORTHING:** 6096082
**DIP/AZIMUTH:** 90°/--

**BORE No:** 142
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 696 | | TOPSOIL FILL/Silty CLAY (CI): medium plasticity, grey dark brown, trace fine to coarse grained sand and rootlets, moist to dry, w<PL, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CI): medium plasticity, pale yellow-brown, trace fine to coarse grained sand and fine gravel up to 10mm in size, moist to dry, w<PL, very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.5 | Bore discontinued at 0.5m -refusal | | | | | | | |
| 695 | 1 | | | | | | | | 1 |
| 694 | 2 | | | | | | | | 2 |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.50 AHD
**EASTING:** 722523
**NORTHING:** 6096078
**DIP/AZIMUTH:** 90°/--

**BORE No:** 143
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | 0.25 | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with rootlets, trace fine grained sand and fine quartz gravel, moist to wet, w>PL, estimated firm to stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 696 | 0.6 | Silty CLAY (CL): low plasticity, pale brown, trace fine grained sand, moist, w~PL, estimated stiff, possible alluvial | | E | 0.5 | | PID < 1ppm | | |
| | 1.2 | Silty CLAY (CL/CI): low to medium plasticity, yellow-brown mottled red, moist, w~PL, estimated stiff, extremely weathered siltstone | | E | 1.0 | | PID < 1ppm | | |
| 695 | | Bore discontinued at 1.2m<br>-limit of investigation | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.00 AHD
**EASTING:** 722496
**NORTHING:** 6096059
**DIP/AZIMUTH:** 90°/--

**BORE No:** 144
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 696 | | TOPSOIL FILL/Silty CLAY (CI): medium plasticity, grey dark brown, trace fine to coarse grained sand and rootlets, dry to moist, w<PL, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CL): low plasticity, pale yellow-brown, trace fine to coarse grained sand and fine gravel up to 5mm in size, dry to moist, w=PL, stiff, residual | | | | | | | |
| | 0.5 | Bore discontinued at 0.5m -refusal | | E | 0.5 | | PID < 1ppm R102 and RR102 | | |
| 695 | 1 | | | | | | | | 1 |
| 694 | 2 | | | | | | | | 2 |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.75 AHD
**EASTING:** 722521
**NORTHING:** 6096057
**DIP/AZIMUTH:** 90°/--

**BORE No:** 145
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, grey-brown, trace fine to coarse grained sand, fine gravel up to 5mm in size, and rootlets, dry to moist, w<PL, very stiff, TOPSOIL FILL | | | | | | | |
| | 0.1 | Clayey GRAVEL (GC): fine to coarse sub-angular to rounded gravel, grey-brown, medium plasticity clay, with fine to coarse grained sand, moist, medium dense, alluvial | | E | 0.1 | | PID < 1ppm | | |
| | | | | E | 0.3 | | PID < 1ppm | | |
| | 0.4 | Silty CLAY (CI/CH): medium to high plasticity, yellow mottled grey, with fine to medium sub-angular to rounded gravel, trace fine to coarse grained sand, moist to dry, w~PL, very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| 696 | 0.7 | Bore discontinued at 0.7m<br>-auger refusal possible cobble | | | | | | | |
| | 1 | | | | | | | | 1 |
| 695 | | | | | | | | | |
| | 2 | | | | | | | | 2 |

**RIG:** CAT 304C CR **DRILLER:** BE **LOGGED:** TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.00 AHD
**EASTING:** 722493
**NORTHING:** 6096041
**DIP/AZIMUTH:** 90°/--

**BORE No:** 146
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 696 | | TOPSOIL FILL/Silty CLAY (CI): medium plasticity, grey dark brown, trace fine to coarse grained sand and rootlets, dry to moist, w<PL, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.2 | Silty CLAY (CL): low plasticity, pale yellow-brown, trace fine to coarse grained sand and fine gravel up to 5mm in size, dry to moist, w=PL, stiff, possible colluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.5 | Bore discontinued at 0.5m<br>-refusal | | | | | | | |
| 695 | 1 | | | | | | | | 1 |
| 694 | 2 | | | | | | | | 2 |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.75 AHD
**EASTING:** 722517
**NORTHING:** 6096044
**DIP/AZIMUTH:** 90°/--

**BORE No:** 147
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | TOPSOIL FILL/Silty CLAY (CL): low plasticity, grey-brown, trace fine to coarse grained sand, fine gravel up to 5mm in size, and rootlets, dry to moist, w<PL, very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.4 | Silty CLAY (CL/CI): low to medium plasticity, grey-brown, with fine to medium sub-angular to rounded gravel, trace fine to coarse grained sand, moist to dry, w<PL, stiff, alluvial | | E | 0.3 | | PID < 1ppm | | |
| | 0.7 | Clayey GRAVEL (GC): fine to coarse sub-angular to rounded gravel, grey-brown, medium plasticity clay, with fine to coarse grained sand, moist, dense to very dense, alluvial | | E | 0.5 | | PID < 1ppm | | |
| 696 | | Bore discontinued at 0.7m<br>-auger refusal possible cobble | | | | | | | |
| | 1 | | | | | | | | 1 |
| 695 | | | | | | | | | |
| | 2 | | | | | | | | 2 |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.00 AHD
**EASTING:** 722512
**NORTHING:** 6096021
**DIP/AZIMUTH:** 90°/--

**BORE No:** 148
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 697 | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, grey-brown, trace fine to coarse grained sand, fine gravel up to 5mm in size, and rootlets, dry to moist, w<PL, hard, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| | 0.15 | Clayey GRAVEL (GC): fine to coarse sub-angular to rounded gravel, grey-brown, medium plasticity clay, with fine to coarse grained sand, moist, dense to very dense, alluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.6 | Silty CLAY (CL): low plasticity, yellow mottled grey, with fine to coarse grained sand, moist to dry, w<PL, very stiff, residual | | E | 0.8 | | PID < 1ppm | | |
| | 0.9 | Bore discontinued at 0.9m<br>-refusal | | | | | | | |
| 696 | 1 | | | | | | | | 1 |
| 695 | 2 | | | | | | | | 2 |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.25 AHD
**EASTING:** 722489
**NORTHING:** 6096008
**DIP/AZIMUTH:** 90°/--

**BORE No:** 149
**PROJECT No:** 202107.04
**DATE:** 11/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, brown, with rootlets, trace fine grained sand and fine gravel, moist, w~PL, estimated stiff to very stiff, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 696 | 0.2 | Gravelly Silty CLAY (CL): low plasticity, brown, fine to coarse quartz gravel, moist, w~PL, estimated stiff to very stiff, possible colluvial | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | Silty CLAY (CI): medium plasticity, red-brown, trace fine to coarse quartz gravel, moist, w~PL, estimated very stiff, residual | | | | | | | |
| | 0.9 | Silty CLAY (CL/CI): low to medium plasticity, yellow-brown mottled red, moist, w~PL, estimated stiff, extremely weathered siltstone | | E | 1.0 | | PID < 1ppm | | 1 |
| 695 | 1.2 | Bore discontinued at 1.2m<br>-limit of investigation | | | | | | | |
| | 2 | | | | | | | | 2 |
| 694 | | | | | | | | | |

**RIG:** KUBOTA KX033-4 **DRILLER:** Terrain Projects **LOGGED:** SDG **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.00 AHD
**EASTING:** 722509
**NORTHING:** 6096006
**DIP/AZIMUTH:** 90°/--

**BORE No:** 150
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| 697 | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, grey-brown, trace fine to coarse grained sand, fine gravel up to 5mm in size, and rootlets, dry to moist, w<PL, hard, TOPSOIL FILL | | | | | | | |
| | 0.1 | Silty CLAY (CL): low plasticity, pale brown, dry to moist, w<PL, very stiff to hard, possible alluvial or residual | | E | 0.1 | | PID < 1ppm | | |
| | 0.3 | Silty CLAY (CL/CI): low to medium plasticity, pale brown, with fine to coarse grained sand, dry to moist, w<PL, hard, residual | | | | | | | |
| | 0.5 | Silty CLAY (CI): medium plasticity, yellow orange and brown, trace fine to coarse grained sand, dry to moist, w<PL, very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| 696 | 1 1.0 | Bore discontinued at 1.0m -limit of investigation | | E | 1.0 | | PID < 1ppm R104 and RR104 | | 1 |
| 695 | 2 | | | | | | | | 2 |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 696.50 AHD
**EASTING:** 722507
**NORTHING:** 6095987
**DIP/AZIMUTH:** 90°/--

**BORE No:** 151
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | | TOPSOIL FILL/Silty CLAY (CL): low plasticity, grey pale brown, trace rootlets, dry to moist, w<PL, stiff, TOPSOIL FILL<br>-from 0.2m, trace gravel | | E | 0.1 | | PID < 1ppm | | |
| 696 | 0.3 | Silty CLAY (CI/CH): medium to high plasticity, yellow orange-brown, dry to moist, w<PL, very stiff, residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.7 | Bore discontinued at 0.7m<br>-refusal | | E | 0.7 | | PID < 1ppm | | |
| | 1 | | | | | | | | 1 |
| 695 | | | | | | | | | |
| | 2 | | | | | | | | 2 |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# BOREHOLE LOG

**CLIENT:** Hindmarsh Construction Pty Ltd
**PROJECT:** Proposed New High School In Bungendore
**LOCATION:** Majara Street, Bungendore

**SURFACE LEVEL:** 697.25 AHD
**EASTING:** 722483
**NORTHING:** 6095990
**DIP/AZIMUTH:** 90°/--

**BORE No:** 152
**PROJECT No:** 202107.04
**DATE:** 8/10/2021
**SHEET** 1 OF 1

| RL | Depth (m) | Description of Strata | Graphic Log | Sampling & In Situ Testing: Type | Depth | Sample | Results & Comments | Water | Well Construction Details |
|---|---|---|---|---|---|---|---|---|---|
| | 0.1 | TOPSOIL FILL/Clayey SILT (ML): low plasticity, pale grey-brown, with fine to coarse grained sand, trace fine gravel up to 20mm in size, dry to moist, w<PL, TOPSOIL FILL | | E | 0.1 | | PID < 1ppm | | |
| 697 | 0.5 | Silty CLAY (CL): low plasticity, pale brown, with fine to coarse grained sand and fine to medium gravel up to 40mm in size, dry to moist, w<PL, stiff, possible colluvial or residual | | E | 0.5 | | PID < 1ppm | | |
| | 0.9 | Silty CLAY (CI): medium plasticity, yellow/orange-brown, trace fine to coarse grained sand and fine gravel, dry to moist, w<PL, very stiff, residual | | E | 0.8 | | PID < 1ppm | | |
| | 1 | Bore discontinued at 0.9m -refusal | | | | | | | 1 |
| 696 | | | | | | | | | |
| | 2 | | | | | | | | 2 |
| 695 | | | | | | | | | |

**RIG:** Ryobi Power Hand-Held Auger **DRILLER:** EAGL/TBO **LOGGED:** EAGL/TBO **CASING:** NA
**TYPE OF BORING:** 200mm auger
**WATER OBSERVATIONS:** No free groundwater observed
**REMARKS:** Location coordinates are in MGA94 Zone 55. Surface levels and coordinates are approximate only and must not be relied upon

**SAMPLING & IN SITU TESTING LEGEND**

| | | | | | |
|---|---|---|---|---|---|
| A | Auger sample | G | Gas sample | PID | Photo ionisation detector (ppm) |
| B | Bulk sample | P | Piston sample | PL(A) | Point load axial test Is(50) (MPa) |
| BLK | Block sample | $U_x$ | Tube sample (x mm dia.) | PL(D) | Point load diametral test Is(50) (MPa) |
| C | Core drilling | W | Water sample | pp | Pocket penetrometer (kPa) |
| D | Disturbed sample | ▷ | Water seep | S | Standard penetration test |
| E | Environmental sample | ▼ | Water level | V | Shear vane (kPa) |

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# Appendix G

Summarised Laboratory Results (Tables G1 – G4 and QA1 – QA5)

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Geotechnics | Environment | Groundwater

## Table G1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH

| | | | Metals | | | | | | | | TRH | | | | | | BTEX | | | | PAH | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Arsenic | Cadmium | Total Chromium | Copper | Lead | Mercury (inorganic) | Nickel | Zinc | TRH C6 - C10 | TRH >C10-C16 | F1 ((C6-C10)-BTEX) | F2 ( >C10-C16 less Naphthalene) | F3 (>C16-C34) | F4 (>C34-C40) | Benzene | Toluene | Ethylbenzene | Total Xylenes | Naphthalene [b] | Benzo(a)pyrene (BaP) | Benzo(a)pyrene TEQ | Total PAHs |
| | | PQL | 4 | 0.4 | 1 | 1 | 1 | 0.1 | 1 | 1 | 25 | 50 | 25 | 50 | 100 | 100 | 0.2 | 0.5 | 1 | 1 | 1 | 0.05 | 0.5 | 0.05 |
| Sample ID | Depth | Sample Date | 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 |
| Bore 101 | 1 m | 08/10/2021 | 6 | <0.4 | 16 | 15 | 23 | <0.1 | 14 | 31 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 90 180 | NL - | - 1300 | - 5600 | 1 65 | NL 105 | NL 125 | 310 45 | NL 170 | - 0.7 | 3 - | 300 - |
| Bore 102 | 0.5 m | 08/10/2021 | <4 | <0.4 | 20 | 14 | 16 | <0.1 | 12 | 26 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 103 | 0.1 m | 08/10/2021 | 5 | <0.4 | 25 | 16 | 33 | <0.1 | 15 | 180 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 104 | 0.1 m | 08/10/2021 | 5 | <0.4 | 30 | 12 | 14 | <0.1 | 10 | 34 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 105 | 0.5 m | 08/10/2021 | 5 | <0.4 | 27 | 11 | 22 | <0.1 | 10 | 25 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| R101 | 0.5 m | 08/10/2021 | 5 | <0.4 | 32 | 9 | 18 | <0.1 | 9 | 20 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 106 | 0.5 m | 08/10/2021 | 5 | <0.4 | 20 | 13 | 24 | <0.1 | 10 | 24 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 107 | 1 m | 08/10/2021 | <4 | <0.4 | 13 | 11 | 22 | <0.1 | 9 | 36 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 90 180 | NL - | - 1300 | - 5600 | 1 65 | NL 105 | NL 125 | 310 45 | NL 170 | - 0.7 | 3 - | 300 - |
| Bore 108 | 0.1 m | 08/10/2021 | <4 | <0.4 | 18 | 11 | 16 | <0.1 | 10 | 37 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 109 | 0.5 m | 08/10/2021 | 5 | <0.4 | 28 | 10 | 29 | <0.1 | 10 | 20 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 110 | 0.1 m | 08/10/2021 | <4 | <0.4 | 15 | 10 | 25 | <0.1 | 6 | 26 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| R102 | 0.1 m | 08/10/2021 | <4 | <0.4 | 22 | 15 | 7 | <0.1 | 16 | 16 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 111 | 0.1 m | 08/10/2021 | <4 | <0.4 | 15 | 9 | 17 | <0.1 | 6 | 19 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 112 | 1 m | 08/10/2021 | 9 | <0.4 | 32 | 28 | 6 | <0.1 | 43 | 25 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 90 180 | NL - | - 1300 | - 5600 | 1 65 | NL 105 | NL 125 | 310 45 | NL 170 | - 0.7 | 3 - | 300 - |
| Bore 113 | 0.5 m | 08/10/2021 | 8 | <0.4 | 23 | 32 | 55 | <0.1 | 18 | 14 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 114 | 0.1 m | 08/10/2021 | <4 | <0.4 | 11 | 6 | 20 | <0.1 | 3 | 21 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 115 | 0.5 m | 08/10/2021 | <4 | <0.4 | 20 | 15 | 22 | <0.1 | 10 | 14 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 116 | 0.1 m | 08/10/2021 | <4 | <0.4 | 9 | 3 | 9 | <0.1 | 2 | 9 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 117 | 0.5 m | 08/10/2021 | <4 | <0.4 | 18 | 12 | 6 | <0.1 | 9 | 14 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 118 | 0.5 m | 08/10/2021 | <4 | <0.4 | 20 | 11 | 6 | <0.1 | 10 | 19 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 119 | 0.1 m | 08/10/2021 | 5 | <0.4 | 11 | 16 | 22 | <0.1 | 20 | 57 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 120 | 0.1 m | 08/10/2021 | <4 | <0.4 | 9 | 5 | 11 | <0.1 | 3 | 12 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 121 | 1 m | 08/10/2021 | <4 | <0.4 | 25 | 21 | 4 | <0.1 | 11 | 13 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 90 180 | NL - | - 1300 | - 5600 | 1 65 | NL 105 | NL 125 | 310 45 | NL 170 | - 0.7 | 3 - | 300 - |
| Bore 122 | 0.1 m | 08/10/2021 | 5 | <0.4 | 6 | 10 | 11 | <0.1 | 4 | 18 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 123 | 0.5 m | 08/10/2021 | <4 | <0.4 | 12 | 3 | 7 | <0.1 | 2 | 5 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 124 | 0.1 m | 08/10/2021 | <4 | <0.4 | 16 | 10 | 14 | <0.1 | 4 | 26 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 125 | 0.1 m | 11/10/2021 | <4 | <0.4 | 11 | 4 | 10 | <0.1 | 3 | 13 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 126 | 0.5 m | 08/10/2021 | <4 | <0.4 | 18 | 23 | 8 | <0.1 | 8 | 19 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 127 | 0.5 m | 11/10/2021 | <4 | <0.4 | 12 | 3 | 8 | <0.1 | 2 | 5 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 128 | 0.1 m | 08/10/2021 | <4 | <0.4 | 13 | 6 | 11 | <0.1 | 3 | 14 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 129 | 1 m | 11/10/2021 | <4 | <0.4 | 4 | 3 | 6 | <0.1 | 2 | 13 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 90 180 | NL - | - 1300 | - 5600 | 1 65 | NL 105 | NL 125 | 310 45 | NL 170 | - 0.7 | 3 - | 300 - |
| Bore 130 | 0.5 m | 11/10/2021 | 4 | <0.4 | 17 | 17 | 20 | <0.1 | 8 | 37 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 131 | 0.1 m | 11/10/2021 | <4 | <0.4 | 22 | 24 | 12 | <0.1 | 42 | 46 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 132 | 1 m | 11/10/2021 | <4 | <0.4 | 22 | 24 | 10 | 0.2 | 10 | 9 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 90 180 | NL - | - 1300 | - 5600 | 1 65 | NL 105 | NL 125 | 310 45 | NL 170 | - 0.7 | 3 - | 300 - |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 133 | 0.1 m | 11/10/2021 | <4 | <0.4 | 16 | 11 | 17 | <0.1 | 5 | 20 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 134 | 0.1 m | 11/10/2021 | <4 | <0.4 | 14 | 7 | 17 | <0.1 | 4 | 19 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 135 | 0.1 m | 11/10/2021 | <4 | <0.4 | 14 | 6 | 13 | <0.1 | 3 | 14 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 136 | 0.1 m | 11/10/2021 | <4 | <0.4 | 15 | 9 | 13 | <0.1 | 4 | 17 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 137 | 0.5 m | 11/10/2021 | <4 | <0.4 | 18 | 4 | 11 | <0.1 | 3 | 7 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 138 | 0.5 m | 11/10/2021 | <4 | <0.4 | 18 | 14 | 9 | <0.1 | 8 | 13 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 139 | 0.1 m | 11/10/2021 | <4 | <0.4 | 12 | 8 | 18 | <0.1 | 4 | 14 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 140 | 1 m | 08/10/2021 | <4 | <0.4 | 27 | 9 | 5 | <0.1 | 8 | 8 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 90 180 | NL - | - 1300 | - 5600 | 1 65 | NL 105 | NL 125 | 310 45 | NL 170 | - 0.7 | 3 - | 300 - |
| Bore 141 | 0.1 m | 11/10/2021 | <4 | <0.4 | 11 | 5 | 10 | <0.1 | 3 | 12 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 142 | 0.5 m | 08/10/2021 | 4 | <0.4 | 25 | 16 | 7 | <0.1 | 14 | 17 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 143 | 1 m | 11/10/2021 | 4 | <0.4 | 28 | 48 | 12 | <0.1 | 16 | 19 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 90 180 | NL - | - 1300 | - 5600 | 1 65 | NL 105 | NL 125 | 310 45 | NL 170 | - 0.7 | 3 - | 300 - |
| Bore 144 | 0.1 m | 08/10/2021 | <4 | <0.4 | 10 | 5 | 10 | <0.1 | 4 | 16 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| R103 | 0.1 m | 08/10/2021 | 5 | <0.4 | 16 | 11 | 17 | <0.1 | 7 | 38 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 145 | 0.3 m | 08/10/2021 | <4 | <0.4 | 16 | 7 | 20 | <0.1 | 4 | 10 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 146 | 0.5 m | 08/10/2021 | <4 | <0.4 | 13 | 7 | 5 | <0.1 | 9 | 10 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 147 | 0.1 m | 08/10/2021 | <4 | <0.4 | 13 | 8 | 14 | <0.1 | 4 | 17 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 148 | 0.8 m | 08/10/2021 | 5 | <0.4 | 27 | 31 | 7 | <0.1 | 14 | 14 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 149 | 0.1 m | 11/10/2021 | <4 | <0.4 | 16 | 4 | 16 | <0.1 | 3 | 12 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 150 | 0.1 m | 08/10/2021 | <4 | <0.4 | 13 | 11 | 19 | <0.1 | 5 | 36 | <25 | <50 | <25 | <50 | 150 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 151 | 0.1 m | 08/10/2021 | <4 | <0.4 | 11 | 4 | 10 | <0.1 | 2 | 11 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |
| Bore 152 | 0.1 m | 08/10/2021 | <4 | <0.4 | 13 | 4 | 14 | <0.1 | 2 | 13 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 |
| | | | 100 100 | 20 - | 100 570 | 6000 150 | 300 1100 | 40 - | 400 70 | 7400 410 | - - | - 120 | 50 180 | 280 - | - 1300 | - 5600 | 0.7 65 | 480 105 | NL 125 | 110 45 | 5 170 | - 0.7 | 3 - | 300 - |

| Lab result | |
|---|---|
| HIL/HSL value | EIL/ESL value |

HIL/HSL exceedance   EIL/ESL exceedance   HIL/HSL and EIL/ESL exceedance   ML exceedance   ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report   **Blue** = DC exceedance   HSL 0-<1 Exceedance

**Bold** = Lab detections   - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable   NL = Non limiting   AD = Asbestos detected   NAD = No Asbestos detected

HIL = Health investigation level   HSL = Health screening level (excluding DC)   EIL = Ecological investigation level   ESL = Ecological screening level   ML = Management Limit   DC = Direct Contact HSL

**Notes:**

a  QA/QC replicate of sample listed directly below the primary sample

b  Reported naphthalene laboratory result obtained from BTEXN suite

c  Criteria applies to DDT only

**Site Assessment Criteria (SAC):**

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

SAC based on generic land use thresholds for Residential A with garden/accessible soil

| | |
|---|---|
| HIL A | Residential / Low - High Density (NEPC, 2013) |
| HSL A/B | Residential / Low - High Density (vapour intrusion) (NEPC, 2013) |
| DC HSL A | Direct contact HSL A Residential (Low density) (direct contact) (CRC CARE, 2011) |
| EIL/ESL UR/POS | Urban Residential and Public Open Space (NEPC, 2013) |
| ML R/P/POS | Residential, Parkland and Public Open Space (NEPC, 2013) |

Douglas Partners
Geotechnics | Environment | Groundwater

Table G2: Summary of Laboratory Results – Phenol, OCP, OPP, PCB, Asbestos

| | | | Phenol | OCP | | | | | | | | | | | | OPP | PCB | | | | | | | | Asbestos | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Phenol | DDD | DDT+DDE+DDD | DDE | DDT | Aldrin & Dieldrin | Total Chlordane | Endrin | Total Endosulfan | Heptachlor | Hexachlorobenzene | Methoxychlor | Chlorpyriphos | Arochlor 1016 | Total PCB | Arochlor 1221 | Arochlor 1232 | Arochlor 1242 | Arochlor 1248 | Arochlor 1254 | Arochlor 1260 | Asbestos ID in soil >0.1g/kg | Trace Analysis | Asbestos (50 g) |
| | | PQL | 5 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | | | |
| Sample ID | Depth | Sample Date | 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 | - | - | - |
| Bore 101 | 1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 102 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 103 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 104 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 105 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| R101 | 0 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | AD | AD | AD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 106 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 107 | 1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 108 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 109 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 110 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| R103 | 0 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 111 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 112 | 1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 113 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 114 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 115 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 116 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 117 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 118 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 119 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 120 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 121 | 1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 122 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 123 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 124 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 125 | 0.1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 126 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 127 | 0.5 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 128 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 129 | 1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 130 | 0.5 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 131 | 0.1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 132 | 1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 133 | 0.1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 134 | 0.1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 135 | 0.1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 136 | 0.1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 137 | 0.5 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 138 | 0.5 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 139 | 0.1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 140 | 1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 141 | 0.1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 142 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 143 | 1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 144 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| R102 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 145 | 0.3 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 146 | 0.5 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 147 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 148 | 0.8 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 149 | 0.1 m | 11/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 150 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 151 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |
| Bore 152 | 0.1 m | 08/10/2021 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| | | | 100 - | - - | 240 180 | - - | - 180 | 6 - | 50 - | 10 - | 270 - | 6 - | 10 - | 300 - | 160 - | - - | 1 - | - - | - - | - - | - - | - - | - - | | | |

| Lab result | |
|---|---|
| HIL/HSL value | EIL/ESL value |

HIL/HSL exceedance   EIL/ESL exceedance   HIL/HSL and EIL/ESL exceedance   ML exceedance   ML and HIL/HSL or EIL/ESL exceedance

Indicates that asbestos has been detected by the lab, refer to the lab report   **Blue** = DC exceedance   HSL 0-<1 Exceedance

**Bold** = Lab detections   - = Not tested or No HIL/HSL/EIL/ESL (as applicable) or Not applicable   NL = Non limiting   AD = Asbestos detected   NAD = No Asbestos detected

HIL = Health investigation level   HSL = Health screening level (excluding DC)   EIL = Ecological investigation level   ESL = Ecological screening level   ML = Management Limit   DC = Direct Contact HSL

**Notes:**

a   QA/QC replicate of sample listed directly below the primary sample

b   Reported naphthalene laboratory result obtained from BTEXN suite

c   Criteria applies to DDT only

**Site Assessment Criteria (SAC):**

Refer to the SAC section of report for information of SAC sources and rationale. Summary information as follows:

SAC based on generic land use thresholds for Residential A with garden/accessible soil

| | |
|---|---|
| HIL A | Residential / Low - High Density (NEPC, 2013) |
| HSL A/B | Residential / Low - High Density (vapour intrusion) (NEPC, 2013) |
| DC HSL A | Direct contact HSL A Residential (Low density) (direct contact) (CRC CARE, 2011) |
| EIL/ESL UR/POS | Urban Residential and Public Open Space (NEPC, 2013) |
| ML R/P/POS | Residential, Parkland and Public Open Space (NEPC, 2013) |

Douglas Partners
Geotechnics / Environment / Groundwater

Table G3: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos (Waste Classification)

| | | | Metals | | | | | | | | TRH | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Arsenic | Cadmium | Total Chromium | Copper | Lead | Mercury (inorganic) | Nickel | Zinc | TRH C6 - C9 | TRH C10 - C14 | TRH C15 - C28 | TRH C29 - C36 | C10-C36 recoverable hydrocarbons |
| | | PQL | 4 | 0.4 | 1 | 1 | 1 | 0.1 | 1 | 1 | 25 | 50 | 100 | 100 | 50 |
| Sample ID | Depth | Sample Date | 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 |
| Bore 101 | 1 m | 08/10/2021 | 6 | <0.4 | 16 | 15 | 23 | <0.1 | 14 | 31 | <25 | <50 | <100 | <100 | <50 |
| Bore 102 | 0.5 m | 08/10/2021 | <4 | <0.4 | 20 | 14 | 16 | <0.1 | 12 | 26 | <25 | <50 | <100 | <100 | <50 |
| Bore 103 | 0.1 m | 08/10/2021 | 5 | <0.4 | 25 | 16 | 33 | <0.1 | 15 | 180 | <25 | <50 | <100 | <100 | <50 |
| Bore 104 | 0.1 m | 08/10/2021 | 5 | <0.4 | 30 | 12 | 14 | <0.1 | 10 | 34 | <25 | <50 | <100 | <100 | <50 |
| Bore 105 | 0.5 m | 08/10/2021 | 5 | <0.4 | 27 | 11 | 22 | <0.1 | 10 | 25 | <25 | <50 | <100 | <100 | <50 |
| Bore 106 | 0.5 m | 08/10/2021 | 5 | <0.4 | 20 | 13 | 24 | <0.1 | 10 | 24 | <25 | <50 | <100 | <100 | <50 |
| Bore 107 | 1 m | 08/10/2021 | <4 | <0.4 | 13 | 11 | 22 | <0.1 | 9 | 36 | <25 | <50 | <100 | <100 | <50 |
| Bore 108 | 0.1 m | 08/10/2021 | <4 | <0.4 | 18 | 11 | 16 | <0.1 | 10 | 37 | <25 | <50 | <100 | <100 | <50 |
| Bore 109 | 0.5 m | 08/10/2021 | 5 | <0.4 | 28 | 10 | 29 | <0.1 | 10 | 20 | <25 | <50 | <100 | <100 | <50 |
| Bore 110 | 0.1 m | 08/10/2021 | <4 | <0.4 | 15 | 10 | 25 | <0.1 | 6 | 26 | <25 | <50 | <100 | <100 | <50 |
| Bore 111 | 0.1 m | 08/10/2021 | <4 | <0.4 | 15 | 9 | 17 | <0.1 | 6 | 19 | <25 | <50 | <100 | <100 | <50 |
| Bore 112 | 1 m | 08/10/2021 | 9 | <0.4 | 32 | 28 | 6 | <0.1 | 43 | 25 | <25 | <50 | <100 | <100 | <50 |
| Bore 113 | 0.5 m | 08/10/2021 | 8 | <0.4 | 23 | 32 | 55 | <0.1 | 18 | 14 | <25 | <50 | <100 | <100 | <50 |
| Bore 114 | 0.1 m | 08/10/2021 | <4 | <0.4 | 11 | 6 | 20 | <0.1 | 3 | 21 | <25 | <50 | <100 | <100 | <50 |
| Bore 115 | 0.5 m | 08/10/2021 | <4 | <0.4 | 20 | 15 | 22 | <0.1 | 10 | 14 | <25 | <50 | <100 | <100 | <50 |
| Bore 116 | 0.1 m | 08/10/2021 | <4 | <0.4 | 9 | 3 | 9 | <0.1 | 2 | 9 | <25 | <50 | <100 | <100 | <50 |
| Bore 117 | 0.5 m | 08/10/2021 | <4 | <0.4 | 18 | 12 | 6 | <0.1 | 9 | 14 | <25 | <50 | <100 | <100 | <50 |
| Bore 118 | 0.5 m | 08/10/2021 | <4 | <0.4 | 20 | 11 | 6 | <0.1 | 10 | 19 | <25 | <50 | <100 | <100 | <50 |
| Bore 119 | 0.1 m | 08/10/2021 | 5 | <0.4 | 11 | 16 | 22 | <0.1 | 20 | 57 | <25 | <50 | <100 | <100 | <50 |
| Bore 120 | 0.1 m | 08/10/2021 | <4 | <0.4 | 9 | 5 | 11 | <0.1 | 3 | 12 | <25 | <50 | <100 | <100 | <50 |
| Bore 121 | 1 m | 08/10/2021 | <4 | <0.4 | 25 | 21 | 4 | <0.1 | 11 | 13 | <25 | <50 | <100 | <100 | <50 |
| Bore 122 | 0.1 m | 08/10/2021 | 5 | <0.4 | 6 | 10 | 11 | <0.1 | 4 | 18 | <25 | <50 | <100 | <100 | <50 |
| Bore 123 | 0.5 m | 08/10/2021 | <4 | <0.4 | 12 | 3 | 7 | <0.1 | 2 | 5 | <25 | <50 | <100 | <100 | <50 |
| Bore 124 | 0.1 m | 08/10/2021 | <4 | <0.4 | 16 | 10 | 14 | <0.1 | 4 | 26 | <25 | <50 | <100 | <100 | <50 |
| Bore 125 | 0.1 m | 11/10/2021 | <4 | <0.4 | 11 | 4 | 10 | <0.1 | 3 | 13 | <25 | <50 | <100 | <100 | <50 |
| Bore 126 | 0.5 m | 08/10/2021 | <4 | <0.4 | 18 | 23 | 8 | <0.1 | 8 | 19 | <25 | <50 | <100 | <100 | <50 |
| Bore 127 | 0.5 m | 11/10/2021 | <4 | <0.4 | 12 | 3 | 8 | <0.1 | 2 | 5 | <25 | <50 | <100 | <100 | <50 |
| Bore 128 | 0.1 m | 08/10/2021 | <4 | <0.4 | 13 | 6 | 11 | <0.1 | 3 | 14 | <25 | <50 | <100 | <100 | <50 |
| Bore 129 | 1 m | 11/10/2021 | <4 | <0.4 | 4 | 3 | 6 | <0.1 | 2 | 13 | <25 | <50 | <100 | <100 | <50 |
| Bore 130 | 0.5 m | 11/10/2021 | 4 | <0.4 | 17 | 17 | 20 | <0.1 | 8 | 37 | <25 | <50 | <100 | <100 | <50 |
| Bore 131 | 0.1 m | 11/10/2021 | <4 | <0.4 | 22 | 24 | 12 | <0.1 | 42 | 46 | <25 | <50 | <100 | <100 | <50 |
| Bore 132 | 1 m | 11/10/2021 | <4 | <0.4 | 22 | 24 | 10 | 0.2 | 10 | 9 | <25 | <50 | <100 | <100 | <50 |
| Bore 133 | 0.1 m | 11/10/2021 | <4 | <0.4 | 16 | 11 | 17 | <0.1 | 5 | 20 | <25 | <50 | <100 | <100 | <50 |
| Bore 134 | 0.1 m | 11/10/2021 | <4 | <0.4 | 14 | 7 | 17 | <0.1 | 4 | 19 | <25 | <50 | <100 | <100 | <50 |
| Bore 135 | 0.1 m | 11/10/2021 | <4 | <0.4 | 14 | 6 | 13 | <0.1 | 3 | 14 | <25 | <50 | <100 | <100 | <50 |
| Bore 136 | 0.1 m | 11/10/2021 | <4 | <0.4 | 15 | 9 | 13 | <0.1 | 4 | 17 | <25 | <50 | <100 | <100 | <50 |
| Bore 137 | 0.5 m | 11/10/2021 | <4 | <0.4 | 18 | 4 | 11 | <0.1 | 3 | 7 | <25 | <50 | <100 | <100 | <50 |
| Bore 138 | 0.5 m | 11/10/2021 | <4 | <0.4 | 18 | 14 | 9 | <0.1 | 8 | 13 | <25 | <50 | <100 | <100 | <50 |
| Bore 139 | 0.1 m | 11/10/2021 | <4 | <0.4 | 12 | 8 | 18 | <0.1 | 4 | 14 | <25 | <50 | <100 | <100 | <50 |
| Bore 140 | 1 m | 08/10/2021 | <4 | <0.4 | 27 | 9 | 5 | <0.1 | 8 | 8 | <25 | <50 | <100 | <100 | <50 |
| Bore 141 | 0.1 m | 11/10/2021 | <4 | <0.4 | 11 | 5 | 10 | <0.1 | 3 | 12 | <25 | <50 | <100 | <100 | <50 |
| Bore 142 | 0.5 m | 08/10/2021 | 4 | <0.4 | 25 | 16 | 7 | <0.1 | 14 | 17 | <25 | <50 | <100 | <100 | <50 |
| Bore 143 | 1 m | 11/10/2021 | 4 | <0.4 | 28 | 48 | 12 | <0.1 | 16 | 19 | <25 | <50 | <100 | <100 | <50 |
| Bore 144 | 0.1 m | 08/10/2021 | <4 | <0.4 | 10 | 5 | 10 | <0.1 | 4 | 16 | <25 | <50 | <100 | <100 | <50 |
| Bore 145 | 0.3 m | 08/10/2021 | <4 | <0.4 | 16 | 7 | 20 | <0.1 | 4 | 10 | <25 | <50 | <100 | <100 | <50 |
| Bore 146 | 0.5 m | 08/10/2021 | <4 | <0.4 | 13 | 7 | 5 | <0.1 | 9 | 10 | <25 | <50 | <100 | <100 | <50 |
| Bore 147 | 0.1 m | 08/10/2021 | <4 | <0.4 | 13 | 8 | 14 | <0.1 | 4 | 17 | <25 | <50 | <100 | <100 | <50 |
| Bore 148 | 0.8 m | 08/10/2021 | 5 | <0.4 | 27 | 31 | 7 | <0.1 | 14 | 14 | <25 | <50 | <100 | <100 | <50 |
| Bore 149 | 0.1 m | 11/10/2021 | <4 | <0.4 | 16 | 4 | 16 | <0.1 | 3 | 12 | <25 | <50 | <100 | <100 | <50 |
| Bore 150 | 0.1 m | 08/10/2021 | <4 | <0.4 | 13 | 11 | 19 | <0.1 | 5 | 36 | <25 | <50 | <100 | 110 | <50 |
| Bore 151 | 0.1 m | 08/10/2021 | <4 | <0.4 | 11 | 4 | 10 | <0.1 | 2 | 11 | <25 | <50 | <100 | <100 | <50 |
| Bore 152 | 0.1 m | 08/10/2021 | <4 | <0.4 | 13 | 4 | 14 | <0.1 | 2 | 13 | <25 | <50 | <100 | <100 | <50 |
| Waste Classification Criteria f | | | | | | | | | | | | | | | |
| CT1 | | | 100 | 20 | 100 | NC | 100 | 4 | 40 | NC | 650 | NC | NC | NC | 10000 |
| SCC1 | | | 500 | 100 | 1900 | NC | 1500 | 50 | 1050 | NC | 650 | NC | NC | NC | 10000 |
| TCLP1 | | | N/A | N/A | N/A | NC | N/A | N/A | N/A | NC | N/A | NC | NC | NC | N/A |
| CT2 | | | 400 | 80 | 400 | NC | 400 | 16 | 160 | NC | 2600 | NC | NC | NC | 40000 |
| SCC2 | | | 2000 | 400 | 7600 | NC | 6000 | 200 | 4200 | NC | 2600 | NC | NC | NC | 40000 |
| TCLP2 | | | N/A | N/A | N/A | NC | N/A | N/A | N/A | NC | N/A | NC | NC | NC | N/A |

| | BTEX | | | | | | PAH | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Benzene | Toluene | Ethylbenzene | m+p-Xylene | o-Xylene | Xylenes (total) | Benzo(a)pyrene (BaP) | Acenaphthene | Acenaphthylene | Anthracene | Benzo(a)anthracene | Benzo(b,j+k)fluoranthene | Benzo(g,h,i)perylene | Chrysene | Dibenzo(a,h)anthracene | Fluoranthene | Fluorene | Indeno(1,2,3-c,d)pyrene | Naphthalene | Phenanthrene | Pyrene | Total PAHs |
| PQL | 0.2 | 0.5 | 1 | 2 | 1 | 3 | 0.05 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 1 | 0.1 | 0.1 | 0.05 |
| Sample ID | 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 |
| Bore 101 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 102 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 103 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 104 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 105 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 106 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 107 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 108 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 109 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 110 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 111 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 112 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 113 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 114 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 115 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 116 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 117 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 118 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 119 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 120 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 121 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 122 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 123 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 124 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 125 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 126 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 127 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 128 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 129 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 130 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 131 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 132 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 133 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 134 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 135 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 136 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 137 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 138 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 139 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 140 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 141 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 142 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 143 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 144 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 145 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 146 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 147 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 148 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 149 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 150 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 151 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Bore 152 | <0.2 | <0.5 | <1 | <2 | <1 | <3 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.1 | <0.1 | <0.05 |
| Waste Classification Criteria f | | | | | | | | | | | | | | | | | | | | | | |
| CT1 | 10 | 288 | 600 | NC | NC | 1000 | 0.8 | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | 200 |
| SCC1 | 18 | 518 | 1080 | NC | NC | 1800 | 10 | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | 200 |
| TCLP1 | N/A | N/A | N/A | NC | NC | N/A | N/A | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | N/A |
| CT2 | 40 | 1152 | 2400 | NC | NC | 4000 | 3.2 | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | 800 |
| SCC2 | 72 | 2073 | 4320 | NC | NC | 7200 | 23 | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | 800 |
| TCLP2 | N/A | N/A | N/A | NC | NC | N/A | N/A | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | NC | N/A |

| | Phenol | OCP | | OPP | PCB | | | | | | | | Asbestos | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Phenol | Total Endosulfan | Total Analysed OCP | Total Analysed OPP | Arochlor 1016 | Arochlor 1221 | Arochlor 1232 | Arochlor 1242 | Arochlor 1248 | Arochlor 1254 | Aroclor 1260 | Total PCB | Asbestos ID in soil >0.1g/kg | Trace Analysis | Total Asbestos |
| PQL | 5 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | | | |
| Sample ID | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | - | - | - |
| Bore 101 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 102 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 103 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 104 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 105 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 106 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 107 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 108 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 109 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 110 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 111 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 112 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 113 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 114 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 115 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 116 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 117 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 118 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 119 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 120 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 121 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 122 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 123 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 124 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 125 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 126 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 127 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 128 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 129 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 130 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 131 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 132 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 133 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 134 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 135 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 136 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 137 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 138 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 139 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 140 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 141 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 142 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 143 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 144 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 145 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 146 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 147 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 148 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 149 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 150 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 151 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Bore 152 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | NAD | NAD | NAD |
| Waste Classification Criteria f | | | | | | | | | | | | | | | |
| CT1 | 288 | 60 | <50 | 4 | NC | NC | NC | NC | NC | NC | NC | <50 | NC | NC | NC |
| SCC1 | 518 | 108 | <50 | 7.5 | NC | NC | NC | NC | NC | NC | NC | <50 | NC | NC | NC |
| TCLP1 | N/A | N/A | N/A | N/A | NC | NC | NC | NC | NC | NC | NC | N/A | NC | NC | NC |
| CT2 | 1152 | 240 | <50 | 16 | NC | NC | NC | NC | NC | NC | NC | <50 | NC | NC | NC |
| SCC2 | 2073 | 432 | <50 | 30 | NC | NC | NC | NC | NC | NC | NC | <50 | NC | NC | NC |
| TCLP2 | N/A | N/A | N/A | N/A | NC | NC | NC | NC | NC | NC | NC | N/A | NC | NC | NC |

CT1 exceedance | TCLP1 and/or SCC1 exceedance | CT2 exceedance | TCLP2 and/or SCC2 exceedance | Asbestos detection

NT = Not tested NL = Non limiting NC = No criteria NA = Not applicable

**Notes:**

a QA/QC replicate of sample listed directly below the primary sample
b Total chromium used as initial screen for chromium(VI).
c Total recoverable hydrocarbons (TRH) used as an initial screen for total petroleum hydrocarbons (TPH)
d Criteria for scheduled chemicals used as an initial screen
e Criteria for Chlorpyrifos used as initial screen
f All criteria are in the same units as the reported results
PQL Practical quantitation limit
CT1 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values of specific contaminant concentration (SCC) for classification without TCLP: General solid waste
SCC1 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
TCLP1 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: General solid waste
CT2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values of specific contaminant concentration (SCC) for classification without TCLP: Restricted solid waste
SCC2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste
TCLP2 NSW EPA, 2014, Waste Classification Guidelines Part 1; Classifying Waste, Maximum values for leachable concentration (TCLP) and specific contaminant concentration (SCC) when used together: Restricted solid waste

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# Table G4: Summary of Laboratory Test Results - TCLP (mg/L)

| Sample ID | Sample Date | Nickel |
|---|---|---|
| Bore 112/1.0 m | 8/10/2021 | <0.02 |
| Bore 131/0.1 m | 11/10/2021 | 0.02 |
| PQL | | 0.02 |
| Leachable Concentration - Nickel | | 2 |

**Notes:**

PQL - Practical Quantitation Limit

Leachable Concentration for Nickel- General Solid Waste Classification Value

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Table QA1: Relative Percentage Difference Results – Intra-laboratory Replicates

| | | | Metals | | | | | | | | TRH | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Arsenic | Cadmium | Total Chromium | Copper | Lead | Mercury (inorganic) | Nickel | Zinc | TRH C6 - C10 | TRH >C10-C16 | F1 ((C6-C10)-BTEX) | F2 (>C10-C16 less Naphthalene) | F3 (>C16-C34) | F4 (>C34-C40) |
| Sample ID | Depth | Sample Date | 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 |
| R101 | 0 m | 08/10/2021 | 5 | <0.4 | 32 | 9 | 18 | <0.1 | 9 | 20 | <25 | <50 | <25 | <50 | <100 | <100 |
| Bore 105 | 0.5 m | 08/10/2021 | 5 | <0.4 | 27 | 11 | 22 | <0.1 | 10 | 25 | <25 | <50 | <25 | <50 | <100 | <100 |
| | | Difference | 0 | 0 | 5 | 2 | 4 | 0 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | 17% | 20% | 20% | 0% | 11% | 22% | 0% | 0% | 0% | 0% | 0% | 0% |
| R102 | 0 m | 08/10/2021 | <4 | <0.4 | 22 | 15 | 7 | <0.1 | 16 | 16 | <25 | <50 | <25 | <50 | <100 | <100 |
| Bore 144 | 0.1 m | 08/10/2021 | <4 | <0.4 | 10 | 5 | 10 | <0.1 | 4 | 16 | <25 | <50 | <25 | <50 | <100 | <100 |
| | | Difference | 0 | 0 | 12 | 10 | 3 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | **75%** | **100%** | **35%** | 0% | **120%** | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| R103 | 0 m | 08/10/2021 | 5 | <0.4 | 16 | 11 | 17 | <0.1 | 7 | 38 | <25 | <50 | <25 | <50 | <100 | <100 |
| Bore 110 | 0.1 m | 08/10/2021 | <4 | <0.4 | 15 | 10 | 25 | <0.1 | 6 | 26 | <25 | <50 | <25 | <50 | <100 | <100 |
| | | Difference | 1 | 0 | 1 | 1 | 8 | 0 | 1 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 22% | 0% | 6% | 10% | **38%** | 0% | 15% | **38%** | 0% | 0% | 0% | 0% | 0% | 0% |

| | | | BTEX | | | | PAH | | | | Phenol | OCP | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Naphthalene [b] | Benzo(a)pyrene (BaP) | Benzo(a)pyrene TEQ | Total PAHs | Phenol | DDD | DDT+DDE+DDD [c] | DDE | DDT | Aldrin & Dieldrin | Total Chlordane | Endrin | Total Endosulfan | Heptachlor | Hexachlorobenzene | Methoxychlor |
| Sample ID | Depth | Sample Date | 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 |
| R101 | 0 m | 08/10/2021 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bore 105 | 0.5 m | 08/10/2021 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | | Difference | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| R102 | 0 m | 08/10/2021 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bore 144 | 0.1 m | 08/10/2021 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | | Difference | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| R103 | 0 m | 08/10/2021 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bore 110 | 0.1 m | 08/10/2021 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | | Difference | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| | | | OPP | PCB | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Chlorpyriphos | Arochlor 1016 | Total PCB | Arochlor 1221 | Arochlor 1232 | Arochlor 1242 | Arochlor 1248 | Arochlor 1254 | Aroclor 1260 |
| Sample ID | Depth | Sample Date | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg |
| R101 | 0 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bore 105 | 0.5 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | | Difference | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| R102 | 0 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bore 144 | 0.1 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | | Difference | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| R103 | 0 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bore 110 | 0.1 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | | Difference | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

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Table QA2: Relative Percentage Difference Results – Inter-laboratory Replicates

| | | | Metals | | | | | | | | TRH | | | | | | BTEX | | | | PAH | | | | Phenol |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Arsenic | Cadmium | Total Chromium | Copper | Lead | Mercury (inorganic) | Nickel | Zinc | TRH C6 - C10 | TRH >C10-C16 | F1 ((C6-C10)-BTEX) | F2 (>C10-C16 less Naphthalene) | F3 (>C16-C34) | F4 (>C34-C40) | Benzene | Toluene | Ethylbenzene | Total Xylenes | Naphthalene [b] | Benzo(a)pyrene (BaP) | Benzo(a)pyrene TEQ | Total PAHs | Phenol |
| Sample ID | Depth | Sample Date | 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 |
| RR101 | 0 m | 08/10/2021 | 6 | <1 | 23 | 11 | 22 | <0.1 | 12 | 27 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 |
| Bore 105 | 0.5 m | 08/10/2021 | 5 | <1 | 27 | 11 | 22 | <0.1 | 10 | 25 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 |
| | | Difference | 1 | 0 | 4 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 18% | 0% | 16% | 0% | 0% | 0% | 18% | 8% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| RR102 | 0 m | 08/10/2021 | <5 | <1 | 18 | 9 | 6 | <0.1 | 11 | 13 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 |
| Bore 144 | 0.1 m | 08/10/2021 | <5 | <1 | 10 | 5 | 10 | <0.1 | 4 | 16 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 |
| | | Difference | 0 | 0 | 8 | 4 | 4 | 0 | 7 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | **57%** | **57%** | **50%** | 0% | **93%** | 21% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| RR103 | 0 m | 08/10/2021 | <5 | <1 | 14 | 10 | 16 | <0.1 | 7 | 34 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 |
| Bore 110 | 0.1 m | 08/10/2021 | <5 | <1 | 15 | 10 | 25 | <0.1 | 6 | 26 | <25 | <50 | <25 | <50 | <100 | <100 | <0.2 | <0.5 | <1 | <1 | <1 | <0.05 | <0.5 | <0.05 | <5 |
| | | Difference | 1 | 0 | 1 | 0 | 9 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 22% | 0% | 7% | 10% | **44%** | 0% | 15% | **27%** | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

| | | | OCP | | | | | | | | | | | OPP | PCB | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | DDD | DDT+DDE+DDD [c] | DDE | DDT | Aldrin & Dieldrin | Total Chlordane | Endrin | Total Endosulfan | Heptachlor | Hexachlorobenzene | Methoxychlor | Chlorpyriphos | Arochlor 1016 | Total PCB | Arochlor 1221 | Arochlor 1232 | Arochlor 1242 | Arochlor 1248 | Arochlor 1254 | Aroclor 1260 |
| Sample ID | Depth | Sample Date | 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 |
| RR101 | 0 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bore 105 | 0.5 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | | Difference | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| RR102 | 0 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bore 144 | 0.1 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | | Difference | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| RR103 | 0 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bore 110 | 0.1 m | 08/10/2021 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| | | Difference | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | RPD | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

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# Table QA3: Trip Spike Results – Soils (% Recovery)

| Sample ID | Benzene | Toluene | Ethylbenzene | o-Xylene | m+p-Xylene |
|---|---|---|---|---|---|
| TS1 - 8 Oct 21 | 94 | 94 | 96 | 96 | 96 |
| TS2 - 11 Oct 21 | 82 | 82 | 84 | 84 | 84 |

# Table QA4: Trip Blank Results - Soils (mg/kg)

| Sample ID | Benzene | Toluene | Ethylbenzene | o-Xylene | m+p-Xylene |
|---|---|---|---|---|---|
| TB1 - 8 Oct 21 | ND | ND | ND | ND | ND |
| TB2 - 11 Oct 21 | ND | ND | ND | ND | ND |

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Table QA5: Rinsate - Water (µg/l)

| | | | TRH C6 - C10 | F1 ((C6-C10)-BTEX) | Benzene | Toluene | Ethylbenzene | Naphthalene b |
|---|---|---|---|---|---|---|---|---|
| | | PQL | 10 | 10 | 1 | 1 | 1 | 1 |
| Sample ID | Depth | Sample Date | µg/l | µg/l | µg/l | µg/l | µg/l | µg/l |
| Rinsate 1 | NA | 08/10/2021 | <10 | <10 | <1 | <1 | <1 | <1 |
| Rinsate 2 | NA | 11/10/2021 | <10 | <10 | <1 | <1 | <1 | <1 |

# Appendix H

Laboratory Sample Receipt, Chain of Custody, Laboratory Certificate

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# CHAIN OF CUSTODY DESPATCH SHEET

| | | | |
|---|---|---|---|
| **Project No:** 202107.04 | **Suburb:** Bungendore | | **To:** Envirolab Services, 12 Ashley St, Chatswood NSW 2067 |
| **Project Manager:** Shannon Goodsell | **Order Number:** | **Sampler:** | **Attn:** Sample Receipt |
| **Email:** Shannon.Goodsell@douglaspartners.com.au | | | **Contact:** (02) 9910 6200 samplereceipt@envirolab.com.au |
| **Turnaround time:** ☐ Standard ☐ 72 hour ☐ 48 hour ☑ 24 hour ☐ Same day | | | |
| **Prior Storage:** ☑ Fridge ☐ Freezer ☐ Shelf | **Do samples contain 'potential' HBM?** ☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID) | | |

| Lab ID | Sample ID: Location / Other ID | Sample ID: Depth From | Sample ID: Depth To | Date Sampled | Sample Type (S - soil, W - water) | Container Type (G - glass, P - plastic) | Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | | Notes/ Preservation/ Additional Requirements |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Bore 101 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 2 | Bore 101 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 3 | Bore 101 | 1.0 | 1.0 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 4 | Bore 101 | 1.6 | 1.6 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 5 | Bore 102 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 6 | Bore 102 | 0.5 | 0.5 | 8/10/21 | S | G | | ✓ | | | | | | | | | | |
| 7 | Bore 102 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 8 | Bore 102 | 1.5 | 1.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 9 | Bore 103 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 10 | Bore 103 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 11 | Bore 103 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 12 | Bore 104 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 13 | Bore 104 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 14 | Bore 104 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 280063
Date Received: 12/10/21
Time Received: 1040
Received by: CH
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

**Metals to analyse:**
**Number of samples in container:**
**Transported to laboratory by:**
**Send results to:** Douglas Partners Pty Ltd
**Address:** Unit 2, 73 Sheppard Street, Hume ACT 262
**Phone:** (02) 6260 2788
**Relinquished by:** Shannon Goodsell
**Date:**
**Signed:**

**LAB RECEIPT**
**Lab Ref. No:**
**Received by:** Christine.
**Date & Time:** 12/10/21 1040
**Signed:**

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# CHAIN OF CUSTODY DESPATCH SHEET

| | | | |
|---|---|---|---|
| **Project No:** 202107.04 | **Suburb:** Bungendore | | **To:** Envirolab Services |
| | | | 12 Ashley St, Chatswood NSW 2067 |
| **Project Manager:** Shannon Goodsell | **Order Number:** | **Dispatch date:** | |

| Lab ID | Sample ID: Location / Other ID | Sample ID: Depth From | Sample ID: Depth To | Date Sampled | Sample Type: S - soil W - water | Container Type: G - glass P - plastic | Analytes: Comb. 8a | Analytes: Asbestos in material ID | Analytes: TRH | Analytes: BTEX | Analytes: pH | Analytes: Clay Content | Analytes: CEC | Analytes: Hold | | | | Notes/ Preservation/ Additional Requirements |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | Bore 104 | 1.6 | 1.6 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 16 | Bore 105 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 17 | Bore 105 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 18 | Bore 105 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 19 | Bore 105 | 1.6 | 1.6 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 20 | Bore 106 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 21 | Bore 106 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 22 | Bore 106 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 23 | Bore 106 | 2.0 | 2.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 24 | Bore 107 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 25 | Bore 107 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 26 | Bore 107 | 1.0 | 1.0 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 27 | Bore 107 | 1.5 | 1.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 28 | Bore 108 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 29 | Bore 108 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 30 | Bore 108 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 31 | Bore 108 | 1.5 | 1.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 32 | Bore 109 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |

# 280063
CH 12/10

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# CHAIN OF CUSTODY DESPATCH SHEET

**Project No:** 202107.04 **Suburb:** Bungendore **To:** Envirolab Services
**Dispatch date:**
**Project Manager:** Shannon Goodsell

| Lab ID | Sample ID: Location / Other ID | Sample ID: Depth From | Sample ID: Depth To | Date Sampled | Sample Type (S - soil, W - water) | Container Type (G - glass, P - plastic) | Analytes: Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | | Notes/ Preservation/ Additional Requirements |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 | Bore 109 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 34 | Bore 109 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 35 | Bore 109 | 1.5 | 1.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 36 | Bore 110 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 37 | Bore 110 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 38 | Bore 111 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 39 | Bore 111 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 40 | Bore 111 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 41 | Bore 112 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 42 | Bore 112 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | ✓ | ✓ | ✓ | | | | | |
| 43 | Bore 112 | 1.0 | 1.0 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 44 | Bore 113 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | | | | | |
| 45 | Bore 113 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 46 | Bore 113 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 47 | Bore 114 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 48 | Bore 114 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 49 | Bore 114 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | #280063 |
| 50 | Bore 115 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | CH 12/10 |
| 51 | Bore 115 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |

**Project Manager:** Shannon Goodsell **Dispatch date:** P

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# CHAIN OF CUSTODY DESPATCH SHEET

**Project No:** 202107.04 | **Suburb:** Bungendore | **To:** Envirolab Services

| Lab ID | Sample ID: Location / Other ID | Sample ID: Depth From | Sample ID: Depth To | Date Sampled | Sample Type (S - soil, W - water) | Container Type (G - glass, P - plastic) | Analytes: Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | | Notes/ Preservation/ Additional Requirements |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 52 | Bore 115 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 53 | Bore 116 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 54 | Bore 116 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 55 | Bore 116 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 56 | Bore 117 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 57 | Bore 117 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 58 | Bore 117 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 59 | Bore 118 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 60 | Bore 118 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 61 | Bore 118 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 62 | Bore 119 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 63 | Bore 119 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 64 | Bore 119 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 65 | Bore 120 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 66 | Bore 120 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 67 | Bore 120 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 68 | Bore 121 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | # 280063 |
| 69 | Bore 121 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | CH 12/10 |
| 70 | Bore 121 | 1.0 | 1.0 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |

**Project Manager:** Shannon Goodsell | **Dispatch date:**

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

**Project No:** 202107.04 | **Suburb:** Bungendore | **To:** Envirolab Services

| Lab ID | Sample ID: Location / Other ID | Sample ID: Depth From | Sample ID: Depth To | Date Sampled | Sample Type (S - soil, W - water) | Container Type (G - glass, P - plastic) | Analytes: Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | | Notes/ Preservation/ Additional Requirements |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71 | Bore 122 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 72 | Bore 122 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | ✓ | ✓ | ✓ | | | | | |
| 73 | Bore 122 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 74 | Bore 123 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 75 | Bore 123 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 76 | Bore 123 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 77 | Bore 124 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 78 | Bore 124 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 79 | Bore 126 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 80 | Bore 126 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 81 | Bore 126 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 82 | Bore 126 | 1.5 | 1.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 83 | Bore 128 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 84 | Bore 128 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 85 | Bore 140 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 86 | Bore 140 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 87 | Bore 140 | 1.0 | 1.0 | 8/10/21 | S | G | ✓ | | | | | | | | | | | #280063 |
| 88 | Bore 142 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | CH 12/10 |
| 89 | Bore 142 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |

**Project Manager:** Shannon Goodsell

**Dispatch date:** P

Douglas Partners
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

**Project No:** 202107.04 | **Suburb:** Bungendore | **To:** *Envirolab Services*

| Lab ID | Sample ID: Location / Other ID | Depth From | Depth To | Date Sampled | Sample Type (S - soil, W - water) | Container Type (G - glass, P - plastic) | Analytes: Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | | Notes/ Preservation/ Additional Requirements |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 90 | Bore 144 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 91 | Bore 144 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 92 | Bore 146 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | ✓ | ✓ | ✓ | | | | | |
| 93 | Bore 146 | 0.5 | 0.5 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 94 | Bore 145 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 95 | Bore 145 | 0.3 | 0.3 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 96 | Bore 145 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 97 | Bore 147 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 98 | Bore 147 | 0.3 | 0.3 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 99 | Bore 147 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 100 | Bore 148 | 0.1 | 0.1 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 101 | Bore 148 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 102 | Bore 148 | 0.8 | 0.8 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 103 | Bore 150 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | |
| 104 | Bore 150 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 105 | Bore 150 | 1.0 | 1.0 | 8/10/21 | S | G | | | | | | | | ✓ | | | | #280063 |
| 106 | Bore 151 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | | CH 12/10 |
| 107 | Bore 151 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |
| 108 | Bore 151 | 0.7 | 0.7 | 8/10/21 | S | G | | | | | | | | ✓ | | | | |

**Project Manager:** Shannon Goodsell | **Dispatch date:**

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF COUNTY DESPATCH SHEET

| Project No: 202107.04 | | | | | Suburb: Bungendore | | | | | | | | | | | | To: Envirolab Services |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID | Sample ID | | | | Sample Type | Container Type | Analytes | | | | | | | | | | Notes/ Preservation/ Additional Requirements |
| | Location / Other ID | Depth From | Depth To | Date Sampled | S - soil W - water | G - glass P - plastic | Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | |
| 109 | Bore 152 | 0.1 | 0.1 | 8/10/21 | S | G | ✓ | | | | | | | | | | |
| 110 | Bore 152 | 0.5 | 0.5 | 8/10/21 | S | G | | | | | | | | ✓ | | | |
| 111 | Bore 152 | 0.8 | 0.8 | 8/10/21 | S | G | | | | | | | | ✓ | | | |
| 112 | R1 | NA | NA | 8/10/21 | S | G | ✓ | | | | | | | | | | |
| 113 | R2 | NA | NA | 8/10/21 | S | G | | | | | | | | ✓ | | | |
| 114 | R3 | NA | NA | 8/10/21 | S | G | ✓ | | | | | | | | | | |
| 115 | R4 | NA | NA | 8/10/21 | S | G | | | | | | | | ✓ | | | |
| 116 | R5 | NA | NA | 8/10/21 | S | G | | | | | | | | ✓ | | | |
| 117 | R7 | NA | NA | 8/10/21 | S | G | | | | | | | | ✓ | | | |
| 118 | TS1 | NA | NA | 8/10/21 | S | G | | | ✓ | ✓ | | | | | | | |
| 119 | TB1 | NA | NA | 8/10/21 | S | G | | | ✓ | ✓ | | | | | | | |
| 120 | Rinsate 1 | NA | NA | 8/10/21 | W | G | | | ✓ | ✓ | | | | | | | |
| 121 | BH128 | 1.0 | | | | | | | | | | | | | | | |
| ~~122~~ | ~~BH149~~ | ~~0.1~~ | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | #280063 |
| | | | | | | | | | | | | | | | | | CH 12/10. |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

## Ming To

**Subject:** FW: Results for Registration 280063 202107.04, Bungendore

Ref: 280063-A.
TAT: 1 day.
Due: 15/10/2021
MT

280063-A

**From:** Shannon Goodsell <Shannon.Goodsell@douglaspartners.com.au>
**Sent:** Thursday, 14 October 2021 9:14 AM
**To:** Greta Petzold <GPetzold@envirolab.com.au>
**Cc:** Aileen Hie <AHie@envirolab.com.au>; SydneyMailbox <Sydney@envirolab.com.au>
**Subject:** RE: Results for Registration 280063 202107.04, Bungendore



Hi Greta,

Could we also have some TCLP tests conducted on samples Bore 112/1.0 (280063-43) and Bore 131/0.1 (280174-13) for nickel?

43

If possible could we please have a same day TAT on the TCLP testing? Otherwise 24 TAT should be okay.

Thank you

**Shannon Goodsell** | Environmental Scientist
**Douglas Partners Pty Ltd** | ABN 75 053 980 117 |
www.douglaspartners.com.au
Unit 2 73 Sheppard Street Hume ACT 2620 | PO Box 1487 Fyshwick ACT 2609
P: 02 6260 2788 | M: 0407 636 645 | E:
Shannon.Goodsell@douglaspartners.com.au



**From:** Shannon Goodsell
**Sent:** Thursday, 14 October 2021 8:16 AM
**To:** Greta Petzold <GPetzold@envirolab.com.au>
**Cc:** Aileen Hie <AHie@envirolab.com.au>; SydneyMailbox <Sydney@envirolab.com.au>
**Subject:** RE: Results for Registration 280063 202107.04, Bungendore

Hi Greta,

Could we please also analyse R2 for Comb8a? I will have to ask for a 24hr TAT on this one too, if that is okay

## Ming To

**Subject:** FW: Results for Registration 280063 202107.04, Bungendore

280063-A

**From:** Shannon Goodsell <Shannon.Goodsell@douglaspartners.com.au>
**Sent:** Thursday, 14 October 2021 8:16 AM
**To:** Greta Petzold <GPetzold@envirolab.com.au>
**Cc:** Aileen Hie <AHie@envirolab.com.au>; SydneyMailbox <Sydney@envirolab.com.au>
**Subject:** RE: Results for Registration 280063 202107.04, Bungendore



Hi Greta,

113

Could we please also analyse R2 for Comb8a? I will have to ask for a 24hr TAT on this one too, if that is okay

And could we also have all R samples amended to say: R101, R102, R103, R104, R105, R106, R107 and R108 (this doesn't have to be completed right away, it can be completed after R2 (now R102) is analysed).

Thank you,

---

**Shannon Goodsell** | Environmental Scientist
**Douglas Partners Pty Ltd** | ABN 75 053 980 117 |
www.douglaspartners.com.au
Unit 2 73 Sheppard Street Hume ACT 2620 | PO Box 1487 Fyshwick ACT 2609
P: 02 6260 2788 | M: 0407 636 645 | E:
Shannon.Goodsell@douglaspartners.com.au



**From:** Greta Petzold <GPetzold@envirolab.com.au>
**Sent:** Wednesday, 13 October 2021 5:13 PM
**To:** Shannon Goodsell <Shannon.Goodsell@douglaspartners.com.au>
**Subject:** Results for Registration 280063 202107.04, Bungendore

Hi Shannon,

Please find a prelim report attached. Clay results will follow.

Thanks

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

| | | | | | |
|---|---|---|---|---|---|
| **Project No:** 202107.04 | **Suburb:** Bungendore | | | **To:** Envirolab Servi |
| **Project Manager:** Shannon Goodsell | **Order Number:** 155170 | **Sampler:** SDG | | 12 Ashley St, C |
| **Email:** Shannon.Goodsell@douglaspartners.com.au | | | | **Attn:** Sample Receip |
| **Turnaround time:** ☐ Standard ☐ 72 hour ☐ 48 hour ☑ 24 hour ☐ Same day | | | | **Contact:** (02) 9910 6200 |
| **Prior Storage:** ☑ Fridge ☐ Freezer ☐ Shelf | **Do samples contain 'potential' HBM?** ☑ No ☐ Yes (If YES, then handle, transport and store in acc | | | |

| Lab ID | Sample ID: Location / Other ID | Depth From | Depth To | Date Sampled | Sample Type (S - soil, W - water) | Container Type (G - glass, P - plastic) | Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Bore 125 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 2 | Bore 125 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 3 | Bore 125 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 4 | Bore 127 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 5 | Bore 127 | 0.5 | 0.5 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 6 | Bore 127 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 7 | Bore 129 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 8 | Bore 129 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 9 | Bore 129 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 10 | Bore 130 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 11 | Bore 130 | 0.5 | 0.5 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 12 | Bore 130 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 13 | Bore 131 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 14 | Bore 131 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |

| | | |
|---|---|---|
| **Metals to analyse:** | | **LAB RECEIPT** |
| **Number of samples in container:** | **Transported to laboratory by:** | **Lab Ref. No:** 280174 |
| **Send results to:** Douglas Partners Pty Ltd | | **Received by:** TSHAW |
| **Address:** Unit 2, 73 Sheppard Street, Hume ACT 262 | **Phone:** (02) 6260 2788 | **Date & Time:** 12/10/21 1030 |
| **Relinquished by:** Shannon Goodsell | **Date:** 12/10/2021 **Signed:** | **Signed:** |

Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 280174
Date Received: 12/10/21
Time Received: 1030
Received By: TSHAW
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

COC @ 12.00pm 12/10/21

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

| | | | | | |
|---|---|---|---|---|---|
| **Project No:** 202107.04 | **Suburb:** Bungendore | | | **To:** | *Envirolab Servi* |
| **Project Manager:** Shannon Goodsell | **Order Number:** 155170 | **Dispatch date:** | **12/10/2021** | | *12 Ashley St, C* |

| Lab ID | Sample ID: Location / Other ID | Sample ID: Depth From | Sample ID: Depth To | Date Sampled | Sample Type: S - soil W - water | Container Type: G - glass P - plastic | Analytes: Comb. 8a | Analytes: Asbestos in material ID | Analytes: TRH | Analytes: BTEX | Analytes: pH | Analytes: Clay Content | Analytes: CEC | Analytes: Hold | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | Bore 131 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 16 | Bore 132 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 17 | Bore 132 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 18 | Bore 132 | 1.0 | 1.0 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 19 | Bore 133 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 20 | Bore 133 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 21 | Bore 133 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 22 | Bore 134 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 23 | Bore 134 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 24 | Bore 134 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 25 | Bore 135 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 26 | Bore 135 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 27 | Bore 135 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | ✓ | ✓ | ✓ | | | | |
| 28 | Bore 136 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 29 | Bore 136 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 30 | Bore 136 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 31 | Bore 137 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 32 | Bore 137 | 0.5 | 0.5 | 11/10/21 | S | G | ✓ | | | | | | | | | | |

#280174

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

| | | | |
|---|---|---|---|
| **Project No:** 202107.04 | **Suburb:** Bungendore | | **To:** *Envirolab Servi* |
| **Project Manager:** Shannon Goodsell | | | **Dispatch date:** |

| Lab ID | Sample ID | | | Date Sampled | Sample Type | Container Type | Analytes | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Location / Other ID | Depth From | Depth To | | S - soil W - water | G - glass P - plastic | Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | |
| 33 | Bore 137 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 34 | Bore 138 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 35 | Bore 138 | 0.5 | 0.5 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 36 | Bore 138 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 37 | Bore 139 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 38 | Bore 139 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 39 | Bore 139 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 40 | Bore 141 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 41 | Bore 141 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 42 | Bore 141 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 43 | Bore 143 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 44 | Bore 143 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 45 | Bore 143 | 1.0 | 1.0 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| NR | Bore 149 - | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 46 | Bore 149 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 47 | Bore 149 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| NR | Bore 144/0.5 - | | | 8/10/21 | S | G | ✓ | | | | | | | | | | |
| 48 | R6 | NA | NA | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| — | RR6 | NA | NA | 11/10/21 | S | G | | | | | | | | ✓ | | | |

#280171

| | | |
|---|---|---|
| **Project Manager:** Shannon Goodsell | | **Dispatch date:** |

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

| Project No: | 202107.04 | | | | Suburb: | Bungendore | | | | | | | | To: | Envirolab Servi | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID | Sample ID | | | Date Sampled | Sample Type | Container Type | Analytes | | | | | | | | | | |
| | Location / Other ID | Depth From | Depth To | | S - soil W - water | G - glass P - plastic | Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | |
| — | RR8 | | | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| NR ~~[illegible]~~ | R2 | | | 8/10/21 | S | G | ✓ | | | | | | | | | | |
| NR | TB2 | | | 11/10/21 | S | G | | | ✓ | ✓ | | | | | | | |
| NR | TS1 | | | 11/10/21 | S | G | | | ✓ | ✓ | | | | | | | |
| NR | Rinsate 2 | | | 11/10/21 | W | G | | | ✓ | ✓ | | | | | | | |

49 R8 (extra)

RR6 } ALS
RR8

# 280174

Douglas Partners
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

| |
|---|
| ces |
| :hatswood NSW 2067 |
| t |
| samplereceipt@envirolab.com.au |
| ɔrdance with FPM HAZID) |
| Notes/ Preservation/ Additional Requirements |
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#290174

Douglas Partners
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

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| ces |
| :hatswood NSW 2067 |
| |

| Notes/ Preservation/ Additional Requirements |
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#280174

Douglas Partners
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

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| Notes/ Preservation/ Additional Requirements |
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| |
| Sent in 8th Oct. batch - not to be on Hold |
| |
| Please send to ALS Sydney |

# 280174

Douglas Partners
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

| ces |
|---|
| Notes/ Preservation/ Additional Requirements |
| Please send to ALS Sydney |
| Sent in 8th Oct. batch - not to be on Hold |
| |
| |
| |

#280179

**Ming To**

**Subject:** FW: Results for Registration 280063 202107.04, Bungendore

Ref: 280174-A.
TAT: 1 day.
Due: 15/10/2021
MT

280174-A

**From:** Shannon Goodsell <Shannon.Goodsell@douglaspartners.com.au>
**Sent:** Thursday, 14 October 2021 9:14 AM
**To:** Greta Petzold <GPetzold@envirolab.com.au>
**Cc:** Aileen Hie <AHie@envirolab.com.au>; SydneyMailbox <Sydney@envirolab.com.au>
**Subject:** RE: Results for Registration 280063 202107.04, Bungendore



Hi Greta,

13

Could we also have some TCLP tests conducted on samples Bore 112/1.0 (280063-43) and Bore 131/0.1 (280174-13) for nickel?

If possible could we please have a same day TAT on the TCLP testing? Otherwise 24 TAT should be okay.

Thank you

**Shannon Goodsell** | Environmental Scientist
**Douglas Partners Pty Ltd** | ABN 75 053 980 117 |
www.douglaspartners.com.au
Unit 2 73 Sheppard Street Hume ACT 2620 | PO Box 1487 Fyshwick ACT 2609
P: 02 6260 2788 | M: 0407 636 645 | E: Shannon.Goodsell@douglaspartners.com.au

To find information on our COVID-19 measures, please visit douglaspartners.com.au/news/covid-19



**From:** Shannon Goodsell
**Sent:** Thursday, 14 October 2021 8:16 AM
**To:** Greta Petzold <GPetzold@envirolab.com.au>
**Cc:** Aileen Hie <AHie@envirolab.com.au>; SydneyMailbox <Sydney@envirolab.com.au>
**Subject:** RE: Results for Registration 280063 202107.04, Bungendore

Hi Greta,

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

| | | | | | |
|---|---|---|---|---|---|
| **Project No:** 202107.04 | | **Suburb:** Bungendore | | | **To:** Envirolab Servi |
| **Project Manager:** Shannon Goodsell | | **Order Number:** 155170 | | **Sampler:** SDG | 12 Ashley St, C |
| **Email:** Shannon.Goodsell@douglaspartners.com.au | | | | | **Attn:** Sample Receip |
| **Turnaround time:** ☐ Standard ☐ 72 hour ☐ 48 hour ☑ 24 hour ☐ Same day | | | | | **Contact:** (02) 9910 6200 |
| **Prior Storage:** ☑ Fridge ☐ Freezer ☐ Shelf | | **Do samples contain 'potential' HBM?** ☑ No ☐ Yes (If YES, then handle, transport and store in acc | | | |

| Lab ID | Sample ID: Location / Other ID | Depth From | Depth To | Date Sampled | Sample Type: S - soil W - water | Container Type: G - glass P - plastic | Analytes: Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Bore 125 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 2 | Bore 125 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 3 | Bore 125 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 4 | Bore 127 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 5 | Bore 127 | 0.5 | 0.5 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 6 | Bore 127 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 7 | Bore 129 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 8 | Bore 129 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 9 | Bore 129 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 10 | Bore 130 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 11 | Bore 130 | 0.5 | 0.5 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 12 | Bore 130 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 13 | Bore 131 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 14 | Bore 131 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |

| | | |
|---|---|---|
| **Metals to analyse:** | | **LAB RECEIPT** |
| **Number of samples in container:** | **Transported to laboratory by:** | **Lab Ref. No:** 280174 |
| **Send results to:** Douglas Partners Pty Ltd | | **Received by:** TJ HAW |
| **Address:** Unit 2, 73 Sheppard Street, Hume ACT 262 | **Phone:** (02) 6260 2788 | **Date & Time:** 12/10/21 10.30 |
| **Relinquished by:** Shannon Goodsell | **Date:** 12/10/2021 **Signed:** | **Signed:** |

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 280174
Date Received: 12/10/21
Time Received: 1030
Received By: TJ HAW
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

COC @ 12.00pm
12/10/21

**Envirolab Services Pty Ltd**
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ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

# SAMPLE RECEIPT ADVICE

| Client Details | |
|---|---|
| **Client** | Douglas Partners Canberra |
| **Attention** | Shannon Goodsell |

| Sample Login Details | |
|---|---|
| **Your reference** | 202107.04, Bungendore |
| **Envirolab Reference** | 280063-A |
| **Date Sample Received** | 12/10/2021 |
| **Date Instructions Received** | 14/10/2021 |
| **Date Results Expected to be Reported** | 15/10/2021 |

| Sample Condition | |
|---|---|
| **Samples received in appropriate condition for analysis** | Yes |
| **No. of Samples Provided** | additional analysis |
| **Turnaround Time Requested** | 1 day |
| **Temperature on Receipt (°C)** | 3 |
| **Cooling Method** | Ice Pack |
| **Sampling Date Provided** | YES |

| Comments |
|---|
| Nil |

Please direct any queries to:

| Aileen Hie | Jacinta Hurst |
|---|---|
| **Phone: 02 9910 6200** | **Phone: 02 9910 6200** |
| **Fax: 02 9910 6201** | **Fax: 02 9910 6201** |
| **Email: ahie@envirolab.com.au** | **Email: jhurst@envirolab.com.au** |

*Analysis Underway, details on the following page:*

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ph 02 9910 6200 fax 02 9910 6201
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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | pH of soil for fluid#determ. | pH of soil TCLP (after HCl) | Extraction fluid used | pH of final Leachate | Nickel | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 101-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 101-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 101-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 101-1.6 | | | | | | | | | | | | | | | ✓ |
| Bore 102-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 102-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 102-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 102-1.5 | | | | | | | | | | | | | | | ✓ |
| Bore 103-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 103-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 103-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 104-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 104-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 104-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 104 -1.6 | | | | | | | | | | | | | | | ✓ |
| Bore 105-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 105-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 105-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 105-1.6 | | | | | | | | | | | | | | | ✓ |
| Bore 106-0.1 | | | | | | | | | | | | | | | ✓ |

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | pH of soil for fluid#determ. | pH of soil TCLP (after HCl) | Extraction fluid used | pH of final Leachate | Nickel | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 106-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 106-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 106-2.0 | | | | | | | | | | | | | | | ✓ |
| Bore 107-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 107-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 107-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 107-1.5 | | | | | | | | | | | | | | | ✓ |
| Bore 108-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 108-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 108-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 108-1.5 | | | | | | | | | | | | | | | ✓ |
| Bore 109-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 109-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 109-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 109-1.5 | | | | | | | | | | | | | | | ✓ |
| Bore 110-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 110-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 111-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 111-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 111-1.0 | | | | | | | | | | | | | | | ✓ |

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | pH of soil for fluid#determ. | pH of soil TCLP (after HCl) | Extraction fluid used | pH of final Leachate | Nickel | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 112-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 112-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 112-1.0 | | | | | | | | | | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Bore 113-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 113-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 113-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 114-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 114-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 114-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 115-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 115-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 115-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 116-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 116-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 116-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 117-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 117-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 117-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 118-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 118-0.5 | | | | | | | | | | | | | | | ✓ |

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | pH of soil for fluid#determ. | pH of soil TCLP (after HCl) | Extraction fluid used | pH of final Leachate | Nickel | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 118-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 119-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 119-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 119-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 120-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 120-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 120-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 121-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 121-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 121-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 122-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 122-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 122-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 123-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 123-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 123-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 124-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 124-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 126-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 126-0.5 | | | | | | | | | | | | | | | ✓ |

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | pH of soil for fluid#determ. | pH of soil TCLP (after HCl) | Extraction fluid used | pH of final Leachate | Nickel | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bore 126-1.0** | | | | | | | | | | | | | | | ✓ |
| **Bore 126-1.5** | | | | | | | | | | | | | | | ✓ |
| **Bore 128-0.1** | | | | | | | | | | | | | | | ✓ |
| **Bore 128-0.5** | | | | | | | | | | | | | | | ✓ |
| **Bore 140-0.1** | | | | | | | | | | | | | | | ✓ |
| **Bore 140-0.5** | | | | | | | | | | | | | | | ✓ |
| **Bore 140-1.0** | | | | | | | | | | | | | | | ✓ |
| **Bore 142-0.1** | | | | | | | | | | | | | | | ✓ |
| **Bore 142-0.5** | | | | | | | | | | | | | | | ✓ |
| **Bore 144-0.1** | | | | | | | | | | | | | | | ✓ |
| **Bore 144-0.5** | | | | | | | | | | | | | | | ✓ |
| **Bore 146-0.1** | | | | | | | | | | | | | | | ✓ |
| **Bore 146-0.5** | | | | | | | | | | | | | | | ✓ |
| **Bore 145-0.1** | | | | | | | | | | | | | | | ✓ |
| **Bore 145-0.3** | | | | | | | | | | | | | | | ✓ |
| **Bore 145-0.5** | | | | | | | | | | | | | | | ✓ |
| **Bore 147-0.1** | | | | | | | | | | | | | | | ✓ |
| **Bore 147-0.3** | | | | | | | | | | | | | | | ✓ |
| **Bore 147-0.5** | | | | | | | | | | | | | | | ✓ |
| **Bore 148-0.1** | | | | | | | | | | | | | | | ✓ |

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | pH of soil for fluid#determ. | pH of soil TCLP (after HCl) | Extraction fluid used | pH of final Leachate | Nickel | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 148-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 148-0.8 | | | | | | | | | | | | | | | ✓ |
| Bore 150-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 150-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 150-1.0 | | | | | | | | | | | | | | | ✓ |
| Bore 151-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 151-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 151-0.7 | | | | | | | | | | | | | | | ✓ |
| Bore 152-0.1 | | | | | | | | | | | | | | | ✓ |
| Bore 152-0.5 | | | | | | | | | | | | | | | ✓ |
| Bore 152-0.8 | | | | | | | | | | | | | | | ✓ |
| R101-. | | | | | | | | | | | | | | | ✓ |
| R102-. | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | |
| R103-. | | | | | | | | | | | | | | | ✓ |
| R104-. | | | | | | | | | | | | | | | ✓ |
| R105-. | | | | | | | | | | | | | | | ✓ |
| R107-. | | | | | | | | | | | | | | | ✓ |
| TS1-. | | | | | | | | | | | | | | | ✓ |
| TB1-. | | | | | | | | | | | | | | | ✓ |
| Rinsate 1-. | | | | | | | | | | | | | | | ✓ |

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | pH of soil for fluid#determ. | pH of soil TCLP (after HCl) | Extraction fluid used | pH of final Leachate | Nickel | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **BH128-1.0** | | | | | | | | | | | | | | | ✓ |
| **Bore 147 - [TRIPLICATE]-0.1** | | | | | | | | | | | | | | | ✓ |

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

## Additional Info

| |
|---|
| Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.<br>Requests for longer term sample storage must be received in writing. |
| Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default. |
| TAT for Micro is dependent on incubation. This varies from 3 to 6 days. |

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

| | | | | | |
|---|---|---|---|---|---|
| **Project No:** 202107.04 | **Suburb:** Bungendore | | | **To:** | *Envirolab Servi* |
| **Project Manager:** Shannon Goodsell | **Order Number:** 155170 | **Dispatch date:** | 12/10/2021 | | *12 Ashley St, C* |

| Lab ID | Sample ID: Location / Other ID | Sample ID: Depth From | Sample ID: Depth To | Date Sampled | Sample Type (S - soil, W - water) | Container Type (G - glass, P - plastic) | Analytes: Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | Bore 131 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 16 | Bore 132 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 17 | Bore 132 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 18 | Bore 132 | 1.0 | 1.0 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 19 | Bore 133 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 20 | Bore 133 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 21 | Bore 133 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 22 | Bore 134 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 23 | Bore 134 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 24 | Bore 134 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 25 | Bore 135 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 26 | Bore 135 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 27 | Bore 135 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | ✓ | ✓ | ✓ | | | | |
| 28 | Bore 136 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 29 | Bore 136 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 30 | Bore 136 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 31 | Bore 137 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 32 | Bore 137 | 0.5 | 0.5 | 11/10/21 | S | G | ✓ | | | | | | | | | | |

#280174

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

| | | | | | |
|---|---|---|---|---|---|
| **Project No:** | 202107.04 | **Suburb:** | Bungendore | **To:** | *Envirolab Servi* |
| **Project Manager:** | Shannon Goodsell | | | **Dispatch date:** | |

| Lab ID | Sample ID | | | Date Sampled | Sample Type | Container Type | Analytes | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Location / Other ID | Depth From | Depth To | | S - soil W - water | G - glass P - plastic | Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | |
| 33 | Bore 137 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 34 | Bore 138 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 35 | Bore 138 | 0.5 | 0.5 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 36 | Bore 138 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 37 | Bore 139 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 38 | Bore 139 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 39 | Bore 139 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 40 | Bore 141 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 41 | Bore 141 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 42 | Bore 141 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 43 | Bore 143 | 0.1 | 0.1 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 44 | Bore 143 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 45 | Bore 143 | 1.0 | 1.0 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| NR | Bore 149 | 0.1 | 0.1 | 11/10/21 | S | G | ✓ | | | | | | | | | | |
| 46 | Bore 149 | 0.5 | 0.5 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| 47 | Bore 149 | 1.0 | 1.0 | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| NR | Bore 144/0.5 | | | 8/10/21 | S | G | ✓ | | | | | | | | | | |
| 48 | R6 | NA | NA | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| — | RR6 | NA | NA | 11/10/21 | S | G | | | | | | | | ✓ | | | |

#280179

| | | | |
|---|---|---|---|
| **Project Manager:** | Shannon Goodsell | **Dispatch date:** | |

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

**Project No:** 202107.04 **Suburb:** Bungendore **To:** *Envirolab Servi*

| Lab ID | Sample ID: Location / Other ID | Depth From | Depth To | Date Sampled | Sample Type: S - soil W - water | Container Type: G - glass P - plastic | Comb. 8a | Asbestos in material ID | TRH | BTEX | pH | Clay Content | CEC | Hold | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| — | RR8 | | | 11/10/21 | S | G | | | | | | | | ✓ | | | |
| NR ~~[illegible]~~ | R2 | | | 8/10/21 | S | G | ✓ | | | | | | | | | | |
| 52 NR | TB2 | | | 11/10/21 | S | G | | | ✓ | ✓ | | | | | | | |
| 53 NR | TS1 | | | 11/10/21 | S | G | | | ✓ | ✓ | | | | | | | |
| 54 NR | Rinsate 2 | | | 11/10/21 | W | G | | | ✓ | ✓ | | | | | | | |

49 R8 (extra)

RR6
RR8 } ALS

# 280174

**Envirolab Services Pty Ltd**
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

# SAMPLE RECEIPT ADVICE

| Client Details | |
|---|---|
| **Client** | Douglas Partners Canberra |
| **Attention** | Shannon Goodsell |

| Sample Login Details | |
|---|---|
| **Your reference** | 202107.04, Bungendore |
| **Envirolab Reference** | 280063 |
| **Date Sample Received** | 12/10/2021 |
| **Date Instructions Received** | 12/10/2021 |
| **Date Results Expected to be Reported** | 13/10/2021 |

| Sample Condition | |
|---|---|
| **Samples received in appropriate condition for analysis** | Yes |
| **No. of Samples Provided** | 120 Soil, 1 Water |
| **Turnaround Time Requested** | 1 day |
| **Temperature on Receipt (°C)** | 3 |
| **Cooling Method** | Ice Pack |
| **Sampling Date Provided** | YES |

| Comments |
|---|
| Clay unable to be tested in 1 day |

Please direct any queries to:

| Aileen Hie | Jacinta Hurst |
|---|---|
| **Phone: 02 9910 6200** | **Phone: 02 9910 6200** |
| **Fax: 02 9910 6201** | **Fax: 02 9910 6201** |
| **Email: ahie@envirolab.com.au** | **Email: jhurst@envirolab.com.au** |

*Analysis Underway, details on the following page:*

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ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | Misc Inorg - Soil | Clay 50-120g | CEC | vTRH(C6-C10)/BTEXN in Water | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 101-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 101-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 101-1.0 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 101-1.6 | | | | | | | | | | | | | | ✓ |
| Bore 102-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 102-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 102-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 102-1.5 | | | | | | | | | | | | | | ✓ |
| Bore 103-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 103-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 103-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 104-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 104-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 104-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 104 -1.6 | | | | | | | | | | | | | | ✓ |
| Bore 105-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 105-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 105-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 105-1.6 | | | | | | | | | | | | | | ✓ |
| Bore 106-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 106-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 106-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 106-2.0 | | | | | | | | | | | | | | ✓ |
| Bore 107-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 107-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 107-1.0 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 107-1.5 | | | | | | | | | | | | | | ✓ |
| Bore 108-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 108-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 108-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 108-1.5 | | | | | | | | | | | | | | ✓ |
| Bore 109-0.1 | | | | | | | | | | | | | | ✓ |

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | Misc Inorg - Soil | Clay 50-120g | CEC | vTRH(C6-C10)/BTEXN in Water | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 109-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 109-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 109-1.5 | | | | | | | | | | | | | | ✓ |
| Bore 110-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 110-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 111-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 111-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 111-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 112-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 112-0.5 | | | | | | | | | | ✓ | ✓ | ✓ | | |
| Bore 112-1.0 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 113-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 113-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 113-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 114-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 114-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 114-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 115-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 115-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 115-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 116-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 116-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 116-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 117-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 117-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 117-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 118-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 118-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 118-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 119-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 119-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 119-1.0 | | | | | | | | | | | | | | ✓ |

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | Misc Inorg - Soil | Clay 50-120g | CEC | vTRH(C6-C10)/BTEXN in Water | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 120-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 120-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 120-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 121-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 121-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 121-1.0 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 122-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 122-0.5 | | | | | | | | | | ✓ | ✓ | ✓ | | |
| Bore 122-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 123-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 123-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 123-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 124-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 124-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 126-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 126-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 126-1.0 | | | | | | | | | | | | | | ✓ |
| Bore 126-1.5 | | | | | | | | | | | | | | ✓ |
| Bore 128-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 128-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 140-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 140-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 140-1.0 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 142-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 142-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 144-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 144-0.5 | | | | | | | | | | | | | | ✓ |
| Bore 146-0.1 | | | | | | | | | | ✓ | ✓ | ✓ | | |
| Bore 146-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 145-0.1 | | | | | | | | | | | | | | ✓ |
| Bore 145-0.3 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| Bore 145-0.5 | | | | | | | | | | | | | | ✓ |

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ph 02 9910 6200 fax 02 9910 6201
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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Misc Soil - Inorg | Acid Extractable metalsin soil | Asbestos ID - soils | Misc Inorg - Soil | Clay 50-120g | CEC | vTRH(C6-C10)/BTEXN in Water | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Bore 147-0.1** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| **Bore 147-0.3** | | | | | | | | | | | | | | ✓ |
| **Bore 147-0.5** | | | | | | | | | | | | | | ✓ |
| **Bore 148-0.1** | | | | | | | | | | | | | | ✓ |
| **Bore 148-0.5** | | | | | | | | | | | | | | ✓ |
| **Bore 148-0.8** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| **Bore 150-0.1** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| **Bore 150-0.5** | | | | | | | | | | | | | | ✓ |
| **Bore 150-1.0** | | | | | | | | | | | | | | ✓ |
| **Bore 151-0.1** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| **Bore 151-0.5** | | | | | | | | | | | | | | ✓ |
| **Bore 151-0.7** | | | | | | | | | | | | | | ✓ |
| **Bore 152-0.1** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| **Bore 152-0.5** | | | | | | | | | | | | | | ✓ |
| **Bore 152-0.8** | | | | | | | | | | | | | | ✓ |
| **R1-.** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| **R2-.** | | | | | | | | | | | | | | ✓ |
| **R3-.** | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | |
| **R4-.** | | | | | | | | | | | | | | ✓ |
| **R5-.** | | | | | | | | | | | | | | ✓ |
| **R7-.** | | | | | | | | | | | | | | ✓ |
| **TS1-.** | ✓ | | | | | | | | | | | | | |
| **TB1-.** | ✓ | | | | | | | | | | | | | |
| **Rinsate 1-.** | | | | | | | | | | | | | ✓ | |
| **BH128-1.0** | | | | | | | | | | | | | | ✓ |

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

| **Additional Info** |
|---|
| Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt. |
| Requests for longer term sample storage must be received in writing. |
| Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default. |
| TAT for Micro is dependent on incubation. This varies from 3 to 6 days. |

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# SAMPLE RECEIPT ADVICE

| Client Details | |
|---|---|
| **Client** | Douglas Partners Canberra |
| **Attention** | Shannon Goodsell |

| Sample Login Details | |
|---|---|
| **Your reference** | 202107.04, Bungendore |
| **Envirolab Reference** | 280174 |
| **Date Sample Received** | 12/10/2021 |
| **Date Instructions Received** | 12/10/2021 |
| **Date Results Expected to be Reported** | 13/10/2021 |

| Sample Condition | |
|---|---|
| **Samples received in appropriate condition for analysis** | Yes |
| **No. of Samples Provided** | 50 Soil |
| **Turnaround Time Requested** | 1 day |
| **Temperature on Receipt (°C)** | 7 |
| **Cooling Method** | Ice |
| **Sampling Date Provided** | YES |

| Comments |
|---|
| Clay results may be delayed |

Please direct any queries to:

| Aileen Hie | Jacinta Hurst |
|---|---|
| **Phone: 02 9910 6200** | **Phone: 02 9910 6200** |
| **Fax: 02 9910 6201** | **Fax: 02 9910 6201** |
| **Email: ahie@envirolab.com.au** | **Email: jhurst@envirolab.com.au** |

*Analysis Underway, details on the following page:*

**Envirolab Services Pty Ltd**
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Acid Extractable metalsin soil | Misc Soil - Inorg | Asbestos ID - soils | Misc Inorg - Soil | CEC | Clay 50-120g | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 125-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 125-0.5 | | | | | | | | | | | | | ✓ |
| Bore 125-1.0 | | | | | | | | | | | | | ✓ |
| Bore 127-0.1 | | | | | | | | | | | | | ✓ |
| Bore 127-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 127-1.0 | | | | | | | | | | | | | ✓ |
| Bore 129-01 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 129-0.5 | | | | | | | | | | | | | ✓ |
| Bore 129-1.0 | | | | | | | | | | | | | ✓ |
| Bore 130-0.1 | | | | | | | | | | | | | ✓ |
| Bore 130-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 130-1.0 | | | | | | | | | | | | | ✓ |
| Bore 131-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 131-0.5 | | | | | | | | | | | | | ✓ |
| Bore 131-1.0 | | | | | | | | | | | | | ✓ |
| Bore 132-0.1 | | | | | | | | | | | | | ✓ |
| Bore 132-0.5 | | | | | | | | | | | | | ✓ |
| Bore 132-1.0 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 133-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 133-0.5 | | | | | | | | | | | | | ✓ |
| Bore 133-1.0 | | | | | | | | | | | | | ✓ |
| Bore 134-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 134-0.5 | | | | | | | | | | | | | ✓ |
| Bore 134-1.0 | | | | | | | | | | | | | ✓ |
| Bore 135-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 135-0.5 | | | | | | | | | | | | | ✓ |
| Bore 135-1.0 | | | | | | | | | | ✓ | ✓ | ✓ | |
| Bore 136-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 136-0.5 | | | | | | | | | | | | | ✓ |
| Bore 136-1.0 | | | | | | | | | | | | | ✓ |
| Bore 137-0.1 | | | | | | | | | | | | | ✓ |
| Bore 137-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | svTRH (C10-C40) in Soil | PAHs in Soil | Organochlorine Pesticides in soil | Organophosphorus Pesticides in Soil | PCBsin Soil | Acid Extractable metalsin soil | Misc Soil - Inorg | Asbestos ID - soils | Misc Inorg - Soil | CEC | Clay 50-120g | On Hold |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bore 137-1.0 | | | | | | | | | | | | | ✓ |
| Bore 138-0.1 | | | | | | | | | | | | | ✓ |
| Bore 138-0.5 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 138-1.0 | | | | | | | | | | | | | ✓ |
| Bore 139-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 139-0.5 | | | | | | | | | | | | | ✓ |
| Bore 139-1.0 | | | | | | | | | | | | | ✓ |
| Bore 141-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 141-0.5 | | | | | | | | | | | | | ✓ |
| Bore 141-1.0 | | | | | | | | | | | | | ✓ |
| Bore 143-0.1 | | | | | | | | | | | | | ✓ |
| Bore 143-0.5 | | | | | | | | | | | | | ✓ |
| Bore 143-1.0 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Bore 149-0.5 | | | | | | | | | | | | | ✓ |
| Bore 149-1.0 | | | | | | | | | | | | | ✓ |
| R6 | | | | | | | | | | | | | ✓ |
| R8 | | | | | | | | | | | | | ✓ |
| Bore 149-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

| Additional Info |
|---|
| Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt. |
| Requests for longer term sample storage must be received in writing. |
| Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default. |
| TAT for Micro is dependent on incubation. This varies from 3 to 6 days. |

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ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
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# SAMPLE RECEIPT ADVICE

| Client Details | |
|---|---|
| **Client** | Douglas Partners Canberra |
| **Attention** | Shannon Goodsell |

| Sample Login Details | |
|---|---|
| **Your reference** | 202107.04, Bungendore |
| **Envirolab Reference** | 280174-A |
| **Date Sample Received** | 12/10/2021 |
| **Date Instructions Received** | 14/10/2021 |
| **Date Results Expected to be Reported** | 15/10/2021 |

| Sample Condition | |
|---|---|
| **Samples received in appropriate condition for analysis** | Yes |
| **No. of Samples Provided** | additional analysis |
| **Turnaround Time Requested** | 1 day |
| **Temperature on Receipt (°C)** | 7 |
| **Cooling Method** | Ice |
| **Sampling Date Provided** | YES |

## Comments

Nil

Please direct any queries to:

| Aileen Hie | Jacinta Hurst |
|---|---|
| **Phone: 02 9910 6200** | **Phone: 02 9910 6200** |
| **Fax: 02 9910 6201** | **Fax: 02 9910 6201** |
| **Email: ahie@envirolab.com.au** | **Email: jhurst@envirolab.com.au** |

*Analysis Underway, details on the following page:*

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| Sample ID | pH of soil for fluid#determ. | pH of soil TCLP (after HCl) | Extraction fluid used | pH of final Leachate | Nickel | On Hold |
|---|---|---|---|---|---|---|
| Bore 125-0.1 | | | | | | ✓ |
| Bore 125-0.5 | | | | | | ✓ |
| Bore 125-1.0 | | | | | | ✓ |
| Bore 127-0.1 | | | | | | ✓ |
| Bore 127-0.5 | | | | | | ✓ |
| Bore 127-1.0 | | | | | | ✓ |
| Bore 129-01 | | | | | | ✓ |
| Bore 129-0.5 | | | | | | ✓ |
| Bore 129-1.0 | | | | | | ✓ |
| Bore 130-0.1 | | | | | | ✓ |
| Bore 130-0.5 | | | | | | ✓ |
| Bore 130-1.0 | | | | | | ✓ |
| Bore 131-0.1 | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Bore 131-0.5 | | | | | | ✓ |
| Bore 131-1.0 | | | | | | ✓ |
| Bore 132-0.1 | | | | | | ✓ |
| Bore 132-0.5 | | | | | | ✓ |
| Bore 132-1.0 | | | | | | ✓ |
| Bore 133-0.1 | | | | | | ✓ |
| Bore 133-0.5 | | | | | | ✓ |
| Bore 133-1.0 | | | | | | ✓ |
| Bore 134-0.1 | | | | | | ✓ |
| Bore 134-0.5 | | | | | | ✓ |
| Bore 134-1.0 | | | | | | ✓ |
| Bore 135-0.1 | | | | | | ✓ |
| Bore 135-0.5 | | | | | | ✓ |
| Bore 135-1.0 | | | | | | ✓ |
| Bore 136-0.1 | | | | | | ✓ |
| Bore 136-0.5 | | | | | | ✓ |
| Bore 136-1.0 | | | | | | ✓ |
| Bore 137-0.1 | | | | | | ✓ |
| Bore 137-0.5 | | | | | | ✓ |

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| Sample ID | pH of soil for fluid#determ. | pH of soil TCLP (after HCl) | Extraction fluid used | pH of final Leachate | Nickel | On Hold |
|---|---|---|---|---|---|---|
| Bore 137-1.0 | | | | | | ✓ |
| Bore 138-0.1 | | | | | | ✓ |
| Bore 138-0.5 | | | | | | ✓ |
| Bore 138-1.0 | | | | | | ✓ |
| Bore 139-0.1 | | | | | | ✓ |
| Bore 139-0.5 | | | | | | ✓ |
| Bore 139-1.0 | | | | | | ✓ |
| Bore 141-0.1 | | | | | | ✓ |
| Bore 141-0.5 | | | | | | ✓ |
| Bore 141-1.0 | | | | | | ✓ |
| Bore 143-0.1 | | | | | | ✓ |
| Bore 143-0.5 | | | | | | ✓ |
| Bore 143-1.0 | | | | | | ✓ |
| Bore 149-0.5 | | | | | | ✓ |
| Bore 149-1.0 | | | | | | ✓ |
| R6 | | | | | | ✓ |
| R8 | | | | | | ✓ |
| Bore 149-0.1 | | | | | | ✓ |
| Bore 137 - [TRIPLICATE]-0.5 | | | | | | ✓ |

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

## Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

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# SAMPLE RECEIPT ADVICE

| Client Details | |
|---|---|
| **Client** | Douglas Partners Canberra |
| **Attention** | Shannon Goodsell |

| Sample Login Details | |
|---|---|
| **Your reference** | 202107.04, Bungendore |
| **Envirolab Reference** | 280174-B |
| **Date Sample Received** | 13/10/2021 |
| **Date Instructions Received** | 13/10/2021 |
| **Date Results Expected to be Reported** | 15/10/2021 |

| Sample Condition | |
|---|---|
| **Samples received in appropriate condition for analysis** | Yes |
| **No. of Samples Provided** | 52 Soil, 1 Water |
| **Turnaround Time Requested** | 1 day |
| **Temperature on Receipt (°C)** | 7 |
| **Cooling Method** | Ice |
| **Sampling Date Provided** | YES |

| Comments |
|---|
| #52 labelled as TB Soil |

Please direct any queries to:

| Aileen Hie | Jacinta Hurst |
|---|---|
| **Phone: 02 9910 6200** | **Phone: 02 9910 6200** |
| **Fax: 02 9910 6201** | **Fax: 02 9910 6201** |
| **Email: ahie@envirolab.com.au** | **Email: jhurst@envirolab.com.au** |

*Analysis Underway, details on the following page:*

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | vTRH(C6-C10)/BTEXN in Water | On Hold |
|---|---|---|---|
| Bore 125-0.1 | | | ✓ |
| Bore 125-0.5 | | | ✓ |
| Bore 125-1.0 | | | ✓ |
| Bore 127-0.1 | | | ✓ |
| Bore 127-0.5 | | | ✓ |
| Bore 127-1.0 | | | ✓ |
| Bore 129-01 | | | ✓ |
| Bore 129-0.5 | | | ✓ |
| Bore 129-1.0 | | | ✓ |
| Bore 130-0.1 | | | ✓ |
| Bore 130-0.5 | | | ✓ |
| Bore 130-1.0 | | | ✓ |
| Bore 131-0.1 | | | ✓ |
| Bore 131-0.5 | | | ✓ |
| Bore 131-1.0 | | | ✓ |
| Bore 132-0.1 | | | ✓ |
| Bore 132-0.5 | | | ✓ |
| Bore 132-1.0 | | | ✓ |
| Bore 133-0.1 | | | ✓ |
| Bore 133-0.5 | | | ✓ |
| Bore 133-1.0 | | | ✓ |
| Bore 134-0.1 | | | ✓ |
| Bore 134-0.5 | | | ✓ |
| Bore 134-1.0 | | | ✓ |
| Bore 135-0.1 | | | ✓ |
| Bore 135-0.5 | | | ✓ |
| Bore 135-1.0 | | | ✓ |
| Bore 136-0.1 | | | ✓ |
| Bore 136-0.5 | | | ✓ |
| Bore 136-1.0 | | | ✓ |
| Bore 137-0.1 | | | ✓ |
| Bore 137-0.5 | | | ✓ |

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| Sample ID | vTRH(C6-C10)/BTEXN in Soil | vTRH(C6-C10)/BTEXN in Water | On Hold |
|---|---|---|---|
| Bore 137-1.0 | | | ✓ |
| Bore 138-0.1 | | | ✓ |
| Bore 138-0.5 | | | ✓ |
| Bore 138-1.0 | | | ✓ |
| Bore 139-0.1 | | | ✓ |
| Bore 139-0.5 | | | ✓ |
| Bore 139-1.0 | | | ✓ |
| Bore 141-0.1 | | | ✓ |
| Bore 141-0.5 | | | ✓ |
| Bore 141-1.0 | | | ✓ |
| Bore 143-0.1 | | | ✓ |
| Bore 143-0.5 | | | ✓ |
| Bore 143-1.0 | | | ✓ |
| Bore 149-0.5 | | | ✓ |
| Bore 149-1.0 | | | ✓ |
| R6 | | | ✓ |
| R8 | | | ✓ |
| Bore 149-0.1 | | | ✓ |
| Bore 137 - [TRIPLICATE]-0.5 | | | ✓ |
| TB2-. | ✓ | | |
| TS1-. | ✓ | | |
| Rinsate 2-. | | ✓ | |

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

| Additional Info |
|---|
| Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt. |
| Requests for longer term sample storage must be received in writing. |
| Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default. |
| TAT for Micro is dependent on incubation. This varies from 3 to 6 days. |

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# CERTIFICATE OF ANALYSIS 280063

## Client Details

| | |
|---|---|
| **Client** | Douglas Partners Canberra |
| **Attention** | Shannon Goodsell |
| **Address** | Unit 2, 73 Sheppard St,, HUME, ACT, 2620 |

## Sample Details

| | |
|---|---|
| **Your Reference** | **202107.04, Bungendore** |
| **Number of Samples** | 120 Soil, 1 Water |
| **Date samples received** | 12/10/2021 |
| **Date completed instructions received** | 12/10/2021 |

## Analysis Details

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

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

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

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

## Report Details

| | |
|---|---|
| **Date results requested by** | 15/10/2021 |
| **Date of Issue** | 15/10/2021 |

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**Asbestos Approved By**

Analysed by Asbestos Approved Analyst: Panika Wongchanda
Authorised by Asbestos Approved Signatory: Lucy Zhu

**Results Approved By**

Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Jaimie Loa-Kum-Cheung, Senior Chemist
Lucy Zhu, Asbestos Supervisor
Steven Luong, Organics Supervisor

**Authorised By**

Nancy Zhang, Laboratory Manager

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-3 | 280063-6 | 280063-9 | 280063-12 | 280063-17 |
| Your Reference | UNITS | Bore 101 | Bore 102 | Bore 103 | Bore 104 | Bore 105 |
| Depth | | 1.0 | 0.5 | 0.1 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | <25 | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | <2 | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | <3 | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 83 | 94 | 83 | 90 | 74 |

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-21 | 280063-26 | 280063-28 | 280063-33 | 280063-36 |
| Your Reference | UNITS | Bore 106 | Bore 107 | Bore 108 | Bore 109 | Bore 110 |
| Depth | | 0.5 | 1.0 | 0.1 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | <25 | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | <2 | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | <3 | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 83 | 85 | 85 | 94 | 85 |

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-38 | 280063-43 | 280063-45 | 280063-47 | 280063-51 |
| Your Reference | UNITS | Bore 111 | Bore 112 | Bore 113 | Bore 114 | Bore 115 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | <25 | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | <2 | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | <3 | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 98 | 94 | 95 | 92 | 97 |

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-53 | 280063-57 | 280063-60 | 280063-62 | 280063-65 |
| Your Reference | UNITS | Bore 116 | Bore 117 | Bore 118 | Bore 119 | Bore 120 |
| Depth | | 0.1 | 0.5 | 0.5 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | <25 | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | <2 | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | <3 | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 98 | 93 | 69 | 94 | 98 |

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-70 | 280063-71 | 280063-75 | 280063-77 | 280063-80 |
| Your Reference | UNITS | Bore 121 | Bore 122 | Bore 123 | Bore 124 | Bore 126 |
| Depth | | 1.0 | 0.1 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | <25 | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | <2 | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | <3 | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 90 | 102 | 92 | 87 | 84 |

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-83 | 280063-87 | 280063-89 | 280063-90 | 280063-93 |
| Your Reference | UNITS | Bore 128 | Bore 140 | Bore 142 | Bore 144 | Bore 146 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | <25 | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | <2 | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | <3 | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 77 | 99 | 99 | 88 | 101 |

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-95 | 280063-97 | 280063-102 | 280063-103 | 280063-106 |
| Your Reference | UNITS | Bore 145 | Bore 147 | Bore 148 | Bore 150 | Bore 151 |
| Depth | | 0.3 | 0.1 | 0.8 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | <25 | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | <2 | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | <3 | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 93 | 90 | 96 | 77 | 90 |

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-109 | 280063-112 | 280063-114 | 280063-118 | 280063-119 |
| Your Reference | UNITS | Bore 152 | R101 | R103 | TS1 | TB1 |
| Depth | | 0.1 | . | . | . | . |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | [NA] | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | [NA] | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | [NA] | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | 94% | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | 94% | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | 96% | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | 96% | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | 96% | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | [NA] | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | [NA] | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 84 | 99 | 101 | 95 | 105 |

| svTRH (C10-C40) in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-3 | 280063-6 | 280063-9 | 280063-12 | 280063-17 |
| Your Reference | UNITS | Bore 101 | Bore 102 | Bore 103 | Bore 104 | Bore 105 |
| Depth | | 1.0 | 0.5 | 0.1 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| *Surrogate* o-Terphenyl | % | 91 | 91 | 97 | 94 | 92 |

| svTRH (C10-C40) in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-21 | 280063-26 | 280063-28 | 280063-33 | 280063-36 |
| Your Reference | UNITS | Bore 106 | Bore 107 | Bore 108 | Bore 109 | Bore 110 |
| Depth | | 0.5 | 1.0 | 0.1 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| *Surrogate* o-Terphenyl | % | 89 | 90 | 93 | 91 | 90 |

| svTRH (C10-C40) in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-38 | 280063-43 | 280063-45 | 280063-47 | 280063-51 |
| Your Reference | UNITS | Bore 111 | Bore 112 | Bore 113 | Bore 114 | Bore 115 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| *Surrogate* o-Terphenyl | % | 91 | 91 | 90 | 93 | 91 |

| svTRH (C10-C40) in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-53 | 280063-57 | 280063-60 | 280063-62 | 280063-65 |
| Your Reference | UNITS | Bore 116 | Bore 117 | Bore 118 | Bore 119 | Bore 120 |
| Depth | | 0.1 | 0.5 | 0.5 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 12/10/2021 | 12/10/2021 | 13/10/2021 | 12/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| *Surrogate* o-Terphenyl | % | 92 | 88 | 85 | 84 | 85 |

| svTRH (C10-C40) in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-70 | 280063-71 | 280063-75 | 280063-77 | 280063-80 |
| Your Reference | UNITS | Bore 121 | Bore 122 | Bore 123 | Bore 124 | Bore 126 |
| Depth | | 1.0 | 0.1 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| *Surrogate* o-Terphenyl | % | 85 | 85 | 83 | 88 | 84 |

| svTRH (C10-C40) in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-83 | 280063-87 | 280063-89 | 280063-90 | 280063-93 |
| Your Reference | UNITS | Bore 128 | Bore 140 | Bore 142 | Bore 144 | Bore 146 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| *Surrogate* o-Terphenyl | % | 84 | 84 | 86 | 88 | 85 |

| svTRH (C10-C40) in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-95 | 280063-97 | 280063-102 | 280063-103 | 280063-106 |
| Your Reference | UNITS | Bore 145 | Bore 147 | Bore 148 | Bore 150 | Bore 151 |
| Depth | | 0.3 | 0.1 | 0.8 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 | 110 | <100 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 | <100 | <100 | 150 | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 | 150 | <50 |
| *Surrogate* o-Terphenyl | % | 83 | 85 | 86 | 88 | 90 |

| svTRH (C10-C40) in Soil | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-109 | 280063-112 | 280063-114 |
| Your Reference | UNITS | Bore 152 | R101 | R103 |
| Depth | | 0.1 | . | . |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 | <100 | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 |
| *Surrogate* o-Terphenyl | % | 90 | 90 | 92 |

| PAHs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-3 | 280063-6 | 280063-9 | 280063-12 | 280063-17 |
| Your Reference | UNITS | Bore 101 | Bore 102 | Bore 103 | Bore 104 | Bore 105 |
| Depth | | 1.0 | 0.5 | 0.1 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 119 | 125 | 125 | 125 | 115 |

| PAHs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-21 | 280063-26 | 280063-28 | 280063-33 | 280063-36 |
| Your Reference | UNITS | Bore 106 | Bore 107 | Bore 108 | Bore 109 | Bore 110 |
| Depth | | 0.5 | 1.0 | 0.1 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 130 | 120 | 126 | 113 | 120 |

| PAHs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-38 | 280063-43 | 280063-45 | 280063-47 | 280063-51 |
| Your Reference | UNITS | Bore 111 | Bore 112 | Bore 113 | Bore 114 | Bore 115 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 123 | 121 | 126 | 126 | 117 |

| PAHs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-53 | 280063-57 | 280063-60 | 280063-62 | 280063-65 |
| Your Reference | UNITS | Bore 116 | Bore 117 | Bore 118 | Bore 119 | Bore 120 |
| Depth | | 0.1 | 0.5 | 0.5 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 13/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 123 | 125 | 114 | 107 | 120 |

| PAHs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-70 | 280063-71 | 280063-75 | 280063-77 | 280063-80 |
| Your Reference | UNITS | Bore 121 | Bore 122 | Bore 123 | Bore 124 | Bore 126 |
| Depth | | 1.0 | 0.1 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 121 | 99 | 102 | 115 | 127 |

| PAHs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-83 | 280063-87 | 280063-89 | 280063-90 | 280063-93 |
| Your Reference | UNITS | Bore 128 | Bore 140 | Bore 142 | Bore 144 | Bore 146 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 126 | 121 | 108 | 100 | 107 |

| PAHs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-95 | 280063-97 | 280063-102 | 280063-103 | 280063-106 |
| Your Reference | UNITS | Bore 145 | Bore 147 | Bore 148 | Bore 150 | Bore 151 |
| Depth | | 0.3 | 0.1 | 0.8 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 105 | 105 | 125 | 98 | 103 |

| PAHs in Soil | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-109 | 280063-112 | 280063-114 |
| Your Reference | UNITS | Bore 152 | R101 | R103 |
| Depth | | 0.1 | . | . |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 104 | 93 | 119 |

| Organochlorine Pesticides in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-3 | 280063-6 | 280063-9 | 280063-12 | 280063-17 |
| Your Reference | UNITS | Bore 101 | Bore 102 | Bore 103 | Bore 104 | Bore 105 |
| Depth | | 1.0 | 0.5 | 0.1 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 100 | 102 | 109 | 112 | 103 |

| Organochlorine Pesticides in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-21 | 280063-26 | 280063-28 | 280063-33 | 280063-36 |
| Your Reference | UNITS | Bore 106 | Bore 107 | Bore 108 | Bore 109 | Bore 110 |
| Depth | | 0.5 | 1.0 | 0.1 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 111 | 105 | 116 | 98 | 111 |

| Organochlorine Pesticides in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-38 | 280063-43 | 280063-45 | 280063-47 | 280063-51 |
| Your Reference | UNITS | Bore 111 | Bore 112 | Bore 113 | Bore 114 | Bore 115 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 108 | 105 | 112 | 120 | 102 |

| Organochlorine Pesticides in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-53 | 280063-57 | 280063-60 | 280063-62 | 280063-65 |
| Your Reference | UNITS | Bore 116 | Bore 117 | Bore 118 | Bore 119 | Bore 120 |
| Depth | | 0.1 | 0.5 | 0.5 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 13/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 109 | 99 | 121 | 102 | 109 |

| Organochlorine Pesticides in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-70 | 280063-71 | 280063-75 | 280063-77 | 280063-80 |
| Your Reference | UNITS | Bore 121 | Bore 122 | Bore 123 | Bore 124 | Bore 126 |
| Depth | | 1.0 | 0.1 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 112 | 103 | 106 | 113 | 107 |

| Organochlorine Pesticides in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-83 | 280063-87 | 280063-89 | 280063-90 | 280063-93 |
| Your Reference | UNITS | Bore 128 | Bore 140 | Bore 142 | Bore 144 | Bore 146 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 122 | 110 | 104 | 114 | 110 |

| Organochlorine Pesticides in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-95 | 280063-97 | 280063-102 | 280063-103 | 280063-106 |
| Your Reference | UNITS | Bore 145 | Bore 147 | Bore 148 | Bore 150 | Bore 151 |
| Depth | | 0.3 | 0.1 | 0.8 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 104 | 115 | 106 | 102 | 100 |

| Organochlorine Pesticides in soil | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-109 | 280063-112 | 280063-114 |
| Your Reference | UNITS | Bore 152 | R101 | R103 |
| Depth | | 0.1 | . | . |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 127 | 103 | 110 |

| Organophosphorus Pesticides in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-3 | 280063-6 | 280063-9 | 280063-12 | 280063-17 |
| Your Reference | UNITS | Bore 101 | Bore 102 | Bore 103 | Bore 104 | Bore 105 |
| Depth | | 1.0 | 0.5 | 0.1 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 100 | 102 | 109 | 112 | 103 |

| Organophosphorus Pesticides in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-21 | 280063-26 | 280063-28 | 280063-33 | 280063-36 |
| Your Reference | UNITS | Bore 106 | Bore 107 | Bore 108 | Bore 109 | Bore 110 |
| Depth | | 0.5 | 1.0 | 0.1 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 111 | 105 | 116 | 98 | 111 |

| Organophosphorus Pesticides in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-38 | 280063-43 | 280063-45 | 280063-47 | 280063-51 |
| Your Reference | UNITS | Bore 111 | Bore 112 | Bore 113 | Bore 114 | Bore 115 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 108 | 105 | 112 | 120 | 102 |

| Organophosphorus Pesticides in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-53 | 280063-57 | 280063-60 | 280063-62 | 280063-65 |
| Your Reference | UNITS | Bore 116 | Bore 117 | Bore 118 | Bore 119 | Bore 120 |
| Depth | | 0.1 | 0.5 | 0.5 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 13/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 109 | 99 | 121 | 102 | 109 |

| Organophosphorus Pesticides in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-70 | 280063-71 | 280063-75 | 280063-77 | 280063-80 |
| Your Reference | UNITS | Bore 121 | Bore 122 | Bore 123 | Bore 124 | Bore 126 |
| Depth | | 1.0 | 0.1 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 112 | 103 | 106 | 113 | 107 |

| Organophosphorus Pesticides in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-83 | 280063-87 | 280063-89 | 280063-90 | 280063-93 |
| Your Reference | UNITS | Bore 128 | Bore 140 | Bore 142 | Bore 144 | Bore 146 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 122 | 110 | 104 | 114 | 110 |

| Organophosphorus Pesticides in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-95 | 280063-97 | 280063-102 | 280063-103 | 280063-106 |
| Your Reference | UNITS | Bore 145 | Bore 147 | Bore 148 | Bore 150 | Bore 151 |
| Depth | | 0.3 | 0.1 | 0.8 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 104 | 115 | 106 | 102 | 100 |

| Organophosphorus Pesticides in Soil | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-109 | 280063-112 | 280063-114 |
| Your Reference | UNITS | Bore 152 | R101 | R103 |
| Depth | | 0.1 | . | . |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 127 | 103 | 110 |

| PCBs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-3 | 280063-6 | 280063-9 | 280063-12 | 280063-17 |
| Your Reference | UNITS | Bore 101 | Bore 102 | Bore 103 | Bore 104 | Bore 105 |
| Depth | | 1.0 | 0.5 | 0.1 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 100 | 102 | 109 | 112 | 103 |

| PCBs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-21 | 280063-26 | 280063-28 | 280063-33 | 280063-36 |
| Your Reference | UNITS | Bore 106 | Bore 107 | Bore 108 | Bore 109 | Bore 110 |
| Depth | | 0.5 | 1.0 | 0.1 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 111 | 105 | 116 | 98 | 111 |

| PCBs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-38 | 280063-43 | 280063-45 | 280063-47 | 280063-51 |
| Your Reference | UNITS | Bore 111 | Bore 112 | Bore 113 | Bore 114 | Bore 115 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 108 | 105 | 112 | 120 | 102 |

| PCBs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-53 | 280063-57 | 280063-60 | 280063-62 | 280063-65 |
| Your Reference | UNITS | Bore 116 | Bore 117 | Bore 118 | Bore 119 | Bore 120 |
| Depth | | 0.1 | 0.5 | 0.5 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 13/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 109 | 99 | 121 | 102 | 109 |

| PCBs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-70 | 280063-71 | 280063-75 | 280063-77 | 280063-80 |
| Your Reference | UNITS | Bore 121 | Bore 122 | Bore 123 | Bore 124 | Bore 126 |
| Depth | | 1.0 | 0.1 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 112 | 103 | 106 | 113 | 107 |

| PCBs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-83 | 280063-87 | 280063-89 | 280063-90 | 280063-93 |
| Your Reference | UNITS | Bore 128 | Bore 140 | Bore 142 | Bore 144 | Bore 146 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 122 | 110 | 104 | 114 | 110 |

| PCBs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-95 | 280063-97 | 280063-102 | 280063-103 | 280063-106 |
| Your Reference | UNITS | Bore 145 | Bore 147 | Bore 148 | Bore 150 | Bore 151 |
| Depth | | 0.3 | 0.1 | 0.8 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 104 | 115 | 106 | 102 | 100 |

| PCBs in Soil | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-109 | 280063-112 | 280063-114 |
| Your Reference | UNITS | Bore 152 | R101 | R103 |
| Depth | | 0.1 | . | . |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 127 | 103 | 110 |

| Misc Soil - Inorg | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-3 | 280063-6 | 280063-9 | 280063-12 | 280063-17 |
| Your Reference | UNITS | Bore 101 | Bore 102 | Bore 103 | Bore 104 | Bore 105 |
| Depth | | 1.0 | 0.5 | 0.1 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 | <5 | <5 |

| Misc Soil - Inorg | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-21 | 280063-26 | 280063-28 | 280063-33 | 280063-36 |
| Your Reference | UNITS | Bore 106 | Bore 107 | Bore 108 | Bore 109 | Bore 110 |
| Depth | | 0.5 | 1.0 | 0.1 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 | <5 | <5 |

| Misc Soil - Inorg | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-38 | 280063-43 | 280063-45 | 280063-47 | 280063-51 |
| Your Reference | UNITS | Bore 111 | Bore 112 | Bore 113 | Bore 114 | Bore 115 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 | <5 | <5 |

| Misc Soil - Inorg | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-53 | 280063-57 | 280063-60 | 280063-62 | 280063-65 |
| Your Reference | UNITS | Bore 116 | Bore 117 | Bore 118 | Bore 119 | Bore 120 |
| Depth | | 0.1 | 0.5 | 0.5 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 | <5 | <5 |

| Misc Soil - Inorg | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-70 | 280063-71 | 280063-75 | 280063-77 | 280063-80 |
| Your Reference | UNITS | Bore 121 | Bore 122 | Bore 123 | Bore 124 | Bore 126 |
| Depth | | 1.0 | 0.1 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 | <5 | <5 |

| Misc Soil - Inorg | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-83 | 280063-87 | 280063-89 | 280063-90 | 280063-93 |
| Your Reference | UNITS | Bore 128 | Bore 140 | Bore 142 | Bore 144 | Bore 146 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 | <5 | <5 |

| Misc Soil - Inorg | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-95 | 280063-97 | 280063-102 | 280063-103 | 280063-106 |
| Your Reference | UNITS | Bore 145 | Bore 147 | Bore 148 | Bore 150 | Bore 151 |
| Depth | | 0.3 | 0.1 | 0.8 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 | <5 | <5 |

| Misc Soil - Inorg | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-109 | 280063-112 | 280063-114 |
| Your Reference | UNITS | Bore 152 | R101 | R103 |
| Depth | | 0.1 | . | . |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 |

| Acid Extractable metals in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-3 | 280063-6 | 280063-9 | 280063-12 | 280063-17 |
| Your Reference | UNITS | Bore 101 | Bore 102 | Bore 103 | Bore 104 | Bore 105 |
| Depth | | 1.0 | 0.5 | 0.1 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | 6 | <4 | 5 | 5 | 5 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 16 | 20 | 25 | 30 | 27 |
| Copper | mg/kg | 15 | 14 | 16 | 12 | 11 |
| Lead | mg/kg | 23 | 16 | 33 | 14 | 22 |
| Mercury | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 14 | 12 | 15 | 10 | 10 |
| Zinc | mg/kg | 31 | 26 | 180 | 34 | 25 |

| Acid Extractable metals in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-21 | 280063-26 | 280063-28 | 280063-33 | 280063-36 |
| Your Reference | UNITS | Bore 106 | Bore 107 | Bore 108 | Bore 109 | Bore 110 |
| Depth | | 0.5 | 1.0 | 0.1 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | 5 | <4 | <4 | 5 | <4 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 20 | 13 | 18 | 28 | 15 |
| Copper | mg/kg | 13 | 11 | 11 | 10 | 10 |
| Lead | mg/kg | 24 | 22 | 16 | 29 | 25 |
| Mercury | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 10 | 9 | 10 | 10 | 6 |
| Zinc | mg/kg | 24 | 36 | 37 | 20 | 26 |

| Acid Extractable metals in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-38 | 280063-43 | 280063-45 | 280063-47 | 280063-51 |
| Your Reference | UNITS | Bore 111 | Bore 112 | Bore 113 | Bore 114 | Bore 115 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | <4 | 9 | 8 | <4 | <4 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 15 | 32 | 23 | 11 | 20 |
| Copper | mg/kg | 9 | 28 | 32 | 6 | 15 |
| Lead | mg/kg | 17 | 6 | 55 | 20 | 22 |
| Mercury | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 6 | 43 | 18 | 3 | 10 |
| Zinc | mg/kg | 19 | 25 | 14 | 21 | 14 |

| Acid Extractable metals in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-53 | 280063-57 | 280063-60 | 280063-62 | 280063-65 |
| Your Reference | UNITS | Bore 116 | Bore 117 | Bore 118 | Bore 119 | Bore 120 |
| Depth | | 0.1 | 0.5 | 0.5 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | <4 | <4 | <4 | 5 | <4 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 9 | 18 | 20 | 11 | 9 |
| Copper | mg/kg | 3 | 12 | 11 | 16 | 5 |
| Lead | mg/kg | 9 | 6 | 6 | 22 | 11 |
| Mercury | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 2 | 9 | 10 | 20 | 3 |
| Zinc | mg/kg | 9 | 14 | 19 | 57 | 12 |

| Acid Extractable metals in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-70 | 280063-71 | 280063-75 | 280063-77 | 280063-80 |
| Your Reference | UNITS | Bore 121 | Bore 122 | Bore 123 | Bore 124 | Bore 126 |
| Depth | | 1.0 | 0.1 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | <4 | 5 | <4 | <4 | <4 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 25 | 6 | 12 | 16 | 18 |
| Copper | mg/kg | 21 | 10 | 3 | 10 | 23 |
| Lead | mg/kg | 4 | 11 | 7 | 14 | 8 |
| Mercury | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 11 | 4 | 2 | 4 | 8 |
| Zinc | mg/kg | 13 | 18 | 5 | 26 | 19 |

| Acid Extractable metals in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-83 | 280063-87 | 280063-89 | 280063-90 | 280063-93 |
| Your Reference | UNITS | Bore 128 | Bore 140 | Bore 142 | Bore 144 | Bore 146 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | <4 | <4 | 4 | <4 | <4 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 13 | 27 | 25 | 10 | 13 |
| Copper | mg/kg | 6 | 9 | 16 | 5 | 7 |
| Lead | mg/kg | 11 | 5 | 7 | 10 | 5 |
| Mercury | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 3 | 8 | 14 | 4 | 9 |
| Zinc | mg/kg | 14 | 8 | 17 | 16 | 10 |

| Acid Extractable metals in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-95 | 280063-97 | 280063-102 | 280063-103 | 280063-106 |
| Your Reference | UNITS | Bore 145 | Bore 147 | Bore 148 | Bore 150 | Bore 151 |
| Depth | | 0.3 | 0.1 | 0.8 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | <4 | <4 | 5 | <4 | <4 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 16 | 13 | 27 | 13 | 11 |
| Copper | mg/kg | 7 | 8 | 31 | 11 | 4 |
| Lead | mg/kg | 20 | 14 | 7 | 19 | 10 |
| Mercury | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 4 | 4 | 14 | 5 | 2 |
| Zinc | mg/kg | 10 | 17 | 14 | 36 | 11 |

| Acid Extractable metals in soil | | | | | |
|---|---|---|---|---|---|
| Our Reference | | 280063-109 | 280063-112 | 280063-114 | 280063-122 |
| Your Reference | UNITS | Bore 152 | R101 | R103 | Bore 147 - [TRIPLICATE] |
| Depth | | 0.1 | . | . | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | <4 | 5 | 5 | <4 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 13 | 32 | 16 | 13 |
| Copper | mg/kg | 4 | 9 | 11 | 7 |
| Lead | mg/kg | 14 | 18 | 17 | 15 |
| Mercury | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 2 | 9 | 7 | 3 |
| Zinc | mg/kg | 13 | 20 | 38 | 19 |

| Moisture | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-3 | 280063-6 | 280063-9 | 280063-12 | 280063-17 |
| Your Reference | UNITS | Bore 101 | Bore 102 | Bore 103 | Bore 104 | Bore 105 |
| Depth | | 1.0 | 0.5 | 0.1 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 12 | 12 | 21 | 16 | 13 |

| Moisture | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-21 | 280063-26 | 280063-28 | 280063-33 | 280063-36 |
| Your Reference | UNITS | Bore 106 | Bore 107 | Bore 108 | Bore 109 | Bore 110 |
| Depth | | 0.5 | 1.0 | 0.1 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 13 | 12 | 17 | 12 | 14 |

| Moisture | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-38 | 280063-43 | 280063-45 | 280063-47 | 280063-51 |
| Your Reference | UNITS | Bore 111 | Bore 112 | Bore 113 | Bore 114 | Bore 115 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 12 | 18 | 13 | 18 | 14 |

| Moisture | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-53 | 280063-57 | 280063-60 | 280063-62 | 280063-65 |
| Your Reference | UNITS | Bore 116 | Bore 117 | Bore 118 | Bore 119 | Bore 120 |
| Depth | | 0.1 | 0.5 | 0.5 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 5.5 | 16 | 13 | 4.3 | 16 |

| Moisture | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-70 | 280063-71 | 280063-75 | 280063-77 | 280063-80 |
| Your Reference | UNITS | Bore 121 | Bore 122 | Bore 123 | Bore 124 | Bore 126 |
| Depth | | 1.0 | 0.1 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 12 | 11 | 10 | 18 | 14 |

| Moisture | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-83 | 280063-87 | 280063-89 | 280063-90 | 280063-93 |
| Your Reference | UNITS | Bore 128 | Bore 140 | Bore 142 | Bore 144 | Bore 146 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 20 | 14 | 17 | 21 | 15 |

| Moisture | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-95 | 280063-97 | 280063-102 | 280063-103 | 280063-106 |
| Your Reference | UNITS | Bore 145 | Bore 147 | Bore 148 | Bore 150 | Bore 151 |
| Depth | | 0.3 | 0.1 | 0.8 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 10 | 16 | 15 | 19 | 16 |

| Moisture | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-109 | 280063-112 | 280063-114 |
| Your Reference | UNITS | Bore 152 | R101 | R103 |
| Depth | | 0.1 | . | . |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 8.6 | 14 | 16 |

| Asbestos ID - soils | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-3 | 280063-6 | 280063-9 | 280063-12 | 280063-17 |
| Your Reference | UNITS | Bore 101 | Bore 102 | Bore 103 | Bore 104 | Bore 105 |
| Depth | | 1.0 | 0.5 | 0.1 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 45g | Approx. 45g | Approx. 40g | Approx. 45g | Approx. 45g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected |

| Asbestos ID - soils | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-21 | 280063-26 | 280063-28 | 280063-33 | 280063-36 |
| Your Reference | UNITS | Bore 106 | Bore 107 | Bore 108 | Bore 109 | Bore 110 |
| Depth | | 0.5 | 1.0 | 0.1 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 45g | Approx. 45g | Approx. 40g | Approx. 45g | Approx. 45g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected |

| Asbestos ID - soils | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-38 | 280063-43 | 280063-45 | 280063-47 | 280063-51 |
| Your Reference | UNITS | Bore 111 | Bore 112 | Bore 113 | Bore 114 | Bore 115 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 45g | Approx. 45g | Approx. 45g | Approx. 40g | Approx. 45g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected |

| Asbestos ID - soils | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-53 | 280063-57 | 280063-60 | 280063-62 | 280063-65 |
| Your Reference | UNITS | Bore 116 | Bore 117 | Bore 118 | Bore 119 | Bore 120 |
| Depth | | 0.1 | 0.5 | 0.5 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 45g | Approx. 40g | Approx. 45g | Approx. 50g | Approx. 45g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected |

| Asbestos ID - soils | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-70 | 280063-71 | 280063-75 | 280063-77 | 280063-80 |
| Your Reference | UNITS | Bore 121 | Bore 122 | Bore 123 | Bore 124 | Bore 126 |
| Depth | | 1.0 | 0.1 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 45g | Approx. 45g | Approx. 45g | Approx. 40g | Approx. 45g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected |

| Asbestos ID - soils | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-83 | 280063-87 | 280063-89 | 280063-90 | 280063-93 |
| Your Reference | UNITS | Bore 128 | Bore 140 | Bore 142 | Bore 144 | Bore 146 |
| Depth | | 0.1 | 1.0 | 0.5 | 0.1 | 0.5 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 40g | Approx. 45g | Approx. 40g | Approx. 40g | Approx. 45g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected |

| Asbestos ID - soils | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280063-95 | 280063-97 | 280063-102 | 280063-103 | 280063-106 |
| Your Reference | UNITS | Bore 145 | Bore 147 | Bore 148 | Bore 150 | Bore 151 |
| Depth | | 0.3 | 0.1 | 0.8 | 0.1 | 0.1 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 45g | Approx. 40g | Approx. 45g | Approx. 40g | Approx. 45g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected |

| Asbestos ID - soils | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-109 | 280063-112 | 280063-114 |
| Your Reference | UNITS | Bore 152 | R101 | R103 |
| Depth | | 0.1 | . | . |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 45g | Approx. 50g | Approx. 45g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected |

| Misc Inorg - Soil | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-42 | 280063-72 | 280063-92 |
| Your Reference | UNITS | Bore 112 | Bore 122 | Bore 146 |
| Depth | | 0.5 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| pH 1:5 soil:water | pH Units | 6.8 | 5.9 | 6.5 |

| Clay 50-120g | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-42 | 280063-72 | 280063-92 |
| Your Reference | UNITS | Bore 112 | Bore 122 | Bore 146 |
| Depth | | 0.5 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 14/10/2021 | 14/10/2021 | 14/10/2021 |
| Clay in soils <2μm | % (w/w) | 51 | 16 | 14 |

| CEC | | | | |
|---|---|---|---|---|
| Our Reference | | 280063-42 | 280063-72 | 280063-92 |
| Your Reference | UNITS | Bore 112 | Bore 122 | Bore 146 |
| Depth | | 0.5 | 0.5 | 0.1 |
| Type of sample | | Soil | Soil | Soil |
| Date Sampled | | 08/10/2021 | 08/10/2021 | 08/10/2021 |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Exchangeable Ca | meq/100g | 4.0 | 1.1 | 6.3 |
| Exchangeable K | meq/100g | 0.4 | 0.1 | 0.4 |
| Exchangeable Mg | meq/100g | 4.2 | 0.5 | 3.4 |
| Exchangeable Na | meq/100g | 0.2 | <0.1 | <0.1 |
| Cation Exchange Capacity | meq/100g | 8.8 | 1.8 | 10 |

| vTRH(C6-C10)/BTEXN in Water | | |
|---|---|---|
| Our Reference | | 280063-120 |
| Your Reference | UNITS | Rinsate 1 |
| Depth | | . |
| Type of sample | | Water |
| Date Sampled | | 08/10/2021 |
| Date extracted | - | 12/10/2021 |
| Date analysed | - | 13/10/2021 |
| TRH $C_6$ - $C_9$ | µg/L | <10 |
| TRH $C_6$ - $C_{10}$ | µg/L | <10 |
| TRH $C_6$ - $C_{10}$ less BTEX (F1) | µg/L | <10 |
| Benzene | µg/L | <1 |
| Toluene | µg/L | <1 |
| Ethylbenzene | µg/L | <1 |
| m+p-xylene | µg/L | <2 |
| o-xylene | µg/L | <1 |
| Naphthalene | µg/L | <1 |
| *Surrogate* Dibromofluoromethane | % | 109 |
| *Surrogate* toluene-d8 | % | 97 |
| *Surrogate* 4-BFB | % | 89 |

| Method ID | Methodology Summary |
|---|---|
| **AS1289.3.6.3** | Determination Particle Size Analysis using AS1289.3.6.3 and AS1289.3.6.1 and in house method INORG-107. Clay fraction at <2µm reported. |
| **ASB-001** | Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004. |
| **Inorg-001** | pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times. |
| **Inorg-008** | Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours. |
| **Inorg-031** | Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish).<br>Solids are extracted in a caustic media prior to analysis. |
| **Metals-020** | Determination of various metals by ICP-AES. |
| **Metals-020** | Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish. |
| **Metals-021** | Determination of Mercury by Cold Vapour AAS. |
| **Org-020** | Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.<br>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. |
| **Org-020** | Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.<br><br>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.<br><br>Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40). |
| **Org-021** | Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. |
| **Org-021** | Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.<br>Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs. |
| **Org-022** | Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS. |
| **Org-022/025** | Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. |

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

| QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-10 | 280063-9 |
| Date extracted | - | | | 12/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 13/10/2021 | 3 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | 25 | Org-023 | <25 | 3 | <25 | <25 | 0 | 80 | 82 |
| TRH $C_6$ - $C_{10}$ | mg/kg | 25 | Org-023 | <25 | 3 | <25 | <25 | 0 | 80 | 82 |
| Benzene | mg/kg | 0.2 | Org-023 | <0.2 | 3 | <0.2 | <0.2 | 0 | 103 | 107 |
| Toluene | mg/kg | 0.5 | Org-023 | <0.5 | 3 | <0.5 | <0.5 | 0 | 91 | 95 |
| Ethylbenzene | mg/kg | 1 | Org-023 | <1 | 3 | <1 | <1 | 0 | 68 | 70 |
| m+p-xylene | mg/kg | 2 | Org-023 | <2 | 3 | <2 | <2 | 0 | 68 | 70 |
| o-Xylene | mg/kg | 1 | Org-023 | <1 | 3 | <1 | <1 | 0 | 71 | 74 |
| naphthalene | mg/kg | 1 | Org-023 | <1 | 3 | <1 | <1 | 0 | [NT] | [NT] |
| *Surrogate* aaa-Trifluorotoluene | % | | Org-023 | 90 | 3 | 83 | 89 | 7 | 83 | 89 |

| QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-11 | 280063-75 |
| Date extracted | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | [NT] | 43 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | 25 | Org-023 | [NT] | 43 | <25 | <25 | 0 | 99 | 90 |
| TRH $C_6$ - $C_{10}$ | mg/kg | 25 | Org-023 | [NT] | 43 | <25 | <25 | 0 | 99 | 90 |
| Benzene | mg/kg | 0.2 | Org-023 | [NT] | 43 | <0.2 | <0.2 | 0 | 129 | 115 |
| Toluene | mg/kg | 0.5 | Org-023 | [NT] | 43 | <0.5 | <0.5 | 0 | 116 | 105 |
| Ethylbenzene | mg/kg | 1 | Org-023 | [NT] | 43 | <1 | <1 | 0 | 83 | 77 |
| m+p-xylene | mg/kg | 2 | Org-023 | [NT] | 43 | <2 | <2 | 0 | 83 | 77 |
| o-Xylene | mg/kg | 1 | Org-023 | [NT] | 43 | <1 | <1 | 0 | 89 | 81 |
| naphthalene | mg/kg | 1 | Org-023 | [NT] | 43 | <1 | <1 | 0 | [NT] | [NT] |
| *Surrogate* aaa-Trifluorotoluene | % | | Org-023 | [NT] | 43 | 94 | 90 | 4 | 104 | 96 |

| QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 71 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 71 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| TRH $C_6$ - $C_9$ | mg/kg | 25 | Org-023 | [NT] | 71 | <25 | <25 | 0 | [NT] | [NT] |
| TRH $C_6$ - $C_{10}$ | mg/kg | 25 | Org-023 | [NT] | 71 | <25 | <25 | 0 | [NT] | [NT] |
| Benzene | mg/kg | 0.2 | Org-023 | [NT] | 71 | <0.2 | <0.2 | 0 | [NT] | [NT] |
| Toluene | mg/kg | 0.5 | Org-023 | [NT] | 71 | <0.5 | <0.5 | 0 | [NT] | [NT] |
| Ethylbenzene | mg/kg | 1 | Org-023 | [NT] | 71 | <1 | <1 | 0 | [NT] | [NT] |
| m+p-xylene | mg/kg | 2 | Org-023 | [NT] | 71 | <2 | <2 | 0 | [NT] | [NT] |
| o-Xylene | mg/kg | 1 | Org-023 | [NT] | 71 | <1 | <1 | 0 | [NT] | [NT] |
| naphthalene | mg/kg | 1 | Org-023 | [NT] | 71 | <1 | <1 | 0 | [NT] | [NT] |
| *Surrogate* aaa-Trifluorotoluene | % | | Org-023 | [NT] | 71 | 102 | 84 | 19 | [NT] | [NT] |

| QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 97 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 97 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| TRH $C_6$ - $C_9$ | mg/kg | 25 | Org-023 | [NT] | 97 | <25 | <25 | 0 | [NT] | [NT] |
| TRH $C_6$ - $C_{10}$ | mg/kg | 25 | Org-023 | [NT] | 97 | <25 | <25 | 0 | [NT] | [NT] |
| Benzene | mg/kg | 0.2 | Org-023 | [NT] | 97 | <0.2 | <0.2 | 0 | [NT] | [NT] |
| Toluene | mg/kg | 0.5 | Org-023 | [NT] | 97 | <0.5 | <0.5 | 0 | [NT] | [NT] |
| Ethylbenzene | mg/kg | 1 | Org-023 | [NT] | 97 | <1 | <1 | 0 | [NT] | [NT] |
| m+p-xylene | mg/kg | 2 | Org-023 | [NT] | 97 | <2 | <2 | 0 | [NT] | [NT] |
| o-Xylene | mg/kg | 1 | Org-023 | [NT] | 97 | <1 | <1 | 0 | [NT] | [NT] |
| naphthalene | mg/kg | 1 | Org-023 | [NT] | 97 | <1 | <1 | 0 | [NT] | [NT] |
| *Surrogate* aaa-Trifluorotoluene | % | | Org-023 | [NT] | 97 | 90 | 99 | 10 | [NT] | [NT] |

| QUALITY CONTROL: svTRH (C10-C40) in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-10 | 280063-9 |
| Date extracted | - | | | 12/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 12/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | 50 | Org-020 | <50 | 3 | <50 | <50 | 0 | 114 | 103 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | 100 | Org-020 | <100 | 3 | <100 | <100 | 0 | 101 | 93 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | 100 | Org-020 | <100 | 3 | <100 | <100 | 0 | 65 | 88 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | 50 | Org-020 | <50 | 3 | <50 | <50 | 0 | 114 | 103 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | 100 | Org-020 | <100 | 3 | <100 | <100 | 0 | 101 | 93 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | 100 | Org-020 | <100 | 3 | <100 | <100 | 0 | 65 | 88 |
| *Surrogate* o-Terphenyl | % | | Org-020 | 92 | 3 | 91 | 91 | 0 | 111 | 97 |

| QUALITY CONTROL: svTRH (C10-C40) in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-11 | 280063-75 |
| Date extracted | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | [NT] | 43 | 13/10/2021 | 13/10/2021 | | 12/10/2021 | 13/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | 50 | Org-020 | [NT] | 43 | <50 | <50 | 0 | 93 | 86 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | 100 | Org-020 | [NT] | 43 | <100 | <100 | 0 | 95 | 90 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | 100 | Org-020 | [NT] | 43 | <100 | <100 | 0 | 109 | 106 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | 50 | Org-020 | [NT] | 43 | <50 | <50 | 0 | 93 | 86 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | 100 | Org-020 | [NT] | 43 | <100 | <100 | 0 | 95 | 90 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | 100 | Org-020 | [NT] | 43 | <100 | <100 | 0 | 109 | 106 |
| *Surrogate* o-Terphenyl | % | | Org-020 | [NT] | 43 | 91 | 91 | 0 | 106 | 83 |

| QUALITY CONTROL: svTRH (C10-C40) in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 71 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 71 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | 50 | Org-020 | [NT] | 71 | <50 | <50 | 0 | [NT] | [NT] |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | 100 | Org-020 | [NT] | 71 | <100 | <100 | 0 | [NT] | [NT] |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | 100 | Org-020 | [NT] | 71 | <100 | <100 | 0 | [NT] | [NT] |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | 50 | Org-020 | [NT] | 71 | <50 | <50 | 0 | [NT] | [NT] |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | 100 | Org-020 | [NT] | 71 | <100 | <100 | 0 | [NT] | [NT] |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | 100 | Org-020 | [NT] | 71 | <100 | <100 | 0 | [NT] | [NT] |
| *Surrogate* o-Terphenyl | % | | Org-020 | [NT] | 71 | 85 | 83 | 2 | [NT] | [NT] |

| QUALITY CONTROL: svTRH (C10-C40) in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 97 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 97 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | 50 | Org-020 | [NT] | 97 | <50 | <50 | 0 | [NT] | [NT] |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | 100 | Org-020 | [NT] | 97 | <100 | <100 | 0 | [NT] | [NT] |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | 100 | Org-020 | [NT] | 97 | <100 | <100 | 0 | [NT] | [NT] |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | 50 | Org-020 | [NT] | 97 | <50 | <50 | 0 | [NT] | [NT] |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | 100 | Org-020 | [NT] | 97 | <100 | <100 | 0 | [NT] | [NT] |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | 100 | Org-020 | [NT] | 97 | <100 | <100 | 0 | [NT] | [NT] |
| *Surrogate* o-Terphenyl | % | | Org-020 | [NT] | 97 | 85 | 87 | 2 | [NT] | [NT] |

| QUALITY CONTROL: PAHs in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-10 | 280063-9 |
| Date extracted | - | | | 12/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 13/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Naphthalene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 105 | 111 |
| Acenaphthylene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Acenaphthene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 113 | 109 |
| Fluorene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 109 | 114 |
| Phenanthrene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 128 | 130 |
| Anthracene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fluoranthene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 123 | 125 |
| Pyrene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 125 | 127 |
| Benzo(a)anthracene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chrysene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 85 | 85 |
| Benzo(b,j+k)fluoranthene | mg/kg | 0.2 | Org-022/025 | <0.2 | 3 | <0.2 | <0.2 | 0 | [NT] | [NT] |
| Benzo(a)pyrene | mg/kg | 0.05 | Org-022/025 | <0.05 | 3 | <0.05 | <0.05 | 0 | 124 | 124 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dibenzo(a,h)anthracene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(g,h,i)perylene | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate p*-Terphenyl-d14 | % | | Org-022/025 | 110 | 3 | 119 | 124 | 4 | 95 | 95 |

| QUALITY CONTROL: PAHs in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-11 | 280063-75 |
| Date extracted | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 13/10/2021 | 13/10/2021 |
| Naphthalene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 114 | 105 |
| Acenaphthylene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Acenaphthene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 109 | 99 |
| Fluorene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 107 | 111 |
| Phenanthrene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 112 | 102 |
| Anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fluoranthene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 118 | 102 |
| Pyrene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 109 | 99 |
| Benzo(a)anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chrysene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 77 | 75 |
| Benzo(b,j+k)fluoranthene | mg/kg | 0.2 | Org-022/025 | [NT] | 43 | <0.2 | <0.2 | 0 | [NT] | [NT] |
| Benzo(a)pyrene | mg/kg | 0.05 | Org-022/025 | [NT] | 43 | <0.05 | <0.05 | 0 | 124 | 130 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dibenzo(a,h)anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(g,h,i)perylene | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate p*-Terphenyl-d14 | % | | Org-022/025 | [NT] | 43 | 121 | 122 | 1 | 102 | 129 |

| QUALITY CONTROL: PAHs in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 71 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 71 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Naphthalene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Acenaphthylene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Acenaphthene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fluorene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Phenanthrene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fluoranthene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Pyrene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(a)anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chrysene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(b,j+k)fluoranthene | mg/kg | 0.2 | Org-022/025 | [NT] | 71 | <0.2 | <0.2 | 0 | [NT] | [NT] |
| Benzo(a)pyrene | mg/kg | 0.05 | Org-022/025 | [NT] | 71 | <0.05 | <0.05 | 0 | [NT] | [NT] |
| Indeno(1,2,3-c,d)pyrene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dibenzo(a,h)anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(g,h,i)perylene | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate p*-Terphenyl-d14 | % | | Org-022/025 | [NT] | 71 | 99 | 122 | 21 | [NT] | [NT] |

| QUALITY CONTROL: PAHs in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 97 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 97 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Naphthalene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Acenaphthylene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Acenaphthene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fluorene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Phenanthrene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fluoranthene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Pyrene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(a)anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chrysene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(b,j+k)fluoranthene | mg/kg | 0.2 | Org-022/025 | [NT] | 97 | <0.2 | <0.2 | 0 | [NT] | [NT] |
| Benzo(a)pyrene | mg/kg | 0.05 | Org-022/025 | [NT] | 97 | <0.05 | <0.05 | 0 | [NT] | [NT] |
| Indeno(1,2,3-c,d)pyrene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dibenzo(a,h)anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(g,h,i)perylene | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate p*-Terphenyl-d14 | % | | Org-022/025 | [NT] | 97 | 105 | 124 | 17 | [NT] | [NT] |

| QUALITY CONTROL: Organochlorine Pesticides in soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-10 | 280063-9 |
| Date extracted | - | | | 12/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 13/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| alpha-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 120 | 112 |
| HCB | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| beta-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 114 | 114 |
| gamma-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Heptachlor | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 111 | 109 |
| delta-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aldrin | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 122 | 124 |
| Heptachlor Epoxide | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 126 | 123 |
| gamma-Chlordane | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| alpha-chlordane | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan I | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDE | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 117 | 123 |
| Dieldrin | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 122 | 126 |
| Endrin | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 82 | 130 |
| Endosulfan II | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDD | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 110 | 120 |
| Endrin Aldehyde | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDT | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan Sulphate | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 106 | 118 |
| Methoxychlor | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | 116 | 3 | 100 | 103 | 3 | 92 | 88 |

| QUALITY CONTROL: Organochlorine Pesticides in soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-11 | 280063-75 |
| Date extracted | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 13/10/2021 | 13/10/2021 |
| alpha-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 126 | 106 |
| HCB | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| beta-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 128 | 92 |
| gamma-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Heptachlor | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 99 | 87 |
| delta-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aldrin | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 120 | 103 |
| Heptachlor Epoxide | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 106 | 110 |
| gamma-Chlordane | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| alpha-chlordane | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan I | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDE | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 109 | 96 |
| Dieldrin | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 94 | 94 |
| Endrin | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 107 | 102 |
| Endosulfan II | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDD | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 108 | 98 |
| Endrin Aldehyde | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDT | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan Sulphate | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 96 | 88 |
| Methoxychlor | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | [NT] | 43 | 105 | 106 | 1 | 94 | 126 |

| QUALITY CONTROL: Organochlorine Pesticides in soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 71 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 71 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| alpha-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| HCB | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| beta-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| gamma-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Heptachlor | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| delta-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aldrin | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Heptachlor Epoxide | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| gamma-Chlordane | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| alpha-chlordane | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan I | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDE | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dieldrin | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endrin | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan II | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDD | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endrin Aldehyde | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDT | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan Sulphate | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Methoxychlor | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | [NT] | 71 | 103 | 116 | 12 | [NT] | [NT] |

| QUALITY CONTROL: Organochlorine Pesticides in soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 97 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 97 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| alpha-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| HCB | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| beta-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| gamma-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Heptachlor | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| delta-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aldrin | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Heptachlor Epoxide | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| gamma-Chlordane | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| alpha-chlordane | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan I | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDE | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dieldrin | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endrin | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan II | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDD | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endrin Aldehyde | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDT | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan Sulphate | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Methoxychlor | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | [NT] | 97 | 115 | 116 | 1 | [NT] | [NT] |

| QUALITY CONTROL: Organophosphorus Pesticides in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-10 | 280063-9 |
| Date extracted | - | | | 12/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 13/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Dichlorvos | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 120 | 91 |
| Dimethoate | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Diazinon | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chlorpyriphos-methyl | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ronnel | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 118 | 120 |
| Fenitrothion | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 85 | 93 |
| Malathion | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 124 | 132 |
| Chlorpyriphos | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 126 | 128 |
| Parathion | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 95 | 101 |
| Bromophos-ethyl | mg/kg | 0.1 | Org-022 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ethion | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | 100 | 117 |
| Azinphos-methyl (Guthion) | mg/kg | 0.1 | Org-022/025 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | 116 | 3 | 100 | 103 | 3 | 92 | 88 |

| QUALITY CONTROL: Organophosphorus Pesticides in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-11 | 280063-75 |
| Date extracted | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 13/10/2021 | 13/10/2021 |
| Dichlorvos | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 95 | 74 |
| Dimethoate | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Diazinon | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chlorpyriphos-methyl | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ronnel | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 110 | 93 |
| Fenitrothion | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 101 | 87 |
| Malathion | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 114 | 120 |
| Chlorpyriphos | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 120 | 110 |
| Parathion | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 91 | 80 |
| Bromophos-ethyl | mg/kg | 0.1 | Org-022 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ethion | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | 84 | 80 |
| Azinphos-methyl (Guthion) | mg/kg | 0.1 | Org-022/025 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | [NT] | 43 | 105 | 106 | 1 | 94 | 126 |

| QUALITY CONTROL: Organophosphorus Pesticides in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 71 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 71 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Dichlorvos | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dimethoate | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Diazinon | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chlorpyriphos-methyl | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ronnel | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fenitrothion | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Malathion | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chlorpyriphos | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Parathion | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Bromophos-ethyl | mg/kg | 0.1 | Org-022 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ethion | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Azinphos-methyl (Guthion) | mg/kg | 0.1 | Org-022/025 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | [NT] | 71 | 103 | 116 | 12 | [NT] | [NT] |

| QUALITY CONTROL: Organophosphorus Pesticides in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 97 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 97 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Dichlorvos | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dimethoate | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Diazinon | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chlorpyriphos-methyl | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ronnel | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fenitrothion | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Malathion | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chlorpyriphos | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Parathion | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Bromophos-ethyl | mg/kg | 0.1 | Org-022 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ethion | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Azinphos-methyl (Guthion) | mg/kg | 0.1 | Org-022/025 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | [NT] | 97 | 115 | 116 | 1 | [NT] | [NT] |

| QUALITY CONTROL: PCBs in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-10 | 280063-9 |
| Date extracted | - | | | 12/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 13/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Aroclor 1016 | mg/kg | 0.1 | Org-021 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1221 | mg/kg | 0.1 | Org-021 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1232 | mg/kg | 0.1 | Org-021 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1242 | mg/kg | 0.1 | Org-021 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1248 | mg/kg | 0.1 | Org-021 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1254 | mg/kg | 0.1 | Org-021 | <0.1 | 3 | <0.1 | <0.1 | 0 | 120 | 120 |
| Aroclor 1260 | mg/kg | 0.1 | Org-021 | <0.1 | 3 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-021 | 116 | 3 | 100 | 103 | 3 | 92 | 88 |

| QUALITY CONTROL: PCBs in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-11 | 280063-75 |
| Date extracted | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 13/10/2021 | 13/10/2021 |
| Aroclor 1016 | mg/kg | 0.1 | Org-021 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1221 | mg/kg | 0.1 | Org-021 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1232 | mg/kg | 0.1 | Org-021 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1242 | mg/kg | 0.1 | Org-021 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1248 | mg/kg | 0.1 | Org-021 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1254 | mg/kg | 0.1 | Org-021 | [NT] | 43 | <0.1 | <0.1 | 0 | 120 | 100 |
| Aroclor 1260 | mg/kg | 0.1 | Org-021 | [NT] | 43 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-021 | [NT] | 43 | 105 | 106 | 1 | 94 | 126 |

| QUALITY CONTROL: PCBs in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 71 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 71 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Aroclor 1016 | mg/kg | 0.1 | Org-021 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1221 | mg/kg | 0.1 | Org-021 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1232 | mg/kg | 0.1 | Org-021 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1242 | mg/kg | 0.1 | Org-021 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1248 | mg/kg | 0.1 | Org-021 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1254 | mg/kg | 0.1 | Org-021 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1260 | mg/kg | 0.1 | Org-021 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-021 | [NT] | 71 | 103 | 116 | 12 | [NT] | [NT] |

| QUALITY CONTROL: PCBs in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 97 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 97 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Aroclor 1016 | mg/kg | 0.1 | Org-021 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1221 | mg/kg | 0.1 | Org-021 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1232 | mg/kg | 0.1 | Org-021 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1242 | mg/kg | 0.1 | Org-021 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1248 | mg/kg | 0.1 | Org-021 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1254 | mg/kg | 0.1 | Org-021 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1260 | mg/kg | 0.1 | Org-021 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-021 | [NT] | 97 | 115 | 116 | 1 | [NT] | [NT] |

| QUALITY CONTROL: Misc Soil - Inorg | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-1 | 280063-9 |
| Date prepared | - | | | 12/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 12/10/2021 | 3 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | 5 | Inorg-031 | <5 | 3 | <5 | <5 | 0 | 99 | 103 |

| QUALITY CONTROL: Misc Soil - Inorg | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-10 | 280063-75 |
| Date prepared | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | [NT] | 43 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | 5 | Inorg-031 | [NT] | 43 | <5 | <5 | 0 | 99 | 95 |

| QUALITY CONTROL: Misc Soil - Inorg | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date prepared | - | | | [NT] | 71 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 71 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Total Phenolics (as Phenol) | mg/kg | 5 | Inorg-031 | [NT] | 71 | <5 | <5 | 0 | [NT] | [NT] |

| QUALITY CONTROL: Misc Soil - Inorg | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date prepared | - | | | [NT] | 97 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 97 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Total Phenolics (as Phenol) | mg/kg | 5 | Inorg-031 | [NT] | 97 | <5 | <5 | 0 | [NT] | [NT] |

| QUALITY CONTROL: Acid Extractable metals in soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-10 | 280063-9 |
| Date prepared | - | | | 13/10/2021 | 3 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| Date analysed | - | | | 13/10/2021 | 3 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | 4 | Metals-020 | <4 | 3 | 6 | 6 | 0 | 108 | 94 |
| Cadmium | mg/kg | 0.4 | Metals-020 | <0.4 | 3 | <0.4 | <0.4 | 0 | 106 | 90 |
| Chromium | mg/kg | 1 | Metals-020 | <1 | 3 | 16 | 18 | 12 | 107 | 100 |
| Copper | mg/kg | 1 | Metals-020 | <1 | 3 | 15 | 16 | 6 | 107 | 105 |
| Lead | mg/kg | 1 | Metals-020 | <1 | 3 | 23 | 25 | 8 | 110 | 92 |
| Mercury | mg/kg | 0.1 | Metals-021 | <0.1 | 3 | <0.1 | <0.1 | 0 | 100 | 88 |
| Nickel | mg/kg | 1 | Metals-020 | <1 | 3 | 14 | 13 | 7 | 109 | 93 |
| Zinc | mg/kg | 1 | Metals-020 | <1 | 3 | 31 | 33 | 6 | 108 | # |

| QUALITY CONTROL: Acid Extractable metals in soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-11 | 280063-75 |
| Date prepared | - | | | [NT] | 43 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| Date analysed | - | | | [NT] | 43 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | 4 | Metals-020 | [NT] | 43 | 9 | 7 | 25 | 100 | 91 |
| Cadmium | mg/kg | 0.4 | Metals-020 | [NT] | 43 | <0.4 | <0.4 | 0 | 100 | 92 |
| Chromium | mg/kg | 1 | Metals-020 | [NT] | 43 | 32 | 27 | 17 | 102 | 104 |
| Copper | mg/kg | 1 | Metals-020 | [NT] | 43 | 28 | 24 | 15 | 102 | 106 |
| Lead | mg/kg | 1 | Metals-020 | [NT] | 43 | 6 | 9 | 40 | 103 | 96 |
| Mercury | mg/kg | 0.1 | Metals-021 | [NT] | 43 | <0.1 | <0.1 | 0 | 97 | 93 |
| Nickel | mg/kg | 1 | Metals-020 | [NT] | 43 | 43 | 30 | 36 | 103 | 100 |
| Zinc | mg/kg | 1 | Metals-020 | [NT] | 43 | 25 | 20 | 22 | 102 | 97 |

| QUALITY CONTROL: Acid Extractable metals in soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date prepared | - | | | [NT] | 71 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 71 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Arsenic | mg/kg | 4 | Metals-020 | [NT] | 71 | 5 | 5 | 0 | [NT] | [NT] |
| Cadmium | mg/kg | 0.4 | Metals-020 | [NT] | 71 | <0.4 | <0.4 | 0 | [NT] | [NT] |
| Chromium | mg/kg | 1 | Metals-020 | [NT] | 71 | 6 | 7 | 15 | [NT] | [NT] |
| Copper | mg/kg | 1 | Metals-020 | [NT] | 71 | 10 | 11 | 10 | [NT] | [NT] |
| Lead | mg/kg | 1 | Metals-020 | [NT] | 71 | 11 | 11 | 0 | [NT] | [NT] |
| Mercury | mg/kg | 0.1 | Metals-021 | [NT] | 71 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Nickel | mg/kg | 1 | Metals-020 | [NT] | 71 | 4 | 5 | 22 | [NT] | [NT] |
| Zinc | mg/kg | 1 | Metals-020 | [NT] | 71 | 18 | 19 | 5 | [NT] | [NT] |

| QUALITY CONTROL: Acid Extractable metals in soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date prepared | - | | | [NT] | 97 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 97 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Arsenic | mg/kg | 4 | Metals-020 | [NT] | 97 | <4 | <4 | 0 | [NT] | [NT] |
| Cadmium | mg/kg | 0.4 | Metals-020 | [NT] | 97 | <0.4 | <0.4 | 0 | [NT] | [NT] |
| Chromium | mg/kg | 1 | Metals-020 | [NT] | 97 | 13 | 11 | 17 | [NT] | [NT] |
| Copper | mg/kg | 1 | Metals-020 | [NT] | 97 | 8 | 7 | 13 | [NT] | [NT] |
| Lead | mg/kg | 1 | Metals-020 | [NT] | 97 | 14 | 10 | 33 | [NT] | [NT] |
| Mercury | mg/kg | 0.1 | Metals-021 | [NT] | 97 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Nickel | mg/kg | 1 | Metals-020 | [NT] | 97 | 4 | 4 | 0 | [NT] | [NT] |
| Zinc | mg/kg | 1 | Metals-020 | [NT] | 97 | 17 | 11 | 43 | [NT] | [NT] |

| QUALITY CONTROL: Misc Inorg - Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-1 | [NT] |
| Date prepared | - | | | 13/10/2021 | 72 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | [NT] |
| Date analysed | - | | | 13/10/2021 | 72 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | [NT] |
| pH 1:5 soil:water | pH Units | | Inorg-001 | [NT] | 72 | 5.9 | 5.9 | 0 | 102 | [NT] |

| QUALITY CONTROL: CEC | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-1 | 280063-72 |
| Date prepared | - | | | 13/10/2021 | 42 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| Date analysed | - | | | 13/10/2021 | 42 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| Exchangeable Ca | meq/100g | 0.1 | Metals-020 | <0.1 | 42 | 4.0 | 4.3 | 7 | 113 | 88 |
| Exchangeable K | meq/100g | 0.1 | Metals-020 | <0.1 | 42 | 0.4 | 0.4 | 0 | 112 | 95 |
| Exchangeable Mg | meq/100g | 0.1 | Metals-020 | <0.1 | 42 | 4.2 | 4.6 | 9 | 109 | 96 |
| Exchangeable Na | meq/100g | 0.1 | Metals-020 | <0.1 | 42 | 0.2 | 0.2 | 0 | 122 | 111 |

| QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-W1 | [NT] |
| Date extracted | - | | | 12/10/2021 | [NT] | [NT] | [NT] | [NT] | 12/10/2021 | [NT] |
| Date analysed | - | | | 13/10/2021 | [NT] | [NT] | [NT] | [NT] | 13/10/2021 | [NT] |
| TRH $C_6$ - $C_9$ | µg/L | 10 | Org-023 | <10 | [NT] | [NT] | [NT] | [NT] | 88 | [NT] |
| TRH $C_6$ - $C_{10}$ | µg/L | 10 | Org-023 | <10 | [NT] | [NT] | [NT] | [NT] | 88 | [NT] |
| Benzene | µg/L | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 91 | [NT] |
| Toluene | µg/L | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 84 | [NT] |
| Ethylbenzene | µg/L | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 85 | [NT] |
| m+p-xylene | µg/L | 2 | Org-023 | <2 | [NT] | [NT] | [NT] | [NT] | 90 | [NT] |
| o-xylene | µg/L | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 88 | [NT] |
| Naphthalene | µg/L | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| *Surrogate* Dibromofluoromethane | % | | Org-023 | 110 | [NT] | [NT] | [NT] | [NT] | 109 | [NT] |
| *Surrogate* toluene-d8 | % | | Org-023 | 96 | [NT] | [NT] | [NT] | [NT] | 98 | [NT] |
| *Surrogate* 4-BFB | % | | Org-023 | 89 | [NT] | [NT] | [NT] | [NT] | 102 | [NT] |

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

## Quality Control Definitions

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

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

## Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

## Report Comments

Acid Extractable Metals in Soil:
- The laboratory RPD acceptance criteria has been exceeded for 280063-97 for Zn. Therefore a triplicate result has been issued as laboratory sample number 280063-122.
- # Percent recovery is not applicable due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples were sub-sampled from jars provided by the client.

**Envirolab Services Pty Ltd**
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

# CERTIFICATE OF ANALYSIS 280063-A

## Client Details

| | |
|---|---|
| **Client** | Douglas Partners Canberra |
| **Attention** | Shannon Goodsell |
| **Address** | Unit 2, 73 Sheppard St,, HUME, ACT, 2620 |

## Sample Details

| | |
|---|---|
| **Your Reference** | **202107.04, Bungendore** |
| **Number of Samples** | additional analysis |
| **Date samples received** | 12/10/2021 |
| **Date completed instructions received** | 14/10/2021 |

## Analysis Details

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

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

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

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

## Report Details

| | |
|---|---|
| **Date results requested by** | 15/10/2021 |
| **Date of Issue** | 15/10/2021 |

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**Asbestos Approved By**

Analysed by Asbestos Approved Analyst: Ridwan Wijaya
Authorised by Asbestos Approved Signatory: Lucy Zhu

**Results Approved By**

Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Josh Williams, LC Supervisor
Lucy Zhu, Asbestos Supervisor

**Authorised By**

Nancy Zhang, Laboratory Manager

| vTRH(C6-C10)/BTEXN in Soil | | |
|---|---|---|
| Our Reference | | 280063-A-113 |
| Your Reference | UNITS | R102 |
| Depth | | . |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date extracted | - | 14/10/2021 |
| Date analysed | - | 15/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 |
| Benzene | mg/kg | <0.2 |
| Toluene | mg/kg | <0.5 |
| Ethylbenzene | mg/kg | <1 |
| m+p-xylene | mg/kg | <2 |
| o-Xylene | mg/kg | <1 |
| naphthalene | mg/kg | <1 |
| Total +ve Xylenes | mg/kg | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 99 |

| svTRH (C10-C40) in Soil | | |
|---|---|---|
| Our Reference | | 280063-A-113 |
| Your Reference | UNITS | R102 |
| Depth | | . |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date extracted | - | 14/10/2021 |
| Date analysed | - | 15/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 |
| *Surrogate* o-Terphenyl | % | 80 |

| PAHs in Soil | | |
|---|---|---|
| Our Reference | | 280063-A-113 |
| Your Reference | UNITS | R102 |
| Depth | | . |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date extracted | - | 14/10/2021 |
| Date analysed | - | 15/10/2021 |
| Naphthalene | mg/kg | <0.1 |
| Acenaphthylene | mg/kg | <0.1 |
| Acenaphthene | mg/kg | <0.1 |
| Fluorene | mg/kg | <0.1 |
| Phenanthrene | mg/kg | <0.1 |
| Anthracene | mg/kg | <0.1 |
| Fluoranthene | mg/kg | <0.1 |
| Pyrene | mg/kg | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 |
| Chrysene | mg/kg | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 84 |

| Organochlorine Pesticides in soil | | |
|---|---|---|
| Our Reference | | 280063-A-113 |
| Your Reference | UNITS | R102 |
| Depth | | . |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date extracted | - | 14/10/2021 |
| Date analysed | - | 15/10/2021 |
| alpha-BHC | mg/kg | <0.1 |
| HCB | mg/kg | <0.1 |
| beta-BHC | mg/kg | <0.1 |
| gamma-BHC | mg/kg | <0.1 |
| Heptachlor | mg/kg | <0.1 |
| delta-BHC | mg/kg | <0.1 |
| Aldrin | mg/kg | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 |
| alpha-chlordane | mg/kg | <0.1 |
| Endosulfan I | mg/kg | <0.1 |
| pp-DDE | mg/kg | <0.1 |
| Dieldrin | mg/kg | <0.1 |
| Endrin | mg/kg | <0.1 |
| Endosulfan II | mg/kg | <0.1 |
| pp-DDD | mg/kg | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 |
| pp-DDT | mg/kg | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 |
| Methoxychlor | mg/kg | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 |
| *Surrogate* TCMX | % | 83 |

| Organophosphorus Pesticides in Soil | | |
|---|---|---|
| Our Reference | | 280063-A-113 |
| Your Reference | UNITS | R102 |
| Depth | | . |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date extracted | - | 14/10/2021 |
| Date analysed | - | 15/10/2021 |
| Dichlorvos | mg/kg | <0.1 |
| Dimethoate | mg/kg | <0.1 |
| Diazinon | mg/kg | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 |
| Ronnel | mg/kg | <0.1 |
| Fenitrothion | mg/kg | <0.1 |
| Malathion | mg/kg | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 |
| Parathion | mg/kg | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 |
| Ethion | mg/kg | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 |
| *Surrogate* TCMX | % | 83 |

| PCBs in Soil | | |
|---|---|---|
| Our Reference | | 280063-A-113 |
| Your Reference | UNITS | R102 |
| Depth | | . |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date extracted | - | 14/10/2021 |
| Date analysed | - | 15/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 |
| *Surrogate* TCMX | % | 83 |

| Misc Soil - Inorg | | |
|---|---|---|
| Our Reference | | 280063-A-113 |
| Your Reference | UNITS | R102 |
| Depth | | . |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date prepared | - | 14/10/2021 |
| Date analysed | - | 14/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 |

| Acid Extractable metals in soil | | |
|---|---|---|
| Our Reference | | 280063-A-113 |
| Your Reference | UNITS | R102 |
| Depth | | . |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date prepared | - | 14/10/2021 |
| Date analysed | - | 15/10/2021 |
| Arsenic | mg/kg | <4 |
| Cadmium | mg/kg | <0.4 |
| Chromium | mg/kg | 22 |
| Copper | mg/kg | 15 |
| Lead | mg/kg | 7 |
| Mercury | mg/kg | <0.1 |
| Nickel | mg/kg | 16 |
| Zinc | mg/kg | 16 |

| Moisture | | |
|---|---|---|
| Our Reference | | 280063-A-113 |
| Your Reference | UNITS | R102 |
| Depth | | . |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date prepared | - | 14/10/2021 |
| Date analysed | - | 15/10/2021 |
| Moisture | % | 19 |

| Asbestos ID - soils | | |
|---|---|---|
| Our Reference | | 280063-A-113 |
| Your Reference | UNITS | R102 |
| Depth | | . |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date analysed | - | 15/10/2021 |
| Sample mass tested | g | Approx. 40g |
| Sample Description | - | Beige fine-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected |
| Asbestos comments | - | NO |
| Trace Analysis | - | No asbestos detected |

| Metals from Leaching Fluid pH 2.9 or 5 | | |
|---|---|---|
| Our Reference | | 280063-A-43 |
| Your Reference | UNITS | Bore 112 |
| Depth | | 1.0 |
| Type of sample | | Soil |
| Date Sampled | | 08/10/2021 |
| Date extracted | - | 15/10/2021 |
| Date analysed | - | 15/10/2021 |
| pH of soil for fluid# determ. | pH units | 8.5 |
| pH of soil TCLP (after HCl) | pH units | 1.8 |
| Extraction fluid used | - | 1 |
| pH of final Leachate | pH units | 5.0 |
| Nickel | mg/L | <0.02 |

| Method ID | Methodology Summary |
|---|---|
| **ASB-001** | Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004. |
| **INORG-004** | Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction (zHE) using AS4439 and USEPA 1311. |
| **Inorg-004** | Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439 and USEPA 1311.<br><br>Please note that the mass used may be scaled down from default based on sample mass available.<br><br>Samples are stored at 2-6oC before and after leachate preparation. |
| **Inorg-008** | Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours. |
| **Inorg-031** | Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish).<br>Solids are extracted in a caustic media prior to analysis. |
| **Metals-020** | Determination of various metals by ICP-AES. |
| **Metals-020** | Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3. Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer. |
| **Metals-021** | Determination of Mercury by Cold Vapour AAS. |
| **Org-020** | Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.<br>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. |
| **Org-020** | Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.<br><br>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.<br><br>Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40). |
| **Org-021** | Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. |

| Method ID | Methodology Summary |
| --- | --- |
| **Org-021** | Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.<br>Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs. |
| **Org-022** | Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS. |
| **Org-022/025** | Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. |
| **Org-022/025** | Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS.<br><br>Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT. |
| **Org-022/025** | Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.<br>For soil results:-<br>1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present.<br>2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL.<br>3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above.<br>Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs. |
| **Org-023** | Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. |
| **Org-023** | Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. |
| **Org-023** | Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.<br>Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes. |

| QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-8 | 280063-A-113 |
| Date extracted | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | 14/10/2021 | 14/10/2021 |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | 15/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | 25 | Org-023 | <25 | [NT] | [NT] | [NT] | [NT] | 94 | 84 |
| TRH $C_6$ - $C_{10}$ | mg/kg | 25 | Org-023 | <25 | [NT] | [NT] | [NT] | [NT] | 94 | 84 |
| Benzene | mg/kg | 0.2 | Org-023 | <0.2 | [NT] | [NT] | [NT] | [NT] | 118 | 105 |
| Toluene | mg/kg | 0.5 | Org-023 | <0.5 | [NT] | [NT] | [NT] | [NT] | 107 | 95 |
| Ethylbenzene | mg/kg | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 82 | 73 |
| m+p-xylene | mg/kg | 2 | Org-023 | <2 | [NT] | [NT] | [NT] | [NT] | 82 | 73 |
| o-Xylene | mg/kg | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 86 | 78 |
| naphthalene | mg/kg | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| *Surrogate* aaa-Trifluorotoluene | % | | Org-023 | 109 | [NT] | [NT] | [NT] | [NT] | 104 | 90 |

| QUALITY CONTROL: svTRH (C10-C40) in Soil | | | | | Duplicate | | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-8 | 280063-A-113 |
| Date extracted | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | 14/10/2021 | 14/10/2021 |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | 15/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | 50 | Org-020 | <50 | [NT] | [NT] | [NT] | [NT] | 107 | 93 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | 100 | Org-020 | <100 | [NT] | [NT] | [NT] | [NT] | 114 | 102 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | 100 | Org-020 | <100 | [NT] | [NT] | [NT] | [NT] | 109 | 103 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | 50 | Org-020 | <50 | [NT] | [NT] | [NT] | [NT] | 107 | 93 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | 100 | Org-020 | <100 | [NT] | [NT] | [NT] | [NT] | 114 | 102 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | 100 | Org-020 | <100 | [NT] | [NT] | [NT] | [NT] | 109 | 103 |
| *Surrogate* o-Terphenyl | % | | Org-020 | 78 | [NT] | [NT] | [NT] | [NT] | 103 | 80 |

| QUALITY CONTROL: PAHs in Soil | | | | | Duplicate | | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | | LCS-8 | 280063-A-113 |
| Date extracted | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | | 14/10/2021 | 14/10/2021 |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | | 15/10/2021 | 15/10/2021 |
| Naphthalene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | 103 | 103 |
| Acenaphthylene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | [NT] | [NT] |
| Acenaphthene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | 99 | 93 |
| Fluorene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | 103 | 93 |
| Phenanthrene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | 110 | 114 |
| Anthracene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | [NT] | [NT] |
| Fluoranthene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | 108 | 110 |
| Pyrene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | 109 | 109 |
| Benzo(a)anthracene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | [NT] | [NT] |
| Chrysene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | 81 | 77 |
| Benzo(b,j+k)fluoranthene | mg/kg | 0.2 | Org-022/025 | <0.2 | [NT] | [NT] | [NT] | [NT] | | [NT] | [NT] |
| Benzo(a)pyrene | mg/kg | 0.05 | Org-022/025 | <0.05 | [NT] | [NT] | [NT] | [NT] | | 120 | 112 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | [NT] | [NT] |
| Dibenzo(a,h)anthracene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | [NT] | [NT] |
| Benzo(g,h,i)perylene | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | | [NT] | [NT] |
| *Surrogate p*-Terphenyl-d14 | % | | Org-022/025 | 93 | [NT] | [NT] | [NT] | [NT] | | 90 | 89 |

| QUALITY CONTROL: Organochlorine Pesticides in soil | | | | | Duplicate | | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-8 | 280063-A-113 |
| Date extracted | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | 14/10/2021 | 14/10/2021 |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | 15/10/2021 |
| alpha-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 102 | 94 |
| HCB | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| beta-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 103 | 96 |
| gamma-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Heptachlor | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 87 | 99 |
| delta-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Aldrin | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 109 | 109 |
| Heptachlor Epoxide | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 106 | 116 |
| gamma-Chlordane | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| alpha-chlordane | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Endosulfan I | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| pp-DDE | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 103 | 98 |
| Dieldrin | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 130 | 116 |
| Endrin | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 84 | 100 |
| Endosulfan II | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| pp-DDD | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 112 | 106 |
| Endrin Aldehyde | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| pp-DDT | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Endosulfan Sulphate | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 98 | 90 |
| Methoxychlor | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | 91 | [NT] | [NT] | [NT] | [NT] | 84 | 80 |

| QUALITY CONTROL: Organophosphorus Pesticides in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-8 | 280063-A-113 |
| Date extracted | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | 14/10/2021 | 14/10/2021 |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | 15/10/2021 |
| Dichlorvos | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 72 | 68 |
| Dimethoate | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Diazinon | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Chlorpyriphos-methyl | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Ronnel | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 114 | 108 |
| Fenitrothion | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 117 | 99 |
| Malathion | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 128 | 124 |
| Chlorpyriphos | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 118 | 120 |
| Parathion | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 119 | 93 |
| Bromophos-ethyl | mg/kg | 0.1 | Org-022 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Ethion | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | 119 | 113 |
| Azinphos-methyl (Guthion) | mg/kg | 0.1 | Org-022/025 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | 91 | [NT] | [NT] | [NT] | [NT] | 84 | 80 |

| QUALITY CONTROL: PCBs in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-8 | 280063-A-113 |
| Date extracted | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | 14/10/2021 | 14/10/2021 |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | 15/10/2021 |
| Aroclor 1016 | mg/kg | 0.1 | Org-021 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Aroclor 1221 | mg/kg | 0.1 | Org-021 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Aroclor 1232 | mg/kg | 0.1 | Org-021 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Aroclor 1242 | mg/kg | 0.1 | Org-021 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Aroclor 1248 | mg/kg | 0.1 | Org-021 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| Aroclor 1254 | mg/kg | 0.1 | Org-021 | <0.1 | [NT] | [NT] | [NT] | [NT] | 120 | 100 |
| Aroclor 1260 | mg/kg | 0.1 | Org-021 | <0.1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-021 | 91 | [NT] | [NT] | [NT] | [NT] | 84 | 80 |

| QUALITY CONTROL: Misc Soil - Inorg | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-8 | [NT] |
| Date prepared | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | 14/10/2021 | [NT] |
| Date analysed | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | 14/10/2021 | [NT] |
| Total Phenolics (as Phenol) | mg/kg | 5 | Inorg-031 | <5 | [NT] | [NT] | [NT] | [NT] | 100 | [NT] |

| QUALITY CONTROL: Acid Extractable metals in soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-8 | 280063-A-113 |
| Date prepared | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | 14/10/2021 | 14/10/2021 |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | 15/10/2021 |
| Arsenic | mg/kg | 4 | Metals-020 | <4 | [NT] | [NT] | [NT] | [NT] | 111 | 85 |
| Cadmium | mg/kg | 0.4 | Metals-020 | <0.4 | [NT] | [NT] | [NT] | [NT] | 104 | 81 |
| Chromium | mg/kg | 1 | Metals-020 | <1 | [NT] | [NT] | [NT] | [NT] | 110 | 75 |
| Copper | mg/kg | 1 | Metals-020 | <1 | [NT] | [NT] | [NT] | [NT] | 107 | 83 |
| Lead | mg/kg | 1 | Metals-020 | <1 | [NT] | [NT] | [NT] | [NT] | 110 | 87 |
| Mercury | mg/kg | 0.1 | Metals-021 | <0.1 | [NT] | [NT] | [NT] | [NT] | 101 | 93 |
| Nickel | mg/kg | 1 | Metals-020 | <1 | [NT] | [NT] | [NT] | [NT] | 112 | 77 |
| Zinc | mg/kg | 1 | Metals-020 | <1 | [NT] | [NT] | [NT] | [NT] | 112 | 79 |

| QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5 | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-W1 | [NT] |
| Date extracted | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | [NT] |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | [NT] |
| Nickel | mg/L | 0.02 | Metals-020 | <0.02 | [NT] | [NT] | [NT] | [NT] | 96 | [NT] |

## Result Definitions

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

## Quality Control Definitions

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

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

## Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

## Report Comments

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.
Note: Sample 280063-A-113 was sub-sampled from a jar provided by the client.

**Envirolab Services Pty Ltd**
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

# CERTIFICATE OF ANALYSIS 280174

## Client Details

| | |
|---|---|
| **Client** | Douglas Partners Canberra |
| **Attention** | Shannon Goodsell |
| **Address** | Unit 2, 73 Sheppard St,, HUME, ACT, 2620 |

## Sample Details

| | |
|---|---|
| **Your Reference** | **202107.04, Bungendore** |
| **Number of Samples** | 50 Soil |
| **Date samples received** | 12/10/2021 |
| **Date completed instructions received** | 12/10/2021 |

## Analysis Details

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

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

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

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

## Report Details

| | |
|---|---|
| **Date results requested by** | 15/10/2021 |
| **Date of Issue** | 15/10/2021 |

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**Asbestos Approved By**
Analysed by Asbestos Approved Analyst: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

**Results Approved By**
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Jaimie Loa-Kum-Cheung, Senior Chemist
Josh Williams, LC Supervisor
Lucy Zhu, Asbestos Supervisor

**Authorised By**

Nancy Zhang, Laboratory Manager

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-1 | 280174-5 | 280174-7 | 280174-11 | 280174-13 |
| Your Reference | UNITS | Bore 125 | Bore 127 | Bore 129 | Bore 130 | Bore 131 |
| Depth | | 0.1 | 0.5 | 01 | 0.5 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | <25 | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | <2 | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | <3 | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 100 | 89 | 90 | 94 | 97 |

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-18 | 280174-19 | 280174-22 | 280174-25 | 280174-28 |
| Your Reference | UNITS | Bore 132 | Bore 133 | Bore 134 | Bore 135 | Bore 136 |
| Depth | | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | <25 | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | <2 | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | <3 | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 103 | 88 | 99 | 88 | 99 |

| vTRH(C6-C10)/BTEXN in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-32 | 280174-35 | 280174-37 | 280174-40 | 280174-45 |
| Your Reference | UNITS | Bore 137 | Bore 138 | Bore 139 | Bore 141 | Bore 143 |
| Depth | | 0.5 | 0.5 | 0.1 | 0.1 | 1.0 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | <25 | <25 | <25 | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | <25 | <25 | <25 | <25 |
| Benzene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Toluene | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| m+p-xylene | mg/kg | <2 | <2 | <2 | <2 | <2 |
| o-Xylene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| naphthalene | mg/kg | <1 | <1 | <1 | <1 | <1 |
| Total +ve Xylenes | mg/kg | <3 | <3 | <3 | <3 | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 95 | 104 | 91 | 90 | 88 |

| vTRH(C6-C10)/BTEXN in Soil | | |
|---|---|---|
| Our Reference | | 280174-50 |
| Your Reference | UNITS | Bore 149 |
| Depth | | 0.1 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date extracted | - | 12/10/2021 |
| Date analysed | - | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 |
| Benzene | mg/kg | <0.2 |
| Toluene | mg/kg | <0.5 |
| Ethylbenzene | mg/kg | <1 |
| m+p-xylene | mg/kg | <2 |
| o-Xylene | mg/kg | <1 |
| naphthalene | mg/kg | <1 |
| Total +ve Xylenes | mg/kg | <3 |
| *Surrogate* aaa-Trifluorotoluene | % | 96 |

| svTRH (C10-C40) in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-1 | 280174-5 | 280174-7 | 280174-11 | 280174-13 |
| Your Reference | UNITS | Bore 125 | Bore 127 | Bore 129 | Bore 130 | Bore 131 |
| Depth | | 0.1 | 0.5 | 01 | 0.5 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (C10-C36) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$-$C_{16}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{16}$-$C_{34}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{34}$-$C_{40}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| *Surrogate* o-Terphenyl | % | 96 | 104 | 96 | 95 | 95 |

| svTRH (C10-C40) in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-18 | 280174-19 | 280174-22 | 280174-25 | 280174-28 |
| Your Reference | UNITS | Bore 132 | Bore 133 | Bore 134 | Bore 135 | Bore 136 |
| Depth | | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (C10-C36) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$-$C_{16}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{16}$-$C_{34}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{34}$-$C_{40}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| *Surrogate* o-Terphenyl | % | 96 | 96 | 109 | 95 | 97 |

| svTRH (C10-C40) in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-32 | 280174-35 | 280174-37 | 280174-40 | 280174-45 |
| Your Reference | UNITS | Bore 137 | Bore 138 | Bore 139 | Bore 141 | Bore 143 |
| Depth | | 0.5 | 0.5 | 0.1 | 0.1 | 1.0 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (C10-C36) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 | <100 | <100 | <100 | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 | <50 | <50 | <50 | <50 |
| *Surrogate* o-Terphenyl | % | 94 | 96 | 96 | 96 | 92 |

| svTRH (C10-C40) in Soil | | |
|---|---|---|
| Our Reference | | 280174-50 |
| Your Reference | UNITS | Bore 149 |
| Depth | | 0.1 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date extracted | - | 12/10/2021 |
| Date analysed | - | 13/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | <50 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | <100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | <100 |
| Total +ve TRH (C10-C36) | mg/kg | <50 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | <50 |
| TRH >$C_{10}$ - $C_{16}$ less Naphthalene (F2) | mg/kg | <50 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | <100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | <100 |
| Total +ve TRH (>C10-C40) | mg/kg | <50 |
| *Surrogate* o-Terphenyl | % | 91 |

| PAHs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-1 | 280174-5 | 280174-7 | 280174-11 | 280174-13 |
| Your Reference | UNITS | Bore 125 | Bore 127 | Bore 129 | Bore 130 | Bore 131 |
| Depth | | 0.1 | 0.5 | 01 | 0.5 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 97 | 97 | 107 | 98 | 106 |

| PAHs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-18 | 280174-19 | 280174-22 | 280174-25 | 280174-28 |
| Your Reference | UNITS | Bore 132 | Bore 133 | Bore 134 | Bore 135 | Bore 136 |
| Depth | | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 108 | 111 | 105 | 98 | 117 |

| PAHs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-32 | 280174-35 | 280174-37 | 280174-40 | 280174-45 |
| Your Reference | UNITS | Bore 137 | Bore 138 | Bore 139 | Bore 141 | Bore 143 |
| Depth | | 0.5 | 0.5 | 0.1 | 0.1 | 1.0 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Naphthalene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Acenaphthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluorene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Phenanthrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fluoranthene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chrysene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 114 | 107 | 104 | 109 | 115 |

| PAHs in Soil | | |
|---|---|---|
| Our Reference | | 280174-50 |
| Your Reference | UNITS | Bore 149 |
| Depth | | 0.1 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date extracted | - | 12/10/2021 |
| Date analysed | - | 12/10/2021 |
| Naphthalene | mg/kg | <0.1 |
| Acenaphthylene | mg/kg | <0.1 |
| Acenaphthene | mg/kg | <0.1 |
| Fluorene | mg/kg | <0.1 |
| Phenanthrene | mg/kg | <0.1 |
| Anthracene | mg/kg | <0.1 |
| Fluoranthene | mg/kg | <0.1 |
| Pyrene | mg/kg | <0.1 |
| Benzo(a)anthracene | mg/kg | <0.1 |
| Chrysene | mg/kg | <0.1 |
| Benzo(b,j+k)fluoranthene | mg/kg | <0.2 |
| Benzo(a)pyrene | mg/kg | <0.05 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | <0.1 |
| Dibenzo(a,h)anthracene | mg/kg | <0.1 |
| Benzo(g,h,i)perylene | mg/kg | <0.1 |
| Total +ve PAH's | mg/kg | <0.05 |
| Benzo(a)pyrene TEQ calc (zero) | mg/kg | <0.5 |
| Benzo(a)pyrene TEQ calc(half) | mg/kg | <0.5 |
| Benzo(a)pyrene TEQ calc(PQL) | mg/kg | <0.5 |
| *Surrogate p*-Terphenyl-d14 | % | 102 |

| Organochlorine Pesticides in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-1 | 280174-5 | 280174-7 | 280174-11 | 280174-13 |
| Your Reference | UNITS | Bore 125 | Bore 127 | Bore 129 | Bore 130 | Bore 131 |
| Depth | | 0.1 | 0.5 | 01 | 0.5 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 98 | 95 | 107 | 102 | 107 |

| Organochlorine Pesticides in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-18 | 280174-19 | 280174-22 | 280174-25 | 280174-28 |
| Your Reference | UNITS | Bore 132 | Bore 133 | Bore 134 | Bore 135 | Bore 136 |
| Depth | | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 107 | 103 | 102 | 97 | 108 |

| Organochlorine Pesticides in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-32 | 280174-35 | 280174-37 | 280174-40 | 280174-45 |
| Your Reference | UNITS | Bore 137 | Bore 138 | Bore 139 | Bore 141 | Bore 143 |
| Depth | | 0.5 | 0.5 | 0.1 | 0.1 | 1.0 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| alpha-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| HCB | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| beta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| delta-BHC | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| alpha-chlordane | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan I | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dieldrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan II | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDD | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pp-DDT | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Methoxychlor | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 107 | 104 | 106 | 106 | 102 |

| Organochlorine Pesticides in soil | | |
|---|---|---|
| Our Reference | | 280174-50 |
| Your Reference | UNITS | Bore 149 |
| Depth | | 0.1 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date extracted | - | 12/10/2021 |
| Date analysed | - | 12/10/2021 |
| alpha-BHC | mg/kg | <0.1 |
| HCB | mg/kg | <0.1 |
| beta-BHC | mg/kg | <0.1 |
| gamma-BHC | mg/kg | <0.1 |
| Heptachlor | mg/kg | <0.1 |
| delta-BHC | mg/kg | <0.1 |
| Aldrin | mg/kg | <0.1 |
| Heptachlor Epoxide | mg/kg | <0.1 |
| gamma-Chlordane | mg/kg | <0.1 |
| alpha-chlordane | mg/kg | <0.1 |
| Endosulfan I | mg/kg | <0.1 |
| pp-DDE | mg/kg | <0.1 |
| Dieldrin | mg/kg | <0.1 |
| Endrin | mg/kg | <0.1 |
| Endosulfan II | mg/kg | <0.1 |
| pp-DDD | mg/kg | <0.1 |
| Endrin Aldehyde | mg/kg | <0.1 |
| pp-DDT | mg/kg | <0.1 |
| Endosulfan Sulphate | mg/kg | <0.1 |
| Methoxychlor | mg/kg | <0.1 |
| Total +ve DDT+DDD+DDE | mg/kg | <0.1 |
| *Surrogate* TCMX | % | 100 |

| Organophosphorus Pesticides in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-1 | 280174-5 | 280174-7 | 280174-11 | 280174-13 |
| Your Reference | UNITS | Bore 125 | Bore 127 | Bore 129 | Bore 130 | Bore 131 |
| Depth | | 0.1 | 0.5 | 01 | 0.5 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 98 | 95 | 107 | 102 | 107 |

| Organophosphorus Pesticides in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-18 | 280174-19 | 280174-22 | 280174-25 | 280174-28 |
| Your Reference | UNITS | Bore 132 | Bore 133 | Bore 134 | Bore 135 | Bore 136 |
| Depth | | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 107 | 103 | 102 | 97 | 108 |

| Organophosphorus Pesticides in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-32 | 280174-35 | 280174-37 | 280174-40 | 280174-45 |
| Your Reference | UNITS | Bore 137 | Bore 138 | Bore 139 | Bore 141 | Bore 143 |
| Depth | | 0.5 | 0.5 | 0.1 | 0.1 | 1.0 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Dichlorvos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Dimethoate | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Diazinon | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ronnel | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Fenitrothion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Malathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Parathion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Ethion | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 107 | 104 | 106 | 106 | 102 |

| Organophosphorus Pesticides in Soil | | |
|---|---|---|
| Our Reference | | 280174-50 |
| Your Reference | UNITS | Bore 149 |
| Depth | | 0.1 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date extracted | - | 12/10/2021 |
| Date analysed | - | 12/10/2021 |
| Dichlorvos | mg/kg | <0.1 |
| Dimethoate | mg/kg | <0.1 |
| Diazinon | mg/kg | <0.1 |
| Chlorpyriphos-methyl | mg/kg | <0.1 |
| Ronnel | mg/kg | <0.1 |
| Fenitrothion | mg/kg | <0.1 |
| Malathion | mg/kg | <0.1 |
| Chlorpyriphos | mg/kg | <0.1 |
| Parathion | mg/kg | <0.1 |
| Bromophos-ethyl | mg/kg | <0.1 |
| Ethion | mg/kg | <0.1 |
| Azinphos-methyl (Guthion) | mg/kg | <0.1 |
| *Surrogate* TCMX | % | 100 |

| PCBs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-1 | 280174-5 | 280174-7 | 280174-11 | 280174-13 |
| Your Reference | UNITS | Bore 125 | Bore 127 | Bore 129 | Bore 130 | Bore 131 |
| Depth | | 0.1 | 0.5 | 01 | 0.5 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 98 | 95 | 107 | 102 | 107 |

| PCBs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-18 | 280174-19 | 280174-22 | 280174-25 | 280174-28 |
| Your Reference | UNITS | Bore 132 | Bore 133 | Bore 134 | Bore 135 | Bore 136 |
| Depth | | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 107 | 103 | 102 | 97 | 108 |

| PCBs in Soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-32 | 280174-35 | 280174-37 | 280174-40 | 280174-45 |
| Your Reference | UNITS | Bore 137 | Bore 138 | Bore 139 | Bore 141 | Bore 143 |
| Depth | | 0.5 | 0.5 | 0.1 | 0.1 | 1.0 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date extracted | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| *Surrogate* TCMX | % | 107 | 104 | 106 | 106 | 102 |

| PCBs in Soil | | |
|---|---|---|
| Our Reference | | 280174-50 |
| Your Reference | UNITS | Bore 149 |
| Depth | | 0.1 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date extracted | - | 12/10/2021 |
| Date analysed | - | 12/10/2021 |
| Aroclor 1016 | mg/kg | <0.1 |
| Aroclor 1221 | mg/kg | <0.1 |
| Aroclor 1232 | mg/kg | <0.1 |
| Aroclor 1242 | mg/kg | <0.1 |
| Aroclor 1248 | mg/kg | <0.1 |
| Aroclor 1254 | mg/kg | <0.1 |
| Aroclor 1260 | mg/kg | <0.1 |
| Total +ve PCBs (1016-1260) | mg/kg | <0.1 |
| *Surrogate* TCMX | % | 100 |

| Acid Extractable metals in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-1 | 280174-5 | 280174-7 | 280174-11 | 280174-13 |
| Your Reference | UNITS | Bore 125 | Bore 127 | Bore 129 | Bore 130 | Bore 131 |
| Depth | | 0.1 | 0.5 | 01 | 0.5 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | <4 | <4 | <4 | 4 | <4 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 11 | 12 | 4 | 17 | 22 |
| Copper | mg/kg | 4 | 3 | 3 | 17 | 24 |
| Lead | mg/kg | 10 | 8 | 6 | 20 | 12 |
| Mercury | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 3 | 2 | 2 | 8 | 42 |
| Zinc | mg/kg | 13 | 5 | 13 | 37 | 46 |

| Acid Extractable metals in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-18 | 280174-19 | 280174-22 | 280174-25 | 280174-28 |
| Your Reference | UNITS | Bore 132 | Bore 133 | Bore 134 | Bore 135 | Bore 136 |
| Depth | | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | <4 | <4 | <4 | <4 | <4 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 22 | 16 | 14 | 14 | 15 |
| Copper | mg/kg | 24 | 11 | 7 | 6 | 9 |
| Lead | mg/kg | 10 | 17 | 17 | 13 | 13 |
| Mercury | mg/kg | 0.2 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 10 | 5 | 4 | 3 | 4 |
| Zinc | mg/kg | 9 | 20 | 19 | 14 | 17 |

| Acid Extractable metals in soil | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-32 | 280174-35 | 280174-37 | 280174-40 | 280174-45 |
| Your Reference | UNITS | Bore 137 | Bore 138 | Bore 139 | Bore 141 | Bore 143 |
| Depth | | 0.5 | 0.5 | 0.1 | 0.1 | 1.0 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date prepared | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | <4 | <4 | <4 | <4 | 4 |
| Cadmium | mg/kg | <0.4 | <0.4 | <0.4 | <0.4 | <0.4 |
| Chromium | mg/kg | 18 | 18 | 12 | 11 | 28 |
| Copper | mg/kg | 4 | 14 | 8 | 5 | 48 |
| Lead | mg/kg | 11 | 9 | 18 | 10 | 12 |
| Mercury | mg/kg | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nickel | mg/kg | 3 | 8 | 4 | 3 | 16 |
| Zinc | mg/kg | 7 | 13 | 14 | 12 | 19 |

| Acid Extractable metals in soil | | | |
|---|---|---|---|
| Our Reference | | 280174-50 | 280174-51 |
| Your Reference | UNITS | Bore 149 | Bore 137 - [TRIPLICATE] |
| Depth | | 0.1 | 0.5 |
| Date Sampled | | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil |
| Date prepared | - | 13/10/2021 | 13/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | <4 | <4 |
| Cadmium | mg/kg | <0.4 | <0.4 |
| Chromium | mg/kg | 16 | 18 |
| Copper | mg/kg | 4 | 3 |
| Lead | mg/kg | 16 | 9 |
| Mercury | mg/kg | <0.1 | <0.1 |
| Nickel | mg/kg | 3 | 3 |
| Zinc | mg/kg | 12 | 6 |

| Misc Soil - Inorg | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-1 | 280174-5 | 280174-7 | 280174-11 | 280174-13 |
| Your Reference | UNITS | Bore 125 | Bore 127 | Bore 129 | Bore 130 | Bore 131 |
| Depth | | 0.1 | 0.5 | 01 | 0.5 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 | <5 | <5 |

| Misc Soil - Inorg | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-18 | 280174-19 | 280174-22 | 280174-25 | 280174-28 |
| Your Reference | UNITS | Bore 132 | Bore 133 | Bore 134 | Bore 135 | Bore 136 |
| Depth | | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 | <5 | <5 |

| Misc Soil - Inorg | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-32 | 280174-35 | 280174-37 | 280174-40 | 280174-45 |
| Your Reference | UNITS | Bore 137 | Bore 138 | Bore 139 | Bore 141 | Bore 143 |
| Depth | | 0.5 | 0.5 | 0.1 | 0.1 | 1.0 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 | <5 | <5 | <5 | <5 |

| Misc Soil - Inorg | | |
|---|---|---|
| Our Reference | | 280174-50 |
| Your Reference | UNITS | Bore 149 |
| Depth | | 0.1 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date prepared | - | 12/10/2021 |
| Date analysed | - | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | <5 |

| Moisture | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-1 | 280174-5 | 280174-7 | 280174-11 | 280174-13 |
| Your Reference | UNITS | Bore 125 | Bore 127 | Bore 129 | Bore 130 | Bore 131 |
| Depth | | 0.1 | 0.5 | 01 | 0.5 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 17 | 12 | 11 | 12 | 7.2 |

| Moisture | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-18 | 280174-19 | 280174-22 | 280174-25 | 280174-28 |
| Your Reference | UNITS | Bore 132 | Bore 133 | Bore 134 | Bore 135 | Bore 136 |
| Depth | | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 18 | 19 | 18 | 17 | 18 |

| Moisture | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-32 | 280174-35 | 280174-37 | 280174-40 | 280174-45 |
| Your Reference | UNITS | Bore 137 | Bore 138 | Bore 139 | Bore 141 | Bore 143 |
| Depth | | 0.5 | 0.5 | 0.1 | 0.1 | 1.0 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date prepared | - | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 | 12/10/2021 |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Moisture | % | 12 | 19 | 13 | 17 | 20 |

| Moisture | | |
|---|---|---|
| Our Reference | | 280174-50 |
| Your Reference | UNITS | Bore 149 |
| Depth | | 0.1 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date prepared | - | 12/10/2021 |
| Date analysed | - | 13/10/2021 |
| Moisture | % | 12 |

| Asbestos ID - soils | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-1 | 280174-5 | 280174-7 | 280174-11 | 280174-13 |
| Your Reference | UNITS | Bore 125 | Bore 127 | Bore 129 | Bore 130 | Bore 131 |
| Depth | | 0.1 | 0.5 | 01 | 0.5 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 30g | Approx. 35g | Approx. 20g | Approx. 40g | Approx. 35g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected |

| Asbestos ID - soils | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-18 | 280174-19 | 280174-22 | 280174-25 | 280174-28 |
| Your Reference | UNITS | Bore 132 | Bore 133 | Bore 134 | Bore 135 | Bore 136 |
| Depth | | 1.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 20g | Approx. 20g | Approx. 30g | Approx. 35g | Approx. 30g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br><br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected |

| Asbestos ID - soils | | | | | | |
|---|---|---|---|---|---|---|
| Our Reference | | 280174-32 | 280174-35 | 280174-37 | 280174-40 | 280174-45 |
| Your Reference | UNITS | Bore 137 | Bore 138 | Bore 139 | Bore 141 | Bore 143 |
| Depth | | 0.5 | 0.5 | 0.1 | 0.1 | 1.0 |
| Date Sampled | | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil | Soil | Soil | Soil |
| Date analysed | - | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 | 13/10/2021 |
| Sample mass tested | g | Approx. 30g | Approx. 30g | Approx. 40g | Approx. 30g | Approx. 25g |
| Sample Description | - | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected |
| Asbestos comments | - | NO | NO | NO | NO | NO |
| Trace Analysis | - | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected | No asbestos detected |

| Asbestos ID - soils | | |
|---|---|---|
| Our Reference | | 280174-50 |
| Your Reference | UNITS | Bore 149 |
| Depth | | 0.1 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date analysed | - | 13/10/2021 |
| Sample mass tested | g | Approx. 20g |
| Sample Description | - | Brown coarse-grained soil & rocks |
| Asbestos ID in soil | - | No asbestos detected at reporting limit of 0.1g/kg<br>Organic fibres detected |
| Asbestos comments | - | NO |
| Trace Analysis | - | No asbestos detected |

| Misc Inorg - Soil | | |
|---|---|---|
| Our Reference | | 280174-27 |
| Your Reference | UNITS | Bore 135 |
| Depth | | 1.0 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date prepared | - | 13/10/2021 |
| Date analysed | - | 13/10/2021 |
| pH 1:5 soil:water | pH Units | 8.4 |

| CEC | | |
|---|---|---|
| Our Reference | | 280174-27 |
| Your Reference | UNITS | Bore 135 |
| Depth | | 1.0 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date prepared | - | 13/10/2021 |
| Date analysed | - | 13/10/2021 |
| Exchangeable Ca | meq/100g | 3.6 |
| Exchangeable K | meq/100g | <0.1 |
| Exchangeable Mg | meq/100g | 2.4 |
| Exchangeable Na | meq/100g | 0.1 |
| Cation Exchange Capacity | meq/100g | 6.2 |

| Clay 50-120g | | |
|---|---|---|
| Our Reference | | 280174-27 |
| Your Reference | UNITS | Bore 135 |
| Depth | | 1.0 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date prepared | - | 13/10/2021 |
| Date analysed | - | 14/10/2021 |
| Clay in soils <2μm | % (w/w) | 29 |

| Method ID | Methodology Summary |
|---|---|
| **AS1289.3.6.3** | Determination Particle Size Analysis using AS1289.3.6.3 and AS1289.3.6.1 and in house method INORG-107. Clay fraction at <2µm reported. |
| **ASB-001** | Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004. |
| **Inorg-001** | pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times. |
| **Inorg-008** | Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours. |
| **Inorg-031** | Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis. |
| **Metals-020** | Determination of various metals by ICP-AES. |
| **Metals-020** | Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish. |
| **Metals-021** | Determination of Mercury by Cold Vapour AAS. |
| **Org-020** | Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. |
| **Org-020** | Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.<br><br>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.<br><br>Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40). |
| **Org-021** | Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. |
| **Org-021** | Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs. |
| **Org-022** | Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS. |
| **Org-022/025** | Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. |

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

| QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-12 | 280174-5 |
| Date extracted | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 13/10/2021 | 1 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | 25 | Org-023 | <25 | 1 | <25 | <25 | 0 | 94 | 92 |
| TRH $C_6$ - $C_{10}$ | mg/kg | 25 | Org-023 | <25 | 1 | <25 | <25 | 0 | 94 | 92 |
| Benzene | mg/kg | 0.2 | Org-023 | <0.2 | 1 | <0.2 | <0.2 | 0 | 90 | 87 |
| Toluene | mg/kg | 0.5 | Org-023 | <0.5 | 1 | <0.5 | <0.5 | 0 | 85 | 82 |
| Ethylbenzene | mg/kg | 1 | Org-023 | <1 | 1 | <1 | <1 | 0 | 98 | 97 |
| m+p-xylene | mg/kg | 2 | Org-023 | <2 | 1 | <2 | <2 | 0 | 98 | 97 |
| o-Xylene | mg/kg | 1 | Org-023 | <1 | 1 | <1 | <1 | 0 | 95 | 94 |
| naphthalene | mg/kg | 1 | Org-023 | <1 | 1 | <1 | <1 | 0 | [NT] | [NT] |
| *Surrogate* aaa-Trifluorotoluene | % | | Org-023 | 111 | 1 | 100 | 91 | 9 | 96 | 97 |

| QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 32 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| TRH $C_6$ - $C_9$ | mg/kg | 25 | Org-023 | [NT] | 32 | <25 | <25 | 0 | [NT] | [NT] |
| TRH $C_6$ - $C_{10}$ | mg/kg | 25 | Org-023 | [NT] | 32 | <25 | <25 | 0 | [NT] | [NT] |
| Benzene | mg/kg | 0.2 | Org-023 | [NT] | 32 | <0.2 | <0.2 | 0 | [NT] | [NT] |
| Toluene | mg/kg | 0.5 | Org-023 | [NT] | 32 | <0.5 | <0.5 | 0 | [NT] | [NT] |
| Ethylbenzene | mg/kg | 1 | Org-023 | [NT] | 32 | <1 | <1 | 0 | [NT] | [NT] |
| m+p-xylene | mg/kg | 2 | Org-023 | [NT] | 32 | <2 | <2 | 0 | [NT] | [NT] |
| o-Xylene | mg/kg | 1 | Org-023 | [NT] | 32 | <1 | <1 | 0 | [NT] | [NT] |
| naphthalene | mg/kg | 1 | Org-023 | [NT] | 32 | <1 | <1 | 0 | [NT] | [NT] |
| *Surrogate* aaa-Trifluorotoluene | % | | Org-023 | [NT] | 32 | 95 | 93 | 2 | [NT] | [NT] |

| QUALITY CONTROL: svTRH (C10-C40) in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-12 | 280174-5 |
| Date extracted | - | | | 14/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 14/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | 50 | Org-020 | <50 | 1 | <50 | <50 | 0 | 107 | 104 |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | 100 | Org-020 | <100 | 1 | <100 | <100 | 0 | 96 | 100 |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | 100 | Org-020 | <100 | 1 | <100 | <100 | 0 | 92 | 81 |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | 50 | Org-020 | <50 | 1 | <50 | <50 | 0 | 107 | 104 |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | 100 | Org-020 | <100 | 1 | <100 | <100 | 0 | 96 | 100 |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | 100 | Org-020 | <100 | 1 | <100 | <100 | 0 | 92 | 81 |
| *Surrogate* o-Terphenyl | % | | Org-020 | 88 | 1 | 96 | 95 | 1 | 88 | 104 |

| QUALITY CONTROL: svTRH (C10-C40) in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 32 | 12/10/2021 | 13/10/2021 | | [NT] | [NT] |
| TRH $C_{10}$ - $C_{14}$ | mg/kg | 50 | Org-020 | [NT] | 32 | <50 | <50 | 0 | [NT] | [NT] |
| TRH $C_{15}$ - $C_{28}$ | mg/kg | 100 | Org-020 | [NT] | 32 | <100 | <100 | 0 | [NT] | [NT] |
| TRH $C_{29}$ - $C_{36}$ | mg/kg | 100 | Org-020 | [NT] | 32 | <100 | <100 | 0 | [NT] | [NT] |
| TRH >$C_{10}$ -$C_{16}$ | mg/kg | 50 | Org-020 | [NT] | 32 | <50 | <50 | 0 | [NT] | [NT] |
| TRH >$C_{16}$ -$C_{34}$ | mg/kg | 100 | Org-020 | [NT] | 32 | <100 | <100 | 0 | [NT] | [NT] |
| TRH >$C_{34}$ -$C_{40}$ | mg/kg | 100 | Org-020 | [NT] | 32 | <100 | <100 | 0 | [NT] | [NT] |
| *Surrogate* o-Terphenyl | % | | Org-020 | [NT] | 32 | 94 | 96 | 2 | [NT] | [NT] |

| QUALITY CONTROL: PAHs in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-12 | 280174-5 |
| Date extracted | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Naphthalene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 116 | 107 |
| Acenaphthylene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Acenaphthene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 111 | 105 |
| Fluorene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 111 | 105 |
| Phenanthrene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 114 | 110 |
| Anthracene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fluoranthene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 108 | 104 |
| Pyrene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 109 | 105 |
| Benzo(a)anthracene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chrysene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 89 | 81 |
| Benzo(b,j+k)fluoranthene | mg/kg | 0.2 | Org-022/025 | <0.2 | 1 | <0.2 | <0.2 | 0 | [NT] | [NT] |
| Benzo(a)pyrene | mg/kg | 0.05 | Org-022/025 | <0.05 | 1 | <0.05 | <0.05 | 0 | 120 | 116 |
| Indeno(1,2,3-c,d)pyrene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dibenzo(a,h)anthracene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(g,h,i)perylene | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate p*-Terphenyl-d14 | % | | Org-022/025 | 106 | 1 | 97 | 95 | 2 | 119 | 122 |

| QUALITY CONTROL: PAHs in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Naphthalene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Acenaphthylene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Acenaphthene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fluorene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Phenanthrene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fluoranthene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Pyrene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(a)anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chrysene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(b,j+k)fluoranthene | mg/kg | 0.2 | Org-022/025 | [NT] | 32 | <0.2 | <0.2 | 0 | [NT] | [NT] |
| Benzo(a)pyrene | mg/kg | 0.05 | Org-022/025 | [NT] | 32 | <0.05 | <0.05 | 0 | [NT] | [NT] |
| Indeno(1,2,3-c,d)pyrene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dibenzo(a,h)anthracene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Benzo(g,h,i)perylene | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate p*-Terphenyl-d14 | % | | Org-022/025 | [NT] | 32 | 114 | 113 | 1 | [NT] | [NT] |

| QUALITY CONTROL: Organochlorine Pesticides in soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-12 | 280174-5 |
| Date extracted | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| alpha-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 114 | 114 |
| HCB | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| beta-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 110 | 117 |
| gamma-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Heptachlor | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 105 | 95 |
| delta-BHC | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aldrin | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 109 | 105 |
| Heptachlor Epoxide | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 102 | 106 |
| gamma-Chlordane | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| alpha-chlordane | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan I | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDE | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 107 | 105 |
| Dieldrin | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 102 | 112 |
| Endrin | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 94 | 121 |
| Endosulfan II | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDD | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 100 | 104 |
| Endrin Aldehyde | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDT | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan Sulphate | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 102 | 100 |
| Methoxychlor | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | 99 | 1 | 98 | 94 | 4 | 130 | 118 |

| QUALITY CONTROL: Organochlorine Pesticides in soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| alpha-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| HCB | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| beta-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| gamma-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Heptachlor | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| delta-BHC | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aldrin | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Heptachlor Epoxide | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| gamma-Chlordane | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| alpha-chlordane | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan I | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDE | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dieldrin | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endrin | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan II | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDD | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endrin Aldehyde | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| pp-DDT | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Endosulfan Sulphate | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Methoxychlor | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | [NT] | 32 | 107 | 104 | 3 | [NT] | [NT] |

| QUALITY CONTROL: Organophosphorus Pesticides in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-12 | 280174-5 |
| Date extracted | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Dichlorvos | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 102 | 71 |
| Dimethoate | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Diazinon | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chlorpyriphos-methyl | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ronnel | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 106 | 106 |
| Fenitrothion | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 75 | 79 |
| Malathion | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 103 | 99 |
| Chlorpyriphos | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 116 | 106 |
| Parathion | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 74 | 74 |
| Bromophos-ethyl | mg/kg | 0.1 | Org-022 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ethion | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | 78 | 86 |
| Azinphos-methyl (Guthion) | mg/kg | 0.1 | Org-022/025 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | 99 | 1 | 98 | 94 | 4 | 130 | 118 |

| QUALITY CONTROL: Organophosphorus Pesticides in Soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Dichlorvos | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Dimethoate | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Diazinon | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chlorpyriphos-methyl | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ronnel | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Fenitrothion | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Malathion | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Chlorpyriphos | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Parathion | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Bromophos-ethyl | mg/kg | 0.1 | Org-022 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Ethion | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Azinphos-methyl (Guthion) | mg/kg | 0.1 | Org-022/025 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-022/025 | [NT] | 32 | 107 | 104 | 3 | [NT] | [NT] |

| QUALITY CONTROL: PCBs in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-12 | 280174-5 |
| Date extracted | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Aroclor 1016 | mg/kg | 0.1 | Org-021 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1221 | mg/kg | 0.1 | Org-021 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1232 | mg/kg | 0.1 | Org-021 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1242 | mg/kg | 0.1 | Org-021 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1248 | mg/kg | 0.1 | Org-021 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1254 | mg/kg | 0.1 | Org-021 | <0.1 | 1 | <0.1 | <0.1 | 0 | 118 | 112 |
| Aroclor 1260 | mg/kg | 0.1 | Org-021 | <0.1 | 1 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-021 | 99 | 1 | 98 | 94 | 4 | 130 | 118 |

| QUALITY CONTROL: PCBs in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date extracted | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Aroclor 1016 | mg/kg | 0.1 | Org-021 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1221 | mg/kg | 0.1 | Org-021 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1232 | mg/kg | 0.1 | Org-021 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1242 | mg/kg | 0.1 | Org-021 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1248 | mg/kg | 0.1 | Org-021 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1254 | mg/kg | 0.1 | Org-021 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Aroclor 1260 | mg/kg | 0.1 | Org-021 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| *Surrogate* TCMX | % | | Org-021 | [NT] | 32 | 107 | 104 | 3 | [NT] | [NT] |

| QUALITY CONTROL: Acid Extractable metals in soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-12 | 280174-5 |
| Date prepared | - | | | 13/10/2021 | 1 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| Date analysed | - | | | 13/10/2021 | 1 | 13/10/2021 | 13/10/2021 | | 13/10/2021 | 13/10/2021 |
| Arsenic | mg/kg | 4 | Metals-020 | <4 | 1 | <4 | <4 | 0 | 106 | 95 |
| Cadmium | mg/kg | 0.4 | Metals-020 | <0.4 | 1 | <0.4 | <0.4 | 0 | 105 | 94 |
| Chromium | mg/kg | 1 | Metals-020 | <1 | 1 | 11 | 11 | 0 | 105 | 96 |
| Copper | mg/kg | 1 | Metals-020 | <1 | 1 | 4 | 4 | 0 | 105 | 99 |
| Lead | mg/kg | 1 | Metals-020 | <1 | 1 | 10 | 11 | 10 | 107 | 93 |
| Mercury | mg/kg | 0.1 | Metals-021 | <0.1 | 1 | <0.1 | <0.1 | 0 | 94 | 91 |
| Nickel | mg/kg | 1 | Metals-020 | <1 | 1 | 3 | 3 | 0 | 109 | 99 |
| Zinc | mg/kg | 1 | Metals-020 | <1 | 1 | 13 | 15 | 14 | 106 | 94 |

| QUALITY CONTROL: Acid Extractable metals in soil | | | | | | Duplicate | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date prepared | - | | | [NT] | 32 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 32 | 13/10/2021 | 13/10/2021 | | [NT] | [NT] |
| Arsenic | mg/kg | 4 | Metals-020 | [NT] | 32 | <4 | <4 | 0 | [NT] | [NT] |
| Cadmium | mg/kg | 0.4 | Metals-020 | [NT] | 32 | <0.4 | <0.4 | 0 | [NT] | [NT] |
| Chromium | mg/kg | 1 | Metals-020 | [NT] | 32 | 18 | 17 | 6 | [NT] | [NT] |
| Copper | mg/kg | 1 | Metals-020 | [NT] | 32 | 4 | 3 | 29 | [NT] | [NT] |
| Lead | mg/kg | 1 | Metals-020 | [NT] | 32 | 11 | 8 | 32 | [NT] | [NT] |
| Mercury | mg/kg | 0.1 | Metals-021 | [NT] | 32 | <0.1 | <0.1 | 0 | [NT] | [NT] |
| Nickel | mg/kg | 1 | Metals-020 | [NT] | 32 | 3 | 3 | 0 | [NT] | [NT] |
| Zinc | mg/kg | 1 | Metals-020 | [NT] | 32 | 7 | 4 | 55 | [NT] | [NT] |

| QUALITY CONTROL: Misc Soil - Inorg | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-1 | 280174-5 |
| Date prepared | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Date analysed | - | | | 12/10/2021 | 1 | 12/10/2021 | 12/10/2021 | | 12/10/2021 | 12/10/2021 |
| Total Phenolics (as Phenol) | mg/kg | 5 | Inorg-031 | <5 | 1 | <5 | <5 | 0 | 99 | 95 |

| QUALITY CONTROL: Misc Soil - Inorg | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | [NT] | [NT] |
| Date prepared | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Date analysed | - | | | [NT] | 32 | 12/10/2021 | 12/10/2021 | | [NT] | [NT] |
| Total Phenolics (as Phenol) | mg/kg | 5 | Inorg-031 | [NT] | 32 | <5 | <5 | 0 | [NT] | [NT] |

| QUALITY CONTROL: Misc Inorg - Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-1 | [NT] |
| Date prepared | - | | | 13/10/2021 | [NT] | [NT] | [NT] | [NT] | 13/10/2021 | [NT] |
| Date analysed | - | | | 13/10/2021 | [NT] | [NT] | [NT] | [NT] | 13/10/2021 | [NT] |
| pH 1:5 soil:water | pH Units | | Inorg-001 | [NT] | [NT] | [NT] | [NT] | [NT] | 102 | [NT] |

| QUALITY CONTROL: CEC | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-1 | [NT] |
| Date prepared | - | | | 13/10/2021 | [NT] | [NT] | [NT] | [NT] | 13/10/2021 | [NT] |
| Date analysed | - | | | 13/10/2021 | [NT] | [NT] | [NT] | [NT] | 13/10/2021 | [NT] |
| Exchangeable Ca | meq/100g | 0.1 | Metals-020 | <0.1 | [NT] | [NT] | [NT] | [NT] | 113 | [NT] |
| Exchangeable K | meq/100g | 0.1 | Metals-020 | <0.1 | [NT] | [NT] | [NT] | [NT] | 112 | [NT] |
| Exchangeable Mg | meq/100g | 0.1 | Metals-020 | <0.1 | [NT] | [NT] | [NT] | [NT] | 109 | [NT] |
| Exchangeable Na | meq/100g | 0.1 | Metals-020 | <0.1 | [NT] | [NT] | [NT] | [NT] | 122 | [NT] |

## Result Definitions

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

## Quality Control Definitions

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

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

## Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

## Report Comments

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 280174-32 for Zn. Therefore a triplicate result has been issued as laboratory sample number 28017-51.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples were sub-sampled from jars provided by the client.

**Envirolab Services Pty Ltd**
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200   fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

# CERTIFICATE OF ANALYSIS 280174-A

| Client Details | |
|---|---|
| **Client** | Douglas Partners Canberra |
| **Attention** | Shannon Goodsell |
| **Address** | Unit 2, 73 Sheppard St,, HUME, ACT, 2620 |

| Sample Details | |
|---|---|
| **Your Reference** | **202107.04, Bungendore** |
| **Number of Samples** | additional analysis |
| **Date samples received** | 12/10/2021 |
| **Date completed instructions received** | 14/10/2021 |

## Analysis Details

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

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

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

| Report Details | |
|---|---|
| **Date results requested by** | 15/10/2021 |
| **Date of Issue** | 15/10/2021 |

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

**Results Approved By**
Giovanni Agosti, Group Technical Manager

**Authorised By**

Nancy Zhang, Laboratory Manager

| Metals from Leaching Fluid pH 2.9 or 5 | | |
|---|---|---|
| Our Reference | | 280174-A-13 |
| Your Reference | UNITS | Bore 131 |
| Depth | | 0.1 |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Soil |
| Date extracted | - | 15/10/2021 |
| Date analysed | - | 15/10/2021 |
| pH of soil for fluid# determ. | pH units | 8.6 |
| pH of soil TCLP (after HCl) | pH units | 1.9 |
| Extraction fluid used | - | 1 |
| pH of final Leachate | pH units | 5.0 |
| Nickel | mg/L | 0.02 |

| Method ID | Methodology Summary |
|---|---|
| **INORG-004** | Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction (zHE) using AS4439 and USEPA 1311. |
| **Inorg-004** | Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439 and USEPA 1311.<br><br>Please note that the mass used may be scaled down from default based on sample mass available.<br><br>Samples are stored at 2-6oC before and after leachate preparation. |
| **Metals-020** | Determination of various metals by ICP-AES following buffer determination as per USEPA 1311 and hence AS 4439.3.<br>Extraction Fluid 1 refers to the pH 5.0 buffer and Extraction Fluid 2 is the pH 2.9 buffer. |

| QUALITY CONTROL: Metals from Leaching Fluid pH 2.9 or 5 | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-W1 | [NT] |
| Date extracted | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | [NT] |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | [NT] |
| Nickel | mg/L | 0.02 | Metals-020 | <0.02 | [NT] | [NT] | [NT] | [NT] | 96 | [NT] |

## Result Definitions

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

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| | |
|---|---|
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## Laboratory Acceptance Criteria

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

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

Spikes for Physical and Aggregate Tests are not applicable.

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

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

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

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

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

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

Measurement Uncertainty estimates are available for most tests upon request.

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

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

**Envirolab Services Pty Ltd**
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200   fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

# CERTIFICATE OF ANALYSIS 280174-B

## Client Details

| | |
|---|---|
| **Client** | Douglas Partners Canberra |
| **Attention** | Shannon Goodsell |
| **Address** | Unit 2, 73 Sheppard St,, HUME, ACT, 2620 |

## Sample Details

| | |
|---|---|
| **Your Reference** | **202107.04, Bungendore** |
| **Number of Samples** | 52 Soil, 1 Water |
| **Date samples received** | 13/10/2021 |
| **Date completed instructions received** | 13/10/2021 |

## Analysis Details

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

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

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

## Report Details

| | |
|---|---|
| **Date results requested by** | 15/10/2021 |
| **Date of Issue** | 15/10/2021 |

NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

**Results Approved By**
Dragana Tomas, Senior Chemist

**Authorised By**

Nancy Zhang, Laboratory Manager

| vTRH(C6-C10)/BTEXN in Soil | | | |
|---|---|---|---|
| Our Reference | | 280174-B-52 | 280174-B-53 |
| Your Reference | UNITS | TB2 | TS1 |
| Depth | | . | . |
| Date Sampled | | 11/10/2021 | 11/10/2021 |
| Type of sample | | Soil | Soil |
| Date extracted | - | 14/10/2021 | 14/10/2021 |
| Date analysed | - | 15/10/2021 | 15/10/2021 |
| TRH $C_6$ - $C_9$ | mg/kg | <25 | [NA] |
| TRH $C_6$ - $C_{10}$ | mg/kg | <25 | [NA] |
| vTPH $C_6$ - $C_{10}$ less BTEX (F1) | mg/kg | <25 | [NA] |
| Benzene | mg/kg | <0.2 | 82% |
| Toluene | mg/kg | <0.5 | 82% |
| Ethylbenzene | mg/kg | <1 | 84% |
| m+p-xylene | mg/kg | <2 | 84% |
| o-Xylene | mg/kg | <1 | 84% |
| naphthalene | mg/kg | <1 | [NT] |
| Total +ve Xylenes | mg/kg | <3 | [NT] |
| *Surrogate* aaa-Trifluorotoluene | % | 92 | 82 |

| vTRH(C6-C10)/BTEXN in Water | | |
|---|---|---|
| Our Reference | | 280174-B-54 |
| Your Reference | UNITS | Rinsate 2 |
| Depth | | . |
| Date Sampled | | 11/10/2021 |
| Type of sample | | Water |
| Date extracted | - | 14/10/2021 |
| Date analysed | - | 15/10/2021 |
| TRH $C_6$ - $C_9$ | µg/L | <10 |
| TRH $C_6$ - $C_{10}$ | µg/L | <10 |
| TRH $C_6$ - $C_{10}$ less BTEX (F1) | µg/L | <10 |
| Benzene | µg/L | <1 |
| Toluene | µg/L | <1 |
| Ethylbenzene | µg/L | <1 |
| m+p-xylene | µg/L | <2 |
| o-xylene | µg/L | <1 |
| Naphthalene | µg/L | <1 |
| *Surrogate* Dibromofluoromethane | % | 98 |
| *Surrogate* toluene-d8 | % | 98 |
| *Surrogate* 4-BFB | % | 105 |

| Method ID | Methodology Summary |
| --- | --- |
| **Org-023** | Water samples are analysed directly by purge and trap GC-MS. |
| **Org-023** | Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. |
| **Org-023** | Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. |
| **Org-023** | Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.<br>Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes. |

| QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-6 | [NT] |
| Date extracted | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | 14/10/2021 | [NT] |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | [NT] |
| TRH $C_6$ - $C_9$ | mg/kg | 25 | Org-023 | <25 | [NT] | [NT] | [NT] | [NT] | 92 | [NT] |
| TRH $C_6$ - $C_{10}$ | mg/kg | 25 | Org-023 | <25 | [NT] | [NT] | [NT] | [NT] | 92 | [NT] |
| Benzene | mg/kg | 0.2 | Org-023 | <0.2 | [NT] | [NT] | [NT] | [NT] | 104 | [NT] |
| Toluene | mg/kg | 0.5 | Org-023 | <0.5 | [NT] | [NT] | [NT] | [NT] | 96 | [NT] |
| Ethylbenzene | mg/kg | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 87 | [NT] |
| m+p-xylene | mg/kg | 2 | Org-023 | <2 | [NT] | [NT] | [NT] | [NT] | 86 | [NT] |
| o-Xylene | mg/kg | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 86 | [NT] |
| naphthalene | mg/kg | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| *Surrogate* aaa-Trifluorotoluene | % | | Org-023 | 103 | [NT] | [NT] | [NT] | [NT] | 99 | [NT] |

| QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water | | | | | Duplicate | | | | Spike Recovery % | |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Description | Units | PQL | Method | Blank | # | Base | Dup. | RPD | LCS-W1 | [NT] |
| Date extracted | - | | | 14/10/2021 | [NT] | [NT] | [NT] | [NT] | 14/10/2021 | [NT] |
| Date analysed | - | | | 15/10/2021 | [NT] | [NT] | [NT] | [NT] | 15/10/2021 | [NT] |
| TRH $C_6$ - $C_9$ | µg/L | 10 | Org-023 | <10 | [NT] | [NT] | [NT] | [NT] | 97 | [NT] |
| TRH $C_6$ - $C_{10}$ | µg/L | 10 | Org-023 | <10 | [NT] | [NT] | [NT] | [NT] | 97 | [NT] |
| Benzene | µg/L | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 97 | [NT] |
| Toluene | µg/L | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 99 | [NT] |
| Ethylbenzene | µg/L | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 97 | [NT] |
| m+p-xylene | µg/L | 2 | Org-023 | <2 | [NT] | [NT] | [NT] | [NT] | 97 | [NT] |
| o-xylene | µg/L | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | 95 | [NT] |
| Naphthalene | µg/L | 1 | Org-023 | <1 | [NT] | [NT] | [NT] | [NT] | [NT] | [NT] |
| *Surrogate* Dibromofluoromethane | % | | Org-023 | 97 | [NT] | [NT] | [NT] | [NT] | 120 | [NT] |
| *Surrogate* toluene-d8 | % | | Org-023 | 99 | [NT] | [NT] | [NT] | [NT] | 117 | [NT] |
| *Surrogate* 4-BFB | % | | Org-023 | 105 | [NT] | [NT] | [NT] | [NT] | 105 | [NT] |

## Result Definitions

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

## Quality Control Definitions

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

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

## Laboratory Acceptance Criteria

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Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

ALS Environmental

# SAMPLE RECEIPT NOTIFICATION (SRN)

| | | | |
|---|---|---|---|
| Work Order | : **ES2136811** | | |
| Client | : **DOUGLAS PARTNERS PTY LTD** | Laboratory | : Environmental Division Sydney |
| Contact | : SHANNON GOODSELL | Contact | : Sepan Mahamad |
| Address | : UNIT 5/50 TOPHAN ROAD SMEATON GRANGE NSW 2567 | Address | : 277-289 Woodpark Road Smithfield NSW Australia 2164 |
| E-mail | : shannon.goodsell@douglaspartners.com.au | E-mail | : Sepan.Mahamad@ALSGlobal.com |
| Telephone | : +61 02 9809 0666 | Telephone | : +61 2 8784 8555 |
| Facsimile | : +61 02 9809 4095 | Facsimile | : +61-2-8784 8500 |
| Project | : 202107.04 Bungendore | Page | : 1 of 2 |
| Order number | : 155171 | Quote number | : EM2017DOUPAR0002 (EN/222) |
| C-O-C number | : ---- | QC Level | : NEPM 2013 B3 & ALS QC Standard |
| Site | : Bugendore | | |
| Sampler | : SDG | | |

## Dates

| | | | |
|---|---|---|---|
| Date Samples Received | : 13-Oct-2021 12:00 | Issue Date | : 14-Oct-2021 |
| Client Requested Due Date | : 20-Oct-2021 | Scheduled Reporting Date | : **20-Oct-2021** |

## Delivery Details

| | | | |
|---|---|---|---|
| Mode of Delivery | : Carrier | Security Seal | : Not Available |
| No. of coolers/boxes | : 1 | Temperature | : 10.7'C - Ice Bricks present |
| Receipt Detail | : | No. of samples received / analysed | : 6 / 3 |

## General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.

## Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exists.**

## Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

| *Laboratory sample ID* | *Sampling date / time* | *Sample ID* | (On Hold) SOIL No analysis requested | SOIL - EA055-103 Moisture Content | SOIL - S-19 TRH/BTEXN/PAH/Ph/OC/OP/PCB/8 metals |
|---|---|---|---|---|---|
| ES2136811-001 | 08-Oct-2021 00:00 | RR1 | | ✓ | ✓ |
| ES2136811-002 | 08-Oct-2021 00:00 | RR2 | | ✓ | ✓ |
| ES2136811-003 | 08-Oct-2021 00:00 | RR3 | | ✓ | ✓ |
| ES2136811-004 | 08-Oct-2021 00:00 | RR4 | ✓ | | |
| ES2136811-005 | 08-Oct-2021 00:00 | RR5 | ✓ | | |
| ES2136811-006 | 08-Oct-2021 00:00 | RR7 | ✓ | | |

## Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

## Requested Deliverables

**ACCOUNTS PAYABLE INVOICES**

| | | |
|---|---|---|
| - A4 - AU Tax Invoice (INV) | Email | apinvoices@douglaspartners.com.au |

**SHANNON GOODSELL**

| | | |
|---|---|---|
| - *AU Certificate of Analysis - NATA (COA) | Email | shannon.goodsell@douglaspartners.com.au |
| - *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI) | Email | shannon.goodsell@douglaspartners.com.au |
| - *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC) | Email | shannon.goodsell@douglaspartners.com.au |
| - A4 - AU Sample Receipt Notification - Environmental HT (SRN) | Email | shannon.goodsell@douglaspartners.com.au |
| - Chain of Custody (CoC) (COC) | Email | shannon.goodsell@douglaspartners.com.au |
| - EDI Format - ESDAT (ESDAT) | Email | shannon.goodsell@douglaspartners.com.au |
| - EDI Format - XTab (XTAB) | Email | shannon.goodsell@douglaspartners.com.au |

**Douglas Partners**
Geotechnics / Environment / Groundwater

# CHAIN OF CUSTODY DESPATCH SHEET

| | | | | | |
|---|---|---|---|---|---|
| **Project No:** 202107.04 | **Suburb:** Bungendore | | | **To:** ALS Environmental | |
| **Project Manager:** Shannon Goodsell | **Order Number:** 155171 | **Sampler:** SDG | | 277-289 Woodpark Rd, Smithfield NSW 2164 | |
| **Email:** Shannon.Goodsell@douglaspartners.com.au | | | | **Attn:** ALS Lab | |
| **Turnaround time:** ☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day | | | | **Contact:** 02 8784855 | ALSEnviro.Sydney@ALSGlobal.com |
| **Prior Storage:** ☑ Fridge ☐ Freezer ☐ Shelf | **Do samples contain 'potential' HBM?** ☑ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID) | | | | |

| Lab ID | Sample ID: Location / Other ID | Sample ID: Depth From | Sample ID: Depth To | Date Sampled | Sample Type: S - soil W - water | Container Type: G - glass P - plastic | Analytes: Metals | PAH | TRH/ BTEX | OCP/OPP/ PCB | Phenols | Hold | | | | | Notes/ Preservation/ Additional Requirements |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RR1 | NA | NA | 8/10/21 | S | G | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | Environmental Division Sydney Work Order Reference ES2136811 Telephone : + 61-2-8784 8555 |
| 2 | RR2 | NA | NA | 8/10/21 | S | G | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | |
| 3 | RR3 | NA | NA | 8/10/21 | S | G | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | |
| ~~4~~ | ~~RR4~~ | ~~NA~~ | NA | 8/10/21 | S | ~~G~~ | | | | | | ✓ | | | | | |
| 5 | RR5 | NA | NA | 8/10/21 | S | G | | | | | | ✓ | | | | | |
| | RR6 | NA | NA | 11/10/21 | S | G | | | | | | ✓ | | | | | |
| 6 | RR7 | NA | NA | 8/10/21 | S | G | | | | | | ✓ | | | | | To be sent separately |
| | RR8 | NA | NA | 11/10/21 | S | G | ~~✓~~ | ~~✓~~ | ~~✓~~ | ~~✓~~ | ~~✓~~ | ✓ | | | | | |
| | | | | | | | | | | | | | | | | | To be sent separately |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| **Metals to analyse:** HM8 (As, Cd, Cr, Cu, Pb, Hg, Ni, Zn) | | | **LAB RECEIPT** |
| **Number of samples in container:** ~~8~~ 6 | **Transported to laboratory by:** TNT | | **Lab Ref. No:** |
| **Send results to:** Douglas Partners Pty Ltd | | | **Received by:** Shye T |
| **Address:** Unit 2, 73 Sheppard Street, Hume ACT 26 | **Phone:** (02) 6260 2788 | | **Date & Time:** 13/10/21 12:00pm |
| **Relinquished by:** Shannon Goodsell | **Date:** 12/10/2021 | **Signed:** | **Signed:** |
| **Project Manager:** Shannor Shannon Goodsell | **Order Number:** 155171 | **Dispatch date:** 12/10/2021 | 277-289 Woodpark Rd, Smithfield NSW 2164 |

**Douglas Partners**
Geotechnics | Environment | Groundwater

Douglas Partners Pty Ltd
ABN 75 053 980 117
www.douglaspartners.com.au

# PURCHASE ORDER

| | |
|---|---|
| **Date** | 12/10/21 |
| **PO No.** | 155171 |

| Vendor/Subcontractor: |
|---|
| |
| |
| **Contact Name:** ALS Environmental |

| Deliver To: |
|---|
| 2/73 Sheppard Street |
| Hume ACT 2620 |
| **Requisitioner:** Shannon Goodsell |

This order covers the supply of goods, materials or services shown here, subject to the terms and conditions of this purchase order. **PO number or Project number** and **Requisitioner** should always be quoted in your invoice.

This PO should be attached to your invoice and emailed to **apinvoices@douglaspartners.com.au** in PDF format.

| Item | Description | Quantity | Unit Price | Total | Project No. & G/L Code |
|---|---|---|---|---|---|
| 1x | Soil Sampling as per COC | | | | 202107.04 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | SUBTOTAL | |
| | | | | GST/TAX | |
| | | | | SHIPPING/ OTHER | |
| | | | | **TOTAL** | |

**Comments or Special Instructions**

**TERMS & CONDITIONS**

The vendor is required to mail his invoices to apinvoices@douglaspartners.com.au on the day following despatch to the Purchaser of the goods ordered.

No deviation may be made by the Vendor in any respect from any drawings or specifications furnished by the Purchaser without the Purchaser's consent thereto in writing. If any drawings or specifications do not fully cover any materials or manufacturing process necessary to execute the order, the Vendor must obtain the Purchaser's instructions in writing before purchasing any such materials or applying any process.

The order will be deemed to have been accepted unless the Vendor notifies the Purchaser to the contrary in writing within seven days after the order is received by the Seller.

The Purchaser reserves the right to negotiate, as necessary, to amend its delivery schedules at any time.

All goods covered by the order whether paid or not, shall be subject to inspection by the Purchaser within a reasonable time after delivery and if such goods/materials/services do not conform to the requirements of the order the Purchaser may either reject the goods or any of them or retain the whole or any of them, reserving his right to compensation for the Vendor's breach. All goods not rejected shall be deemed to have been warranted by the Vendor to be in accordance in all respect with any drawings and or specification and/or instructions furnished by the Purchaser to the Vendor.

The order may be cancelled by the Purchaser in the event of the Vendor at any time failing or being unable to comply with any of the terms, conditions or warranties contained therein. Insolvency on the part of either party gives the other party the right of cancellation.

In the case of unforeseen contingency causing stoppage or delay in production the Purchaser reserves the right at its option to suspend, modify or cancel the order.

On the cancellation of the order all goods/materials/services comprised or mentioned thereon, whether wholly or partly manufactured, then in the possession of the Vendor, shall be delivered by and at the cost of the Vendor to such person or persons as the Purchaser shall direct.

All tools, jigs, gauges and other equipment and all the drawings, blue prints and specifications and other papers supplied without charge by the Vendor to the Purchaser and all and any such items as above which has been purchased or manufactured by the Vendor and for which the Purchaser has paid or is liable to pay the full value thereof, shall be the property of the Purchaser and shall not be used otherwise than for the manufacture of goods for the Purchaser.

The Vendor shall have no rights or claim to the drawings, data, designs or ideas furnished to it from the Purchaser. The vendor shall preserve the drawings and data in good order and condition, will not copy or reproduce them or any substantial portion thereof without authority in writing from the Purchaser and will return them to the Purchaser when requested.

All tools, jigs, gauges and other equipment, whether supplied by the Purchaser to the Vendor or manufactured by the Vendor and paid for by the Purchaser, that are lost, partly damaged, or destroyed while in the possession of the Vendor must be replaced free of charge to the Purchaser and to the entire satisfaction of the Purchaser.

Should the Purchaser supply materials to the Vendor it will be the Vendor's responsibility to replace any material that is lost, partly damaged, or destroyed whilst in his possession.

It will be the responsibility of the Vendor to ensure that all tooling supplied by the Purchaser will produce parts strictly in accordance with the drawings of such components.

Waiver by the Purchaser of any specific default by the Vendor or failure by the Purchaser to cancel the order or any part thereof when right of cancellation arises shall not constitute waiver by the Purchaser or any rights of the Purchaser under any terms and conditions of the order arising through any further or subsequent default by the Vendor whether giving rise to a right of cancellation or a claim for damages.

This order is not assignable by the Vendor.

ALS Environmental

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| **Work Order** | : **ES2136811** | Page | : 1 of 8 |
| Client | : **DOUGLAS PARTNERS PTY LTD** | Laboratory | : Environmental Division Sydney |
| Contact | : SHANNON GOODSELL | Contact | : Sepan Mahamad |
| Address | : UNIT 5/50 TOPHAN ROAD<br>SMEATON GRANGE NSW 2567 | Address | : 277-289 Woodpark Road Smithfield NSW Australia 2164 |
| Telephone | : +61 02 9809 0666 | Telephone | : +61 2 8784 8555 |
| Project | : 202107.04 Bungendore | Date Samples Received | : 13-Oct-2021 12:00 |
| Order number | : 155171 | Date Analysis Commenced | : 14-Oct-2021 |
| C-O-C number | : ---- | Issue Date | : 20-Oct-2021 14:52 |
| Sampler | : SDG | | |
| Site | : Bugendore | | |
| Quote number | : EN/222 | | |
| No. of samples received | : 6 | | |
| No. of samples analysed | : 3 | | |

ilac-MRA NATA

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* |
|---|---|---|
| Edwandy Fadjar | Organic Coordinator | Sydney Inorganics, Smithfield, NSW |
| Edwandy Fadjar | Organic Coordinator | Sydney Organics, Smithfield, NSW |
| Ivan Taylor | Analyst | 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 Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
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 | RR1 | RR2 | RR3 | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 08-Oct-2021 00:00 | 08-Oct-2021 00:00 | 08-Oct-2021 00:00 | ---- | ---- |
| Compound | CAS Number | LOR | Unit | ES2136811-001 | ES2136811-002 | ES2136811-003 | -------- | -------- |
| | | | | Result | Result | Result | ---- | ---- |
| **EA055: Moisture Content (Dried @ 105-110°C)** | | | | | | | | |
| Moisture Content | ---- | 1.0 | % | **12.8** | **16.3** | **14.2** | ---- | ---- |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | |
| Arsenic | 7440-38-2 | 5 | mg/kg | **6** | <5 | <5 | ---- | ---- |
| Cadmium | 7440-43-9 | 1 | mg/kg | <1 | <1 | <1 | ---- | ---- |
| Chromium | 7440-47-3 | 2 | mg/kg | **23** | **18** | **14** | ---- | ---- |
| Copper | 7440-50-8 | 5 | mg/kg | **11** | **9** | **10** | ---- | ---- |
| Lead | 7439-92-1 | 5 | mg/kg | **22** | **6** | **16** | ---- | ---- |
| Nickel | 7440-02-0 | 2 | mg/kg | **12** | **11** | **7** | ---- | ---- |
| Zinc | 7440-66-6 | 5 | mg/kg | **27** | **13** | **34** | ---- | ---- |
| **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)** | | | | | | | | |
| 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)**

| Compound | CAS Number | LOR | Unit | RR1 | RR2 | RR3 | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 08-Oct-2021 00:00 | 08-Oct-2021 00:00 | 08-Oct-2021 00:00 | ---- | ---- |
| | | | | ES2136811-001 | ES2136811-002 | ES2136811-003 | -------- | -------- |
| | | | | 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)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 | ---- | ---- |
| 2.6-Dichlorophenol | 87-65-0 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | ---- | ---- |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | RR1 | RR2 | RR3 | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 08-Oct-2021 00:00 | 08-Oct-2021 00:00 | 08-Oct-2021 00:00 | ---- | ---- |
| Compound | CAS Number | LOR | Unit | ES2136811-001 | ES2136811-002 | ES2136811-003 | -------- | -------- |
| | | | | Result | Result | Result | ---- | ---- |
| **EP075(SIM)A: Phenolic Compounds - Continued** | | | | | | | | |
| 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** | | | | | | | | |
| C6 - C9 Fraction | ---- | 10 | mg/kg | <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 | ---- | ---- |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | RR1 | RR2 | RR3 | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 08-Oct-2021 00:00 | 08-Oct-2021 00:00 | 08-Oct-2021 00:00 | ---- | ---- |
| Compound | CAS Number | LOR | Unit | ES2136811-001 | ES2136811-002 | ES2136811-003 | -------- | -------- |
| | | | | Result | Result | Result | ---- | ---- |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued** | | | | | | | | |
| ^ C6 - C10 Fraction minus BTEX (F1) | C6_C10-BTEX | 10 | mg/kg | <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 | ---- | ---- |
| Toluene | 108-88-3 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | ---- | ---- |
| Ethylbenzene | 100-41-4 | 0.5 | mg/kg | <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 | ---- | ---- |
| ortho-Xylene | 95-47-6 | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | ---- | ---- |
| ^ Sum of BTEX | ---- | 0.2 | mg/kg | <0.2 | <0.2 | <0.2 | ---- | ---- |
| ^ Total Xylenes | ---- | 0.5 | mg/kg | <0.5 | <0.5 | <0.5 | ---- | ---- |
| Naphthalene | 91-20-3 | 1 | mg/kg | <1 | <1 | <1 | ---- | ---- |
| **EP066S: PCB Surrogate** | | | | | | | | |
| Decachlorobiphenyl | 2051-24-3 | 0.1 | % | **79.0** | **96.7** | **86.1** | ---- | ---- |
| **EP068S: Organochlorine Pesticide Surrogate** | | | | | | | | |
| Dibromo-DDE | 21655-73-2 | 0.05 | % | **76.9** | **86.1** | **87.9** | ---- | ---- |
| **EP068T: Organophosphorus Pesticide Surrogate** | | | | | | | | |
| DEF | 78-48-8 | 0.05 | % | **83.1** | **103** | **96.8** | ---- | ---- |
| **EP075(SIM)S: Phenolic Compound Surrogates** | | | | | | | | |
| Phenol-d6 | 13127-88-3 | 0.5 | % | **88.2** | **86.4** | **82.2** | ---- | ---- |
| 2-Chlorophenol-D4 | 93951-73-6 | 0.5 | % | **84.1** | **86.6** | **82.5** | ---- | ---- |
| 2.4.6-Tribromophenol | 118-79-6 | 0.5 | % | **72.8** | **89.1** | **66.0** | ---- | ---- |
| **EP075(SIM)T: PAH Surrogates** | | | | | | | | |
| 2-Fluorobiphenyl | 321-60-8 | 0.5 | % | **98.8** | **100** | **87.4** | ---- | ---- |
| Anthracene-d10 | 1719-06-8 | 0.5 | % | **93.1** | **88.8** | **80.8** | ---- | ---- |
| 4-Terphenyl-d14 | 1718-51-0 | 0.5 | % | **85.4** | **83.0** | **86.6** | ---- | ---- |
| **EP080S: TPH(V)/BTEX Surrogates** | | | | | | | | |
| 1.2-Dichloroethane-D4 | 17060-07-0 | 0.2 | % | **87.2** | **92.6** | **97.5** | ---- | ---- |
| Toluene-D8 | 2037-26-5 | 0.2 | % | **88.6** | **93.8** | **96.5** | ---- | ---- |

## Analytical Results

| Sub-Matrix: SOIL (Matrix: SOIL) | | | Sample ID | RR1 | RR2 | RR3 | ---- | ---- |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling date / time | 08-Oct-2021 00:00 | 08-Oct-2021 00:00 | 08-Oct-2021 00:00 | ---- | ---- |
| Compound | CAS Number | LOR | Unit | ES2136811-001 | ES2136811-002 | ES2136811-003 | -------- | -------- |
| | | | | Result | Result | Result | ---- | ---- |
| **EP080S: TPH(V)/BTEX Surrogates - Continued** | | | | | | | | |
| 4-Bromofluorobenzene | 460-00-4 | 0.2 | % | 82.4 | 87.7 | 91.1 | ---- | ---- |

## Surrogate Control Limits

Sub-Matrix: **SOIL**

| Compound | CAS Number | Recovery Limits (%) 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 | 73 | 133 |
| **Toluene-D8** | 2037-26-5 | 74 | 132 |
| **4-Bromofluorobenzene** | 460-00-4 | 72 | 130 |

# QUALITY CONTROL REPORT

| | | | |
|---|---|---|---|
| **Work Order** | : **ES2136811** | Page | : 1 of 10 |
| Client | : **DOUGLAS PARTNERS PTY LTD** | Laboratory | : Environmental Division Sydney |
| Contact | : SHANNON GOODSELL | Contact | : Sepan Mahamad |
| Address | : UNIT 5/50 TOPHAN ROAD<br>SMEATON GRANGE NSW 2567 | Address | : 277-289 Woodpark Road Smithfield NSW Australia 2164 |
| Telephone | : +61 02 9809 0666 | Telephone | : +61 2 8784 8555 |
| Project | : 202107.04 Bungendore | Date Samples Received | : 13-Oct-2021 |
| Order number | : 155171 | Date Analysis Commenced | : 14-Oct-2021 |
| C-O-C number | : ---- | Issue Date | : 20-Oct-2021 |
| Sampler | : SDG | | |
| Site | : Bugendore | | |
| Quote number | : EN/222 | | |
| No. of samples received | : 6 | | |
| No. of samples analysed | : 3 | | |

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* |
|---|---|---|
| Edwandy Fadjar | Organic Coordinator | Sydney Inorganics, Smithfield, NSW |
| Edwandy Fadjar | Organic Coordinator | Sydney Organics, Smithfield, NSW |
| Ivan Taylor | Analyst | 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 (%)* |
| **EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 3959849)** | | | | | | | | | |
| ES2136459-001 | Anonymous | EG005T: Cadmium | 7440-43-9 | 1 | mg/kg | <1 | <1 | 0.0 | No Limit |
| | | EG005T: Chromium | 7440-47-3 | 2 | mg/kg | 3 | 3 | 0.0 | No Limit |
| | | 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 | 5 | 5 | 0.0 | No Limit |
| | | EG005T: Zinc | 7440-66-6 | 5 | mg/kg | 12 | 10 | 10.7 | No Limit |
| **EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 3959852)** | | | | | | | | | |
| ES2136770-001 | Anonymous | EA055: Moisture Content | ---- | 0.1 | % | 15.6 | 15.5 | 0.0 | 0% - 50% |
| ES2136811-003 | RR3 | EA055: Moisture Content | ---- | 0.1 | % | 14.2 | 13.5 | 4.9 | 0% - 50% |
| **EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3959850)** | | | | | | | | | |
| ES2136459-001 | Anonymous | EG035T: Mercury | 7439-97-6 | 0.1 | mg/kg | <0.1 | <0.1 | 0.0 | No Limit |
| **EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3955243)** | | | | | | | | | |
| ES2136811-001 | RR1 | EP066: Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | <0.1 | <0.1 | 0.0 | No Limit |
| **EP068A: Organochlorine Pesticides (OC) (QC Lot: 3955244)** | | | | | | | | | |
| ES2136811-001 | RR1 | 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 |

Sub-Matrix: **SOIL**

| Laboratory sample ID | Sample ID | Method: Compound | CAS Number | LOR | Unit | Original Result | Duplicate Result | RPD (%) | Acceptable RPD (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Laboratory Duplicate (DUP) Report | | | | | |
| **EP068A: Organochlorine Pesticides (OC) (QC Lot: 3955244) - continued** | | | | | | | | | |
| ES2136811-001 | RR1 | 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 |
| **EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3955244)** | | | | | | | | | |
| ES2136811-001 | RR1 | 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)A: Phenolic Compounds (QC Lot: 3955245)** | | | | | | | | | |
| ES2136811-001 | RR1 | 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 |

Sub-Matrix: **SOIL**

| Laboratory sample ID | Sample ID | Method: Compound | CAS Number | LOR | Unit | Original Result | Duplicate Result | RPD (%) | Acceptable RPD (%) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Laboratory Duplicate (DUP) Report | | | | | |
| **EP075(SIM)A: Phenolic Compounds (QC Lot: 3955245) - continued** | | | | | | | | | |
| ES2136811-001 | RR1 | 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 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3955245)** | | | | | | | | | |
| ES2136811-001 | RR1 | 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<br>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: 3955246)** | | | | | | | | | |
| ES2136811-001 | RR1 | 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: 3955444)** | | | | | | | | | |
| ES2134309-007 | Anonymous | EP080: C6 - C9 Fraction | ---- | 10 | mg/kg | <10 | <10 | 0.0 | No Limit |
| ES2136811-002 | RR2 | EP080: C6 - C9 Fraction | ---- | 10 | mg/kg | <10 | <10 | 0.0 | No Limit |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3955246)** | | | | | | | | | |
| ES2136811-001 | RR1 | 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: 3955444)** | | | | | | | | | |

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 Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 3955444) - continued** | | | | | | | | | |
| ES2134309-007 | Anonymous | EP080: C6 - C10 Fraction | C6_C10 | 10 | mg/kg | <10 | <10 | 0.0 | No Limit |
| ES2136811-002 | RR2 | EP080: C6 - C10 Fraction | C6_C10 | 10 | mg/kg | <10 | <10 | 0.0 | No Limit |
| **EP080: BTEXN (QC Lot: 3955444)** | | | | | | | | | |
| ES2134309-007 | 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 |
| ES2136811-002 | RR2 | 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: 3959849)** | | | | | | | | |
| EG005T: Arsenic | 7440-38-2 | 5 | mg/kg | <5 | 121.1 mg/kg | 98.5 | 88.0 | 113 |
| EG005T: Cadmium | 7440-43-9 | 1 | mg/kg | <1 | 0.74 mg/kg | 93.0 | 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 | 106 | 89.0 | 111 |
| EG005T: Lead | 7439-92-1 | 5 | mg/kg | <5 | 60.8 mg/kg | 94.2 | 82.0 | 119 |
| EG005T: Nickel | 7440-02-0 | 2 | mg/kg | <2 | 15.3 mg/kg | 99.9 | 80.0 | 120 |
| EG005T: Zinc | 7440-66-6 | 5 | mg/kg | <5 | 139.3 mg/kg | 88.2 | 66.0 | 133 |
| **EG035T: Total Recoverable Mercury by FIMS (QCLot: 3959850)** | | | | | | | | |
| EG035T: Mercury | 7439-97-6 | 0.1 | mg/kg | <0.1 | 0.087 mg/kg | 120 | 70.0 | 125 |
| **EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3955243)** | | | | | | | | |
| EP066: Total Polychlorinated biphenyls | ---- | 0.1 | mg/kg | <0.1 | 1 mg/kg | 97.8 | 62.0 | 126 |
| **EP068A: Organochlorine Pesticides (OC) (QCLot: 3955244)** | | | | | | | | |
| EP068: alpha-BHC | 319-84-6 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 85.1 | 69.0 | 113 |
| EP068: Hexachlorobenzene (HCB) | 118-74-1 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 79.5 | 65.0 | 117 |
| EP068: beta-BHC | 319-85-7 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 92.9 | 67.0 | 119 |
| EP068: gamma-BHC | 58-89-9 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 87.8 | 68.0 | 116 |
| EP068: delta-BHC | 319-86-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 89.4 | 65.0 | 117 |
| EP068: Heptachlor | 76-44-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 89.5 | 67.0 | 115 |
| EP068: Aldrin | 309-00-2 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 89.5 | 69.0 | 115 |
| EP068: Heptachlor epoxide | 1024-57-3 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 94.5 | 62.0 | 118 |
| EP068: trans-Chlordane | 5103-74-2 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 93.0 | 63.0 | 117 |
| EP068: alpha-Endosulfan | 959-98-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 93.0 | 66.0 | 116 |
| EP068: cis-Chlordane | 5103-71-9 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 92.8 | 64.0 | 116 |
| EP068: Dieldrin | 60-57-1 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 94.4 | 66.0 | 116 |
| EP068: 4.4`-DDE | 72-55-9 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 92.8 | 67.0 | 115 |
| EP068: Endrin | 72-20-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 86.2 | 67.0 | 123 |
| EP068: beta-Endosulfan | 33213-65-9 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 97.3 | 69.0 | 115 |
| EP068: 4.4`-DDD | 72-54-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 93.3 | 69.0 | 121 |
| EP068: Endrin aldehyde | 7421-93-4 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 78.3 | 56.0 | 120 |
| EP068: Endosulfan sulfate | 1031-07-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 81.0 | 62.0 | 124 |
| EP068: 4.4`-DDT | 50-29-3 | 0.2 | mg/kg | <0.2 | 0.5 mg/kg | 86.0 | 66.0 | 120 |
| EP068: Endrin ketone | 53494-70-5 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 79.5 | 64.0 | 122 |
| EP068: Methoxychlor | 72-43-5 | 0.2 | mg/kg | <0.2 | 0.5 mg/kg | 89.0 | 54.0 | 130 |
| **EP068B: Organophosphorus Pesticides (OP) (QCLot: 3955244)** | | | | | | | | |

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: 3955244) - continued** | | | | | | | | |
| EP068: Dichlorvos | 62-73-7 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 89.8 | 59.0 | 119 |
| EP068: Demeton-S-methyl | 919-86-8 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 107 | 62.0 | 128 |
| EP068: Monocrotophos | 6923-22-4 | 0.2 | mg/kg | <0.2 | 0.5 mg/kg | 104 | 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 | 92.6 | 72.0 | 120 |
| EP068: Parathion-methyl | 298-00-0 | 0.2 | mg/kg | <0.2 | 0.5 mg/kg | 95.1 | 68.0 | 120 |
| EP068: Malathion | 121-75-5 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 104 | 68.0 | 122 |
| EP068: Fenthion | 55-38-9 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 94.3 | 69.0 | 117 |
| EP068: Chlorpyrifos | 2921-88-2 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 93.7 | 76.0 | 118 |
| EP068: Parathion | 56-38-2 | 0.2 | mg/kg | <0.2 | 0.5 mg/kg | 96.0 | 64.0 | 122 |
| EP068: Pirimphos-ethyl | 23505-41-1 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 93.9 | 70.0 | 116 |
| EP068: Chlorfenvinphos | 470-90-6 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 85.4 | 69.0 | 121 |
| EP068: Bromophos-ethyl | 4824-78-6 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 87.3 | 66.0 | 118 |
| EP068: Fenamiphos | 22224-92-6 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 104 | 68.0 | 124 |
| EP068: Prothiofos | 34643-46-4 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 92.1 | 62.0 | 112 |
| EP068: Ethion | 563-12-2 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 95.7 | 68.0 | 120 |
| EP068: Carbophenothion | 786-19-6 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 83.8 | 65.0 | 127 |
| EP068: Azinphos Methyl | 86-50-0 | 0.05 | mg/kg | <0.05 | 0.5 mg/kg | 107 | 41.0 | 123 |
| **EP075(SIM)A: Phenolic Compounds (QCLot: 3955245)** | | | | | | | | |
| EP075(SIM): Phenol | 108-95-2 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 93.7 | 71.0 | 125 |
| EP075(SIM): 2-Chlorophenol | 95-57-8 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 96.6 | 72.0 | 124 |
| EP075(SIM): 2-Methylphenol | 95-48-7 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 88.5 | 71.0 | 123 |
| EP075(SIM): 3- & 4-Methylphenol | 1319-77-3 | 1 | mg/kg | <1 | 12 mg/kg | 89.3 | 67.0 | 127 |
| EP075(SIM): 2-Nitrophenol | 88-75-5 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 89.1 | 54.0 | 114 |
| EP075(SIM): 2.4-Dimethylphenol | 105-67-9 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 98.8 | 68.0 | 126 |
| EP075(SIM): 2.4-Dichlorophenol | 120-83-2 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 97.0 | 66.0 | 120 |
| EP075(SIM): 2.6-Dichlorophenol | 87-65-0 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 102 | 70.0 | 120 |
| EP075(SIM): 4-Chloro-3-methylphenol | 59-50-7 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 91.6 | 70.0 | 116 |
| EP075(SIM): 2.4.6-Trichlorophenol | 88-06-2 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 89.7 | 54.0 | 114 |
| EP075(SIM): 2.4.5-Trichlorophenol | 95-95-4 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 98.2 | 60.0 | 114 |
| EP075(SIM): Pentachlorophenol | 87-86-5 | 2 | mg/kg | <2 | 12 mg/kg | 45.6 | 10.0 | 57.0 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3955245)** | | | | | | | | |
| EP075(SIM): Naphthalene | 91-20-3 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 96.2 | 77.0 | 125 |
| EP075(SIM): Acenaphthylene | 208-96-8 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 103 | 72.0 | 124 |
| EP075(SIM): Acenaphthene | 83-32-9 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 102 | 73.0 | 127 |
| EP075(SIM): Fluorene | 86-73-7 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 98.3 | 72.0 | 126 |
| EP075(SIM): Phenanthrene | 85-01-8 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 108 | 75.0 | 127 |
| EP075(SIM): Anthracene | 120-12-7 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 93.6 | 77.0 | 127 |

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 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3955245) - continued** | | | | | | | | |
| EP075(SIM): Fluoranthene | 206-44-0 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 89.3 | 73.0 | 127 |
| EP075(SIM): Pyrene | 129-00-0 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 90.5 | 74.0 | 128 |
| EP075(SIM): Benz(a)anthracene | 56-55-3 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 97.5 | 69.0 | 123 |
| EP075(SIM): Chrysene | 218-01-9 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 101 | 75.0 | 127 |
| EP075(SIM): Benzo(b+j)fluoranthene | 205-99-2<br>205-82-3 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 97.7 | 68.0 | 116 |
| EP075(SIM): Benzo(k)fluoranthene | 207-08-9 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 100 | 74.0 | 126 |
| EP075(SIM): Benzo(a)pyrene | 50-32-8 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 99.7 | 70.0 | 126 |
| EP075(SIM): Indeno(1.2.3.cd)pyrene | 193-39-5 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 97.0 | 61.0 | 121 |
| EP075(SIM): Dibenz(a.h)anthracene | 53-70-3 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 101 | 62.0 | 118 |
| EP075(SIM): Benzo(g.h.i)perylene | 191-24-2 | 0.5 | mg/kg | <0.5 | 6 mg/kg | 94.0 | 63.0 | 121 |
| **EP080/071: Total Petroleum Hydrocarbons (QCLot: 3955246)** | | | | | | | | |
| EP071: C10 - C14 Fraction | ---- | 50 | mg/kg | <50 | 300 mg/kg | 93.5 | 75.0 | 129 |
| EP071: C15 - C28 Fraction | ---- | 100 | mg/kg | <100 | 450 mg/kg | 89.4 | 77.0 | 131 |
| EP071: C29 - C36 Fraction | ---- | 100 | mg/kg | <100 | 300 mg/kg | 91.7 | 71.0 | 129 |
| **EP080/071: Total Petroleum Hydrocarbons (QCLot: 3955444)** | | | | | | | | |
| EP080: C6 - C9 Fraction | ---- | 10 | mg/kg | <10 | 26 mg/kg | 89.7 | 68.4 | 128 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3955246)** | | | | | | | | |
| EP071: >C10 - C16 Fraction | ---- | 50 | mg/kg | <50 | 375 mg/kg | 95.2 | 77.0 | 125 |
| EP071: >C16 - C34 Fraction | ---- | 100 | mg/kg | <100 | 525 mg/kg | 91.2 | 74.0 | 138 |
| EP071: >C34 - C40 Fraction | ---- | 100 | mg/kg | <100 | 225 mg/kg | 76.6 | 63.0 | 131 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3955444)** | | | | | | | | |
| EP080: C6 - C10 Fraction | C6_C10 | 10 | mg/kg | <10 | 31 mg/kg | 101 | 68.4 | 128 |
| **EP080: BTEXN (QCLot: 3955444)** | | | | | | | | |
| EP080: Benzene | 71-43-2 | 0.2 | mg/kg | <0.2 | 1 mg/kg | 89.9 | 62.0 | 116 |
| EP080: Toluene | 108-88-3 | 0.5 | mg/kg | <0.5 | 1 mg/kg | 95.0 | 67.0 | 121 |
| EP080: Ethylbenzene | 100-41-4 | 0.5 | mg/kg | <0.5 | 1 mg/kg | 92.5 | 65.0 | 117 |
| EP080: meta- & para-Xylene | 108-38-3<br>106-42-3 | 0.5 | mg/kg | <0.5 | 2 mg/kg | 95.2 | 66.0 | 118 |
| EP080: ortho-Xylene | 95-47-6 | 0.5 | mg/kg | <0.5 | 1 mg/kg | 94.6 | 68.0 | 120 |
| EP080: Naphthalene | 91-20-3 | 1 | mg/kg | <1 | 1 mg/kg | 76.0 | 63.0 | 119 |

## 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 (%) |

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: 3959849)** | | | | | | | |
| ES2136459-001 | Anonymous | EG005T: Arsenic | 7440-38-2 | 50 mg/kg | 99.1 | 70.0 | 130 |
| | | EG005T: Cadmium | 7440-43-9 | 50 mg/kg | 100 | 70.0 | 130 |
| | | EG005T: Chromium | 7440-47-3 | 50 mg/kg | 100 | 68.0 | 132 |
| | | EG005T: Copper | 7440-50-8 | 250 mg/kg | 96.0 | 70.0 | 130 |
| | | EG005T: Lead | 7439-92-1 | 250 mg/kg | 94.5 | 70.0 | 130 |
| | | EG005T: Nickel | 7440-02-0 | 50 mg/kg | 101 | 70.0 | 130 |
| | | EG005T: Zinc | 7440-66-6 | 250 mg/kg | 96.7 | 66.0 | 133 |
| **EG035T: Total Recoverable Mercury by FIMS (QCLot: 3959850)** | | | | | | | |
| ES2136459-001 | Anonymous | EG035T: Mercury | 7439-97-6 | 5 mg/kg | 105 | 70.0 | 130 |
| **EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3955243)** | | | | | | | |
| ES2136811-001 | RR1 | EP066: Total Polychlorinated biphenyls | ---- | 1 mg/kg | 106 | 70.0 | 130 |
| **EP068A: Organochlorine Pesticides (OC) (QCLot: 3955244)** | | | | | | | |
| ES2136811-001 | RR1 | EP068: gamma-BHC | 58-89-9 | 0.5 mg/kg | 95.2 | 70.0 | 130 |
| | | EP068: Heptachlor | 76-44-8 | 0.5 mg/kg | 93.5 | 70.0 | 130 |
| | | EP068: Aldrin | 309-00-2 | 0.5 mg/kg | 98.2 | 70.0 | 130 |
| | | EP068: Dieldrin | 60-57-1 | 0.5 mg/kg | 96.6 | 70.0 | 130 |
| | | EP068: Endrin | 72-20-8 | 2 mg/kg | 106 | 70.0 | 130 |
| | | EP068: 4.4`-DDT | 50-29-3 | 2 mg/kg | 86.7 | 70.0 | 130 |
| **EP068B: Organophosphorus Pesticides (OP) (QCLot: 3955244)** | | | | | | | |
| ES2136811-001 | RR1 | EP068: Diazinon | 333-41-5 | 0.5 mg/kg | 107 | 70.0 | 130 |
| | | EP068: Chlorpyrifos-methyl | 5598-13-0 | 0.5 mg/kg | 94.4 | 70.0 | 130 |
| | | EP068: Pirimphos-ethyl | 23505-41-1 | 0.5 mg/kg | 96.5 | 70.0 | 130 |
| | | EP068: Bromophos-ethyl | 4824-78-6 | 0.5 mg/kg | 88.3 | 70.0 | 130 |
| | | EP068: Prothiofos | 34643-46-4 | 0.5 mg/kg | 80.0 | 70.0 | 130 |
| **EP075(SIM)A: Phenolic Compounds (QCLot: 3955245)** | | | | | | | |
| ES2136811-001 | RR1 | EP075(SIM): Phenol | 108-95-2 | 10 mg/kg | 91.3 | 70.0 | 130 |
| | | EP075(SIM): 2-Chlorophenol | 95-57-8 | 10 mg/kg | 83.2 | 70.0 | 130 |
| | | EP075(SIM): 2-Nitrophenol | 88-75-5 | 10 mg/kg | 76.8 | 60.0 | 130 |
| | | EP075(SIM): 4-Chloro-3-methylphenol | 59-50-7 | 10 mg/kg | 86.8 | 70.0 | 130 |
| | | EP075(SIM): Pentachlorophenol | 87-86-5 | 10 mg/kg | 52.4 | 20.0 | 130 |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3955245)** | | | | | | | |
| ES2136811-001 | RR1 | EP075(SIM): Acenaphthene | 83-32-9 | 10 mg/kg | 84.8 | 70.0 | 130 |
| | | EP075(SIM): Pyrene | 129-00-0 | 10 mg/kg | 81.0 | 70.0 | 130 |
| **EP080/071: Total Petroleum Hydrocarbons (QCLot: 3955246)** | | | | | | | |
| ES2136811-001 | RR1 | EP071: C10 - C14 Fraction | ---- | 480 mg/kg | 117 | 73.0 | 137 |
| | | EP071: C15 - C28 Fraction | ---- | 3100 mg/kg | 105 | 53.0 | 131 |
| | | EP071: C29 - C36 Fraction | ---- | 2060 mg/kg | 102 | 52.0 | 132 |

Sub-Matrix: **SOIL**

| Laboratory sample ID | Sample ID | Method: Compound | CAS Number | Matrix Spike (MS) Report Spike Concentration | SpikeRecovery(%) MS | Acceptable Limits (%) Low | High |
|---|---|---|---|---|---|---|---|
| **EP080/071: Total Petroleum Hydrocarbons (QCLot: 3955444)** | | | | | | | |
| ES2134309-007 | Anonymous | EP080: C6 - C9 Fraction | ---- | 32.5 mg/kg | 107 | 70.0 | 130 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3955246)** | | | | | | | |
| ES2136811-001 | RR1 | EP071: >C10 - C16 Fraction | ---- | 860 mg/kg | 111 | 73.0 | 137 |
| | | EP071: >C16 - C34 Fraction | ---- | 4320 mg/kg | 106 | 53.0 | 131 |
| | | EP071: >C34 - C40 Fraction | ---- | 890 mg/kg | 90.2 | 52.0 | 132 |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 3955444)** | | | | | | | |
| ES2134309-007 | Anonymous | EP080: C6 - C10 Fraction | C6_C10 | 37.5 mg/kg | 119 | 70.0 | 130 |
| **EP080: BTEXN (QCLot: 3955444)** | | | | | | | |
| ES2134309-007 | Anonymous | EP080: Benzene | 71-43-2 | 2.5 mg/kg | 95.2 | 70.0 | 130 |
| | | EP080: Toluene | 108-88-3 | 2.5 mg/kg | 94.6 | 70.0 | 130 |
| | | EP080: Ethylbenzene | 100-41-4 | 2.5 mg/kg | 94.6 | 70.0 | 130 |
| | | EP080: meta- & para-Xylene | 108-38-3 106-42-3 | 2.5 mg/kg | 96.2 | 70.0 | 130 |
| | | EP080: ortho-Xylene | 95-47-6 | 2.5 mg/kg | 96.3 | 70.0 | 130 |
| | | EP080: Naphthalene | 91-20-3 | 2.5 mg/kg | 87.6 | 70.0 | 130 |

ALS Environmental

# QA/QC Compliance Assessment to assist with Quality Review

| | | | |
|---|---|---|---|
| **Work Order** | : **ES2136811** | Page | : 1 of 5 |
| Client | : **DOUGLAS PARTNERS PTY LTD** | Laboratory | : Environmental Division Sydney |
| Contact | : SHANNON GOODSELL | Telephone | : +61 2 8784 8555 |
| Project | : 202107.04 Bungendore | Date Samples Received | : 13-Oct-2021 |
| Site | : Bugendore | Issue Date | : 20-Oct-2021 |
| Sampler | : SDG | No. of samples received | : 6 |
| Order number | : 155171 | No. of samples analysed | : 3 |

**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*

- **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)** | | | | | | | | |
| **Soil Glass Jar - Unpreserved (EA055)**<br>RR1,<br>RR3 | RR2, | **08-Oct-2021** | **----** | ---- | ---- | **18-Oct-2021** | 22-Oct-2021 | ✓ |
| **EG005(ED093)T: Total Metals by ICP-AES** | | | | | | | | |
| **Soil Glass Jar - Unpreserved (EG005T)**<br>RR1,<br>RR3 | RR2, | **08-Oct-2021** | **18-Oct-2021** | 06-Apr-2022 | ✓ | **18-Oct-2021** | 06-Apr-2022 | ✓ |
| **EG035T: Total Recoverable Mercury by FIMS** | | | | | | | | |
| **Soil Glass Jar - Unpreserved (EG035T)**<br>RR1,<br>RR3 | RR2, | **08-Oct-2021** | **18-Oct-2021** | 05-Nov-2021 | ✓ | **19-Oct-2021** | 05-Nov-2021 | ✓ |
| **EP066: Polychlorinated Biphenyls (PCB)** | | | | | | | | |
| **Soil Glass Jar - Unpreserved (EP066)**<br>RR1,<br>RR3 | RR2, | **08-Oct-2021** | **18-Oct-2021** | 22-Oct-2021 | ✓ | **18-Oct-2021** | 27-Nov-2021 | ✓ |
| **EP068A: Organochlorine Pesticides (OC)** | | | | | | | | |
| **Soil Glass Jar - Unpreserved (EP068)**<br>RR1,<br>RR3 | RR2, | **08-Oct-2021** | **18-Oct-2021** | 22-Oct-2021 | ✓ | **18-Oct-2021** | 27-Nov-2021 | ✓ |
| **EP068B: Organophosphorus Pesticides (OP)** | | | | | | | | |
| **Soil Glass Jar - Unpreserved (EP068)**<br>RR1,<br>RR3 | RR2, | **08-Oct-2021** | **18-Oct-2021** | 22-Oct-2021 | ✓ | **18-Oct-2021** | 27-Nov-2021 | ✓ |
| **EP075(SIM)A: Phenolic Compounds** | | | | | | | | |
| **Soil Glass Jar - Unpreserved (EP075(SIM))**<br>RR1,<br>RR3 | RR2, | **08-Oct-2021** | **18-Oct-2021** | 22-Oct-2021 | ✓ | **18-Oct-2021** | 27-Nov-2021 | ✓ |
| **EP075(SIM)B: Polynuclear Aromatic Hydrocarbons** | | | | | | | | |
| **Soil Glass Jar - Unpreserved (EP075(SIM))**<br>RR1,<br>RR3 | RR2, | **08-Oct-2021** | **18-Oct-2021** | 22-Oct-2021 | ✓ | **18-Oct-2021** | 27-Nov-2021 | ✓ |

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)** RR1, RR3 | RR2, | **08-Oct-2021** | **14-Oct-2021** | 22-Oct-2021 | ✓ | **15-Oct-2021** | 22-Oct-2021 | ✓ |
| **Soil Glass Jar - Unpreserved (EP071)** RR1, RR3 | RR2, | **08-Oct-2021** | **18-Oct-2021** | 22-Oct-2021 | ✓ | **18-Oct-2021** | 27-Nov-2021 | ✓ |
| **EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions** | | | | | | | | |
| **Soil Glass Jar - Unpreserved (EP080)** RR1, RR3 | RR2, | **08-Oct-2021** | **14-Oct-2021** | 22-Oct-2021 | ✓ | **15-Oct-2021** | 22-Oct-2021 | ✓ |
| **Soil Glass Jar - Unpreserved (EP071)** RR1, RR3 | RR2, | **08-Oct-2021** | **18-Oct-2021** | 22-Oct-2021 | ✓ | **18-Oct-2021** | 27-Nov-2021 | ✓ |
| **EP080: BTEXN** | | | | | | | | |
| **Soil Glass Jar - Unpreserved (EP080)** RR1, RR3 | RR2, | **08-Oct-2021** | **14-Oct-2021** | 22-Oct-2021 | ✓ | **15-Oct-2021** | 22-Oct-2021 | ✓ |

## 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 | 20 | **10.00** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| PAH/Phenols (SIM) | EP075(SIM) | 1 | 6 | **16.67** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS | EP068 | 1 | 7 | **14.29** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Polychlorinated Biphenyls (PCB) | EP066 | 1 | 5 | **20.00** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Mercury by FIMS | EG035T | 1 | 8 | **12.50** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES | EG005T | 1 | 8 | **12.50** | **10.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction | EP071 | 1 | 6 | **16.67** | **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 | 6 | **16.67** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS | EP068 | 1 | 7 | **14.29** | **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 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES | EG005T | 1 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction | EP071 | 1 | 6 | **16.67** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX | EP080 | 1 | 20 | **5.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| **Method Blanks (MB)** | | | | | | | |
| PAH/Phenols (SIM) | EP075(SIM) | 1 | 6 | **16.67** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS | EP068 | 1 | 7 | **14.29** | **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 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES | EG005T | 1 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction | EP071 | 1 | 6 | **16.67** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX | EP080 | 1 | 20 | **5.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| **Matrix Spikes (MS)** | | | | | | | |
| PAH/Phenols (SIM) | EP075(SIM) | 1 | 6 | **16.67** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Pesticides by GCMS | EP068 | 1 | 7 | **14.29** | **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 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| Total Metals by ICP-AES | EG005T | 1 | 8 | **12.50** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH - Semivolatile Fraction | EP071 | 1 | 6 | **16.67** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |
| TRH Volatiles/BTEX | EP080 | 1 | 20 | **5.00** | **5.00** | ✓ | NEPM 2013 B3 & ALS QC Standard |

## 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 AS 3550, 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. |

# Appendix I

Quality Assurance and Quality Control

# Appendix I
# Data Quality Assurance and Quality Control
# Majara Street, Bungendore

## I1.0 Field and Laboratory Data Quality Assurance and Quality Control

The field and laboratory data quality assurance and quality control (QA/QC) procedures and results are summarised in the following Table 1. Reference should be made to the field work methodology and the laboratory results / certificates of analysis for further details. The relative percentage difference (RPD) results, along with the other field QC samples are included in the summary results tables.

**Table 1: Field and Laboratory Quality Control**

| Item | Evaluation / Acceptance Criteria | Compliance |
|---|---|---|
| Analytical laboratories used | NATA accreditation | C |
| Holding times | Various based on type of analysis | C |
| Intra-laboratory replicates | 5% of primary samples;<br><30% RPD | PC |
| Inter-laboratory replicates | 5% of primary samples;<br><30% RPD | PC |
| Trip Spikes | One per sampling event; 60-140% recovery | C |
| Trip Blanks | One per sampling event; <PQL | C |
| Rinsates | One per sampling event; <PQL | C |
| Laboratory / Reagent Blanks | One per batch; <PQL | C |
| Matrix Spikes | One per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics) | C |
| Surrogate Spikes | All organics analysis; 70-130% recovery (inorganics); 60-140% recovery (organics) | C |
| Control Samples | One per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics) | C |
| Standard Operating Procedures (SOP) | Adopting SOP for all aspects of the sampling field work | C |

Notes:
C = compliance; PC = partial compliance; NC = non-compliance

The RPD results were all within the acceptable range, except for those indicated in Tables QA1 and QA2 (Appendix G). The exceedances are not, however, considered to be of concern given that:

- The replicate pairs being collected from fill soils which were heterogeneous in nature;
- Soil replicates, rather than homogenised soil duplicates, were used to minimise the risk of possible volatile loss, hence greater variability can be expected;
- Most of the recorded concentrations being relatively close to the PQL and small actual differences in recorded concentrations will lead to high RPD values;
- The majority of RPDs within a replicate pair being within the acceptable limits; and
- All other QA/QC parameters met the DQIs.

## I2.0 Data Quality Indicators

The reliability of field procedures and analytical results was assessed against the following data quality indicators (DQIs) as outlined in NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013):

- Completeness: a measure of the amount of usable data from a data collection activity;
- Comparability: the confidence (qualitative) that data may be considered to be equivalent for each sampling and analytical event;
- Representativeness: the confidence (qualitative) of data representativeness of media present on-site;
- Precision: a measure of variability or reproducibility of data; and
- Accuracy: a measure of closeness of the data to the 'true' value.

**Table 2: Data Quality Indicators**

| Data Quality Indicator | Method(s) of Achievement |
|---|---|
| Completeness | Systematic and selected target locations sampled. |
| | Preparation of borehole logs, sample location plan and chain of custody records. |
| | Laboratory sample receipt information received confirming receipt of samples intact and appropriateness of the chain of custody. |
| | Samples analysed for contaminants of potential concern (COPC) identified in the Conceptual Site Model (CSM). |
| | Completion of chain of custody (COC) documentation. |
| | NATA accredited laboratory results certificates provided by the laboratory. |
| | Satisfactory frequency and results for field and laboratory quality control (QC) samples as discussed in Section 1. |
| Comparability | Using appropriate techniques for sample recovery, storage and transportation, which were the same for the duration of the project. |
| | Experienced sampler(s) used. |
| | Use of NATA registered laboratories, with test methods the same or similar between laboratories. |
| | Satisfactory results for field and laboratory QC samples. |
| Representativeness | Target media sampled. |
| | Sample numbers recovered and analysed are considered to be representative of the target media and complying with DQOs. |
| | Samples were extracted and analysed within holding times. |
| | Samples were analysed in accordance with the COC. |
| Precision | Field staff followed standard operating procedures. |
| | Generally acceptable RPD between original samples and replicates. |
| | Satisfactory results for all other field and laboratory QC samples. |
| Accuracy | Field staff followed standard operating procedures. |
| | Satisfactory results for all field and laboratory QC samples. |

Based on the above, it is considered that the DQIs have been generally complied with.

## I3.0 Conclusion

Based on the results of the field QA and field and laboratory QC, and evaluation against the DQIs it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment.

## I4.0 References

NEPC. (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM].* Australian Government Publishing Services Canberra: National Environment Protection Council.

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