



Douglas Partners
Geotechnics | Environment | Groundwater

Report on
Detailed Site Investigation (Contamination)

Proposed Residential Subdivision
Gurner Avenue, Austral, NSW

Prepared for
Landcom

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Integrated Practical Solutions



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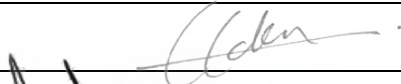
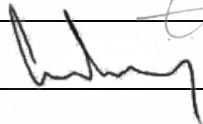
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The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

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Executive Summary

Douglas Partners Pty Ltd (DP) has been engaged by Landcom to complete this Detailed Site Investigation for Contamination (DSI) for a proposed residential subdivision at Gurner Avenue, Austral (hereinafter referred to as 'the site').

The DSI was conducted in consultation with Urbis Pty Ltd (Urbis) who have been engaged by Landcom to provide archaeological advice for the site. The consultation process included Urbis' review of the proposed scope of works for the DSI and adjustments to avoid any harm to known or possible Aboriginal objects within the site. Sensitive riparian corridors were also required to be protected from damage during the DSI field works. The consultation process and agreed outcome is summarised in the Sampling and Analysis Quality Plan (SAQP) which is discussed in Section 9 of this report.

The scope of the DSI included a review of previous investigations (Section 6), preparation of a preliminary Conceptual Site Model (Section 8), intrusive investigation of Potential Areas of Environmental Concern (PAEC) identified in previous investigations, or general site conditions, analysis of soil samples and review of analytical results against appropriate current NSW EPA endorsed assessment criteria for relevant receptors for the proposed land use.

Previous reports indicate that the site was historically used for pastoral purposes and then parts of it were utilised for infrastructure located both on site (ie. the Jemena gas easement and Sydney Water pump house) and to the north west of the site (ie. the TransGrid substation). Prior to the occupation of land to the north west of the site by TransGrid, the western part of the site was likely accessible along the historical alignment of Fourth Avenue adjacent to the western side of the western riparian corridor. Evidence of illegal dumping was observed in portions of the site, particularly along the perimeter of the riparian corridors. Localised contamination in some AECs was observed as requiring further investigation, delineation and/or remediation. These AECs requiring further works are summarised below:

- AEC 1 – ACM drainage conduit to be removed, chased out and validated. The remediation and validation process should be documented in a RAP.
- AEC 2 – possible ACM drainage conduit. Drainage conduit to be removed and inspected prior to bulk earthworks. If asbestos is suspected, laboratory analysis of the conduit materials is to be conducted to confirm presence/absence. If the conduit does contain asbestos, it must be removed and validated prior to bulk earthworks. The process for remediation and validation is to be documented in a RAP.
- AEC 3 – localised surficial ACM impact on the site boundary. Where observed, ACM fragments on the surface should be removed by hand. A RAP is required to document the process for the remediation and validation works.
- AEC 4 – ACM and deleterious material on the site surface and ACM in fill. Where observed, ACM fragments on the surface should be removed by hand. A RAP is required to document the process for the remediation and validation works. A detailed asbestos assessment of asbestos in fill should be undertaken to delineate impact in fill.
- AEC 5 – ACM on the site surface and in fill. Where observed, ACM fragments on the surface should be removed by hand. A RAP is required to document the process for the remediation and validation works. A detailed asbestos assessment of asbestos in fill can be undertaken to delineate impact in fill and establish if the fill is (all or in part) suitable for retention on the site as part of the development.

It is noted that the majority of the observed impact at each AEC as outlined above are typical of sites in the south west Sydney region and does not impinge on the suitability of the site for rezoning from a contamination perspective. The above additional works should be undertaken to facilitate the DA process for subdivision.

The site is therefore suitable for subdivision and development from a contamination perspective subject to the above additional investigations and/or remediation works being undertaken.

Occasional soil mounds have been observed on the site. The UFP protocol should be referred to if asbestos is encountered once these materials are disturbed. A waste classification assessment will be required for off-site disposal for materials that are not pre-classified.

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Report on Detailed Site Investigation (Contamination)

Proposed Residential Subdivision

Gurner Avenue, Austral, NSW

1. Introduction

Douglas Partners Pty Ltd (DP) has been engaged by Landcom to complete this Detailed Site Investigation for Contamination (DSI) for a proposed residential subdivision at Gurner Avenue, Austral, NSW (hereinafter referred to as 'the site'). The site is shown on Drawing 1, Appendix A.

The initial engagement included preparation of a Preliminary Site Investigation (PSI – report reference 94562.01.R.001, dated November 2019) as well as the DSI which was based on a scope for field works provided by Landcom. Since the initial engagement, Landcom has requested additional investigations both prior to and as part of the DSI to inform their contamination-specific risk planning. Section 6 of this report outlines the findings of the PSI and a detailed site walkover which was conducted prior to the DSI have been used to inform the scope of this DSI.

It is understood that the report will be used to support a development application (DA) for the proposed development.

The DSI was conducted in consultation with Urbis Pty Ltd (Urbis) who have been engaged by Landcom to provide archaeological advice for the site. The consultation process included Urbis' review of the proposed scope of works for the DSI and adjustments to avoid any harm to known or possible Aboriginal objects within the site. Sensitive riparian corridors were also required to be protected from damage during the DSI field works. The consultation process and agreed outcome is summarised in the Sampling and Analysis Quality Plan (SAQP) which is discussed in Section 9 of this report.

The DSI field works were conducted to inform both the contamination and the geotechnical investigation, the findings of the latter investigation are documented under separate cover (reference 94562.02.R.003).

This report must be read in conjunction with all appendices including the notes provided in Appendix A.

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

- NEPC *National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM]* (NEPC, 2013);
- NSW EPA *Guidelines for Consultants Reporting on Contaminated Land* (NSW EPA, 2020); and
- State Environment Planning Policy (SEPP) No. 55 – *Remediation of Land*.

1.1 Objectives

The objectives of the DSI are threefold, namely:

- to assess the suitability of the site for the proposed development, which is outlined in Section 2;
- to establish whether further investigation and/or management is required for the proposed development; and
- to inform Landcom's own contamination-specific risk planning.

2. Proposed Development

It is understood that the site will be split into two developable areas – east and west which are divided by a riparian corridor in the east centre of the site and the developable portion will primarily comprise residential lots. The southern strip of land which forms part of the site and fronts Gurner Avenue is primarily a riparian corridor and includes integrated/apartment development in the southernmost area. A child care facility is also proposed in the northern portion of the site, adjacent to the Sydney Water pump station which is present in the north centre portion of the site and excluded from the site definition.

Land adjacent to the northern site boundary and electricity pylons shall be retained in their current layout. Land along the Jemena gas easement in the eastern part of the site shall be developed as large lots with Jemena pipe ventilation facilities incorporated.

The master plan for the proposed development is shown in Figure 1 on the following page.



Figure 1: Master Plan

3. Scope of Work

The following scope of work was conducted for this DSI:

- Review of previous investigations conducted across the site (Section 6) and preparation of a preliminary Conceptual Site Model (Section 8);
- Using a backhoe, undertake soil sampling at test locations across the site targeting either Potential Areas of Environmental Concern (PAEC) identified in previous investigations, or general site conditions. Each sampling test location was undertaken to a depth of 0.5 m into natural strata or prior refusal. Select locations were extended to greater depths in natural strata to inform the geotechnical investigation. Test locations were undertaken using one of the following methods:
 - o Using a backhoe mounted with a toothless 400 mm diameter bucket – this method was undertaken where no heritage restrictions were necessary and/or outside of the riparian corridor;
 - o Using a backhoe mounted with a 300 mm diameter auger – undertaken where heritage restrictions required minimal ground disturbance, but access by machinery was possible; or
 - o Using hand tools, comprising either a hand auger or shovel where machine access was not possible owing to heritage restrictions and/or the presence of riparian corridor;

Test locations undertaken for this investigation are further detailed in Section 9 of this report.

- Analysis of selected soil samples for a range of contaminants of potential concern (CoPC) including metals¹, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene and total xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), total phenols, polychlorinated biphenyls (PCBs), organochlorine pesticides (OC) and organophosphorus pesticides (OP), volatile organic compounds (VOCs), per- and poly-fluoroalkyl substances (PFAS) and asbestos;
- Compare soil analytical results against appropriate current NSW EPA endorsed assessment criteria for relevant receptors for the proposed land use; and
- Outline the findings of the DSI in this report which has been prepared with reference to NSW EPA (2020) guidelines.

¹ Arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), nickel (Ni) and zinc (Zn).

4. Site Information

Site Address	Gurner Avenue, Austral, NSW
Legal Description	Part Lot 184 Deposited Plan 1237400
Area	Approximately 38.5 hectares
Zoning	R2 Low Density Residential R3 Medium Density Residential SP2 Local Drainage C2 Environmental Conservation RE1 Public Recreation RU6 Transition C4 Environmental Living
Local Council Area	Liverpool City Council
Current Use	The site currently comprises a mixture of open grassland and dense bush cover along two riparian corridors, one in the eastern and one in the western portions of the site. A high-pressure gas main and gas transmission line owned and managed by Jemena is present in the eastern part of the site, running close to and parallel with the eastern site boundary.
Surrounding Uses	Centre – Sydney Water pump station. North – Land zoned for urban development, separated by a band of rural transition land generally following the alignment of high voltage power lines adjacent to the north boundary which are owned and managed by TransGrid. Approximately 300 m further north is the Kemps Creek substation and approximately 900 m north is the Kemps Creek Nature Reserve, which forms part of Western Sydney Parklands. East – Western Sydney Parklands and Sydney Water Supply Canal located approximately 460 m east of the site. South – Lots comprising a mixture of rural residential and residential developments. West – TransGrid secured access road (historically part of Fourth Avenue), open grassland and Kemps Creek Nature Reserve (approximately 330 m west). Maleleuca Trail (public walkway) is located near the south western corner of the site and commences to the west of the TransGrid access road.

The site is currently accessible via the northern end of Edmondson Avenue (main entrance), the eastern corner (Seoul Avenue) as well as more rarely used entrances in the southern strip, on Gurner Avenue and along the TransGrid access road. The site boundary is shown on Figure 1 below.



Figure 1: Site Location

5. Environmental Setting

Regional Topography	Gently undulating and generally sloping from the east to the west, i.e. from the Sydney Water Supply Canal and Western Sydney Parklands towards Kemps Creek, approximately 2.8 km west of the site.
Site Topography	Gently undulating, topography ranging from 62 m relative to Australian Height Datum (AHD) in the north east and north west of the site, in the riparian corridors/creeks to 72 m AHD along the southern site boundary and 78 m AHD in the southernmost portion of the site (south of the western riparian corridor). The site topography generally slopes towards the west and north west in the eastern portion, and towards the north in the western portion i.e. towards the riparian corridor and towards the north.
Soil Landscape	Reference to the Penrith 1: 100 000 <i>Soils Landscape Sheet 9029</i> , 1990, indicates that the site is underlain by Blacktown soils (mapping unit bt), which is a residual soils group associated with gently undulating rises, broad rounded crests, and ridges with gently inclined slopes. The unit comprises of shallow to moderately deep (<100 cm) red and brown podzolic soils on crests, upper slopes and in well-drained areas. In areas of greater depth (150 to 300 cm), there are yellow podzolic soils and soloths on lower slopes and in areas of poor drainage (Sydney). Local relief is to 30 m, slopes are usually <5%. These soils are typically of low fertility, are moderately reactive, with high plasticity in the subsoil, and generally possess poor soil drainage.
Geology	Reference to the Geological Survey of NSW, Sydney (1991) <i>Penrith</i> , 1:100 000 Geological Sheet indicates the site is underlain by Bringelly Shale (geological code 'Rwb') of the Wianamatta Group of Middle Triassic age. Bringelly Shale comprises of shale, carbonaceous claystone, laminite, lithic sandstone and rare coal.
Acid Sulfate Soils	Online published Australian Soil Resource Information Systems (ASRIS ²) acid sulphate soils risk mapping indicates that the site is classified as Cq (p4), ie. extremely low probability of occurrence.
Surface Water	Two unnamed creeks are located on the site, both tributaries of Kemps Creek and conjoin approximately 330 m north west of the site and flow into Kemps Creek approximately 4.5 km north west of the site.
Groundwater	There is one registered groundwater bore located within a 1 km radius of the site – GW100571 which is 271 m deep and used for irrigation purposes. The screening interval and the standing water level is not provided. Based on the regional topography and the inferred flow direction of nearby water courses, the anticipated flow direction of groundwater beneath the site is anticipated to primarily flow from east to west, with some flow towards the north in the proximity of the two riparian corridors. Given the local geology (ie. Bringelly Shale), the groundwater in the fractured rock beneath the site is anticipated to be saline and of very low yield.

² <http://www.asris.csiro.au/mapping/viewer.htm>. Last accessed 11 January 2021.

	Accordingly, there would be no significant potential beneficial uses of the groundwater.
Vegetation	Two riparian corridors are present on the site as previously described. Occasional bush cover is present on the remainder of the site, mostly around more minor drainage lines that traverse the site. From visual inspection of the vegetation at the site, there was no evidence of vegetation stress at the site.

6. Previous Reports and Site History

The following previous reports are relevant to the current investigation:

- JBS & G *Preliminary Site Investigation, 75 Gurner Avenue, Austral, NSW*, report reference 54460-112740, Rev 0, dated 17 January 2018 (JBS & G, 2018);
- DP *Report on Preliminary Site Investigation for Contamination, Proposed Residential Subdivision, Lots 99 and 100 D.P. 1243071, Gurner Avenue, Austral, NSW*, Project 94562.01, dated November 2019 (DP, 2019 – ‘the PSI’); and
- DP Letter report, *Detailed Site Walk Over Findings, Proposed Residential Subdivision, Part Lot 84 Gurner Avenue, Austral, NSW*, Project 94562.02, dated 29 September 2020 (DP, 2020).

The JBS & G (2018) report is discussed in the DP PSI (DP, 2019) and summarised in part of Section 6.1 below.

6.1 DP (2019)

The scope of work conducted for the PSI included a desktop review and site walkover and it is noted that the PSI covered a larger area than the current site and extended further west of the site boundary. Key site background information established for the site of relevance to this investigation is summarised below:

- Historical land titles suggest the site was likely used for pastoral purposes.
- A TransGrid substation is located immediately north west of the site and electrical metal pylons traverse north east – south west across the western portion of the site. Review of historical aerial photographs show that the TransGrid substation, pylons and associated access roads have been present on site since at least 1982 but were not present in 1970 (the preceding aerial photograph).
- A Sydney Water wastewater pump station is located in the north central portion of the site and is excluded from the assessment area. Review of historical aerial photographs show that the pump station was constructed at some time between 2009 and 2015 and was complete by 2019.
- A Jemena gas substation is located near the south eastern corner of the site, within the site area. Review of historical aerial photographs show that the substation was constructed at some time between 2009 and 2015.
- The surrounding area to the south along Gurner Avenue has been used for a combination of market gardens, horticultural, low density agricultural uses and rural residential purposes with rural residential development evident since between 1970 and 1982 and residential subdivisions present from between 2015 and 2019.
- The site has previously been the subject of a PSI prepared by JBS & G (2018) which was prepared for due diligence purposes and included a site walkover. In their walkover they observed a large (approximately 5,000 m³) soil stockpile containing demolition waste and suspected fragments of asbestos-containing materials (ACM) in the south central portion of the site, next to the current main site entrance (see Drawing 1). ACM fragments were also observed in the surrounding spread out fill.
- The site walkover conducted by DP as part of the PSI (2019) identified the following key observations:

- Fly tipping along the creek in the eastern portion of the site.
 - The presence of construction and demolition materials and fly tipping in several portions of the site.
 - Residual soil including construction and demolition materials next to the main site entrance; the stockpile observed by JBS & G (2018) in this location was no longer present.
- DP established the following PAEC (2019):
 - Areas of fill (including access roads);
 - Soil and miscellaneous material stockpiles including residual soils from recent stockpiles;
 - Fly tipping / illegal dumping;
 - Historical application of herbicides and pesticides (agricultural land use and market gardens);
 - Possible asbestos pipe network; and
 - Electrical transmission fluids.

6.2 DP (2020)

A detailed site walkover and field mapping of Mapping Reference Points (MRP) was conducted to provide a more comprehensive visual assessment of the site than would usually be undertaken for a PSI and as part of the staged process required for SEPP 55 (referenced in Section 1). The objective of the detailed site walk over is to provide a comprehensive review of the visible aspects of the site that would inform the design of the DSI including targeted or higher density of portions of the site identified as potentially presenting a higher contamination risk.

The key recommendations made in the DP (2020) report are summarised below:

- Full density, targeted investigation around and in bush cover along the riparian corridor in the western portion of the site and in the southern strip that fronts Gurner Avenue;
- Additional testing in the proximity of a historical stockpile PAEC located near to the main site entrance at the northern end of Edmondson Avenue; and
- Targeted investigation of uneven ground where observed.

7. Summary of PAECs

Table 1 below outlines the key features identified at the site following review of the previous reports and whether they have been carried forward as an existing PAEC. The PAEC are listed in Table 2, further below and shown in Drawing 2, Appendix A

Table 1: Key Features Identified from Previous Investigations

Source	MRP ³ Reference (if relevant)	Description	PAEC?	PAEC Reference
JBS & G (2018)	N/A ⁴	Large soil stockpile with inclusions of demolition waste and suspected asbestos containing materials (ACM)	The soil stockpile was later removed (prior to DP, 2019). The stockpile footprint is captured in MRP 15/PAEC 21	N/A
		Small stockpile east of AusGrid access road, formerly part of Fourth Avenue	No – outside of site boundary	N/A
		Small stockpile next to (eastern side) of westernmost riparian corridor	Yes	1
		Disturbed soil/spread fill next to (western side) of pump station	Yes – also note DP (2019) MRP 8 / PAEC 15	2
		Disturbed soil/spread fill in south central portion of the site, near the Edmondson Avenue entrance	Yes	3
		Former agricultural land use in southernmost part of southern strip fronting Gurner Avenue	Yes	4
		Tipped rubbish next to (eastern side) of western riparian corridor	Yes	5
		Tipped rubbish in two areas in south western portion of site, next to access road	Yes	6

³ Mapping Reference Point.

⁴ Not applicable.

Source	MRP ³ Reference (if relevant)	Description	PAEC?	PAEC Reference
		Tipped rubbish in north western portion of site, next to northern site boundary	Yes	7
		Tipped rubbish including ACM drainage conduit next to (south western side) of eastern riparian corridor	Yes	8
		Tipped rubbish west of AusGrid access road (formerly part of Fourth Avenue)	No – outside of site boundary	N/A
	N/A	ACM drainage conduit in eastern portion of the site next to Jemena asset	Yes	9
PSI (DP, 2019) 1982 aerial photograph	1	Electrical metal pylons	Yes (those within site boundary)	10
	2	Service/construction roads near the pylons	Yes (those within site boundary)	11
	3	Current access road for TransGrid (previously part of Fourth Avenue)	No – outside of site boundary	N/A
	4	Possible ground disturbances in south eastern portion of the site	Yes	12
	5	Possible structures in south eastern portion of the site	Yes	13
PSI (DP, 2019) 1991 aerial photograph	6	Electrical metal pylons	No – outside of site boundary	N/A
PSI (DP, 2019) 2002 aerial photograph	7	Small structure	Yes	14
PSI (DP, 2019) 2015 aerial photograph	8	Ground disturbance / earth works associated with pump station	Captured within PAEC 2 and 20	N/A
	9	Road construction associated with pump station	Yes	15
	10	Structure on eastern boundary	Captured within PAEC 14	N/A

Source	MRP ³ Reference (if relevant)	Description	PAEC?	PAEC Reference
	11	Stockpile in south western corner	No – outside of site boundary	N/A
	12	Ground disturbance	Yes	16
	13	Additional service road in the centre of the site	Yes	17
PSI (DP, 2019) 2019 aerial photograph	14	Ground disturbances associated with subdivision earthworks	Captured within PAEC 2	N/A
	15	Ground disturbances associated with subdivision earthworks	Yes – captured as PAEC 3	N/A
Detailed Site Walk Over (DP, 2020)	1	Concrete container possible trough or old service	No – no evidence of possible contamination observed	N/A
	2	Possible gathering or bonfire area (timber and minor domestic refuse)	Yes	18
	3	Second gathering area (timber and minor domestic refuse)		
	4	Construction and demolition rubble visible on boundary	Yes – possible fill or fly tipping	19
	5	Fill visible along fence line	Yes – possible fill. Fly tipping also present here	20
	6	Ridges along site surface appears to be fill		
	7	Ridges, largely covered with grass		
	8	Brick next to tree		
	9	Fill along fence line (mostly reworked natural but some anthropogenic material visible)		
	10	Fill along fence line and concrete block.		
	11	Site adjacent - two drums (near one is empty) and terracotta services tiles on surface. Darker staining near drums (in site)	Yes – possible fill or fly tipping and contamination of surface soils	21

Source	MRP ³ Reference (if relevant)	Description	PAEC?	PAEC Reference
	12	Topsoil scrape fill containing construction and demolition rubble and domestic waste	Yes	22
	13	Metal pipe extruding from ground (possible vent pipe?)	Yes	23
	14	Overgrown shrubs	No – no evidence of contamination observed	N/A
	15	Reeds	No – no evidence of contamination observed	N/A
	16	Hummocky ground	Yes – possible fill	24
	17	Grass and leaf litter cover with some concrete visible	Yes – possible fill	25
	18	Construction and demolition material visible on access road	Yes – already captured as part of PAEC 20	N/A
	19	Occasional ceramic fragments on road surface	Yes – already captured as part of PAECs 2 and 20	N/A
	20	Ridge of mulch and timber	Yes – already captured as part of PAEC 2 and 20	N/A
	21	Occasional rusted metal	Yes – possible fly tipping and fill in bushland in western riparian corridor	26
	22	Occasional rusted metal		
	23	Soil mound	Yes	27
	24	Fragments of asbestos and ceramic visible in largely overgrown area	Yes	28
	25	Fragments of asbestos visible in largely overgrown area		
	26	Rusted cans		
	27	Car parts and rusted bed springs	Yes – possible fly tipping	26
	28	Terracotta tile and brick - possible old structure	Yes – possible hazardous materials or filling present	29
	29	Metal cabinet with broken glass	Yes – possible fly tipping	26

Source	MRP ³ Reference (if relevant)	Description	PAEC?	PAEC Reference
	30	Steel can		
	31	Possible earthworks/disturbed ground	Yes	30
	32	Domestic refuse including plastic, fabric and polystyrene pushed up against the fence on the adjacent site	Yes - already captured in PAEC 6	N/A
	33	Large suspected Synthetic Mineral Fibres (SMF) fragment	Yes – captured as part of PAEC 3	N/A
	34	Construction and demolition rubbish around a tree		
	35	Possible ACM fragments on access road. Cement and terracotta also visible		
	36	Breach in fence	No – general observation only	N/A
	37	Fragments of Potential Asbestos Containing Materials (PACM).	Yes	31
	38	Raised area next to road with fill containing concrete and asphalt	Yes	31
	39	Uneven ground - possibly from pipeline	Yes – captured as part of PAEC 12	N/A
	40	Raised area - general fill	Yes	31
	41	Fragments of PACM embedded in ground		
	42	Fragments of PACM embedded in ground		
	43	Fragments of PACM fragments embedded in ground		
	44	Fragments of PACM embedded in ground		
	45	PACM loose on ground		
	46	PACM loose on ground		
	47	PACM loose on ground		

Source	MRP ³ Reference (if relevant)	Description	PAEC?	PAEC Reference
	48	PACM loose on ground		
	49	PACM loose on ground		
	50	PACM loose on ground		
	51	PACM loose on ground		
	52	PACM fragments embedded in ground		
	53	PACM fragments embedded in ground		
	54	Uneven ground - possibly from pipeline	Yes – captured as part of PAEC 12	N/A
	55	Metal cone-shaped disks in creek	No – observation only	N/A
	56	Rubbish in creek partially covered with mud	Yes	8
	57	Tyres and plastic containers in creek		
	58	Loose metal pipe next to creek		
	59	Car bonnet next to creek		
	60	Brick fragment		
	61	Metal cone-shaped disks in creek	No – observation only	N/A
	62	Access track (bare earth)	No – observation only	N/A
	63	Rubbish partially covered with water in creek	Yes	8
	64	Recently installed manhole, outside of site boundary	No	N/A
	65	Creek with bedrock cobbles – outside of site boundary	No	N/A
	66	Scattered polystyrene containers	Yes	6
	67	View of creek	No – observation only	N/A
	68	Rubbish visible next to creek	Yes	32
	69	View of creek	No – observation only	N/A

Source	MRP ³ Reference (if relevant)	Description	PAEC?	PAEC Reference
	70	Wheelie bin	Yes	32
	71	Discarded white goods	Yes	32
	72	Empty "Danger Asbestos" bag on ground surface	No – observation only	N/A
	73	Domestic refuse in the creek	Yes	32
	74	Domestic refuse in the creek		
	75	Brick next to the creek		
	76	Domestic refuse and ACM fragments	Yes	8
	77	Hole in ground	Yes	33
	N/A	Observed uneven ground	Yes	34
	N/A	Possible fill in creek	Yes	35

Table 2: Summary of PAECs

PAEC Reference	Description
1	Small stockpile next to the eastern side of the western riparian corridor
2	Disturbed soil/spread fill next to the western side of pump station
3	Disturbed soil/spread fill in the south central portion of the site, near the Edmondson Avenue entrance
4	Former agricultural land use in the southernmost part of the southern strip fronting Gurner Avenue
5	Tipped rubbish next to the eastern side of the western riparian corridor
6	Tipped rubbish in two areas in the south western portion of site, next to an access road
7	Tipped rubbish in the north western portion of the site, next to the northern site boundary
8	Tipped rubbish including ACM drainage conduit next to the south western side of the eastern riparian corridor
9	ACM drainage conduit in the eastern portion of the site next to Jemena asset
10	Electrical metal pylons
11	Service/construction roads near the pylons

PAEC Reference	Description
12	Possible ground disturbances in the south eastern portion of the site
13	Possible structures in the south eastern portion of the site
14	Small structure in eastern portion of the site
15	Ground disturbance/earth works associated with pump station
16	Ground disturbance
17	Additional service road in the centre of the site
18	Possible gathering or bonfire area (timber and minor domestic refuse)
19	Construction and demolition rubble visible on boundary
20	Possible fill
21	Site adjacent - two drums (near one is empty) and terracotta services tiles on surface. Darker staining near drums (in site)
22	Topsoil scrape of fill containing construction and demolition rubble and domestic waste
23	Metal pipe extruding from ground (possible vent pipe?)
24	Hummocky ground
25	Grass and leaf litter cover with some concrete visible
26	Fly tipping and surface refuse – in proximity of the western riparian corridor
27	Soil mound
28	Fragments of asbestos and ceramic
29	Terracotta tile and brick - possible old structure
30	Possible earthworks / disturbed ground
31	Possible fill / fragments of ACM
32	Rubbish visible along eastern riparian corridor
33	Possible ground disturbance – hole in ground
34	Uneven ground
35	Possible fill in creek

8. Conceptual Site Model

A conceptual site model (CSM) is a theoretical 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 may become 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

Based on the current investigation, the following potential sources (S) of contamination and associated CoPC have been identified.

- S1: Areas of Fill (including access roads): Evidence of filling was observed in historical aerial photographs during the construction of both the electrical substation, the pump station and access roads.
 - o Various CoPC and may include metals, TRH, BTEX, PAH, phenols, PCBs, OCP, OPP and asbestos.
- S2: Stockpiles: Stockpiles containing soil and some construction and demolition materials have been observed by DP on the site. Residual soils from recent stockpiling during nearby construction works were also observed – JBS & G observed suspected ACM fragments on the ground surface next to the stockpile.
 - o COPC include metals, TRH, BTEX, PAH, phenols, PCBs, OCP, OPP and asbestos.
- S3: Fly Tipping/Illegal Dumping: Fly tipping and illegal dumping of white goods, domestic and construction materials were observed next to the creek and along the southern site boundary.
 - o Various CoPC and may include metals, TRH, BTEX, PAH, phenols, PCBs, OCP, OPP, PFAS and asbestos.
- S4: Former Low Density Agricultural Land Use/Market Gardens: The site has previously been used for low density agricultural/pastoral purposes and possibly market gardens.
 - o CoPC include metals, OCP and OPP.
- S5: Possible Asbestos Pipe Network: An asbestos pipe network has not been observed at the site however, such a network is often present on rural residential/agricultural sites in the region of a similar age. Such a pipe network is rarely mapped and the chances of locating services using above ground radio detection and ground penetrating radar (GPR) tools is low. Investigating for such a network at the site prior to bulk earthworks is intended to prevent strike and breakage and impacting surrounding soils with asbestos.
 - o CoPC comprise asbestos.
- S6: Electrical Transmission Fluids: If the network of electrical transmission infrastructure is to be retained as part of the development, it is likely that development will be restricted to a 'buffer' around the network (usually defined by the asset owner) that will at least reduce possible exposure pathways to human health. Some characterisation of the risk will be required as part of the DSI. It is noted that the transmission infrastructure observed at the site were metal; no timber power poles were observed.
 - o CoPC include metals, hydrocarbons, PCBs and solvents.

Potential Receptors

The following potential human receptors (R) have been identified for the site:

- R1 – Current / future site users (construction and maintenance workers and residents in a low density residential setting); and

- R2 – Land users in adjacent areas including residential.

The following potential ecological receptors (R) have been identified for the site:

- R3 – Local groundwater and receiving water bodies;
- R4 – Surface water bodies (on-site creek and off-site dams and creeks) including the riparian corridors; and
- R5 – Downstream terrestrial ecosystems.

Review of the Bureau of Meteorology Groundwater Dependent Ecosystems (GDE) Atlas⁵ indicates that riparian corridor in the western portion of the site is mapped as terrestrial GDE, i.e. vegetation within the riparian corridor is dependent on groundwater. It is noted that the GDE is intended to inform groundwater planning and management and is not subject to additional regulatory controls.

Groundwater beneath the site is typically of low yield and saline and is therefore unlikely to provide a beneficial use to receptors for irrigation purposes or otherwise and as such is not further assessed here in the context of risk to human health from direct contact with groundwater and/or ingestion of groundwater.

Potential Pathways

The following potential pathways (P) have been identified:

- P1 – Ingestion and dermal contact of soil or dust;
- P2 – Inhalation of fibres and / or dust and / or vapours;
- P3 – Leaching of contaminants into groundwater and migration to Kemps Creek;
- P4 – Surface water runoff into creeks;
- P5 – Direct human health contact with impacted surface waters within the riparian corridor; and
- P6 – Direct contact with terrestrial ecosystem receptors.

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 (P 1 to P6) between the above sources (S1 to S6) and receptors (R1 to R5) are provided below in Table 3.

⁵ <http://www.bom.gov.au/water/groundwater/gde/map.shtml>. Last accessed 1 February 2022.

Table 3: Summary of Potentially Complete Exposure Pathways

Potential Source	Transport Pathway	Receptor	Risk Management
S1: Areas of Fill	P1 – Ingestion and dermal contact; P2 – Inhalation of fibres and / or dust and / or vapours; P3 – Leaching of contaminants into groundwater and migration; P4 – Surface water runoff; P5 – Direct contact with human receptors (creek) P6 – Direct contact with terrestrial ecosystem receptors	R1 – Current / future site users (construction and maintenance workers and residents in a low density residential setting) R2 – Land users in adjacent areas R3 – Local groundwater and receiving water bodies R4 – Surface water bodies (on-site and off-site dams and creeks) R5 – Downstream terrestrial ecosystems	An intrusive soil investigation is recommended to assess for possible contamination.
S2: Stockpiles	P1 – P6	R1 – R5	
S3: Fly tipping / illegal dumping	P1 – P6	R1 – R5	
S4: Former low density agricultural land use	P1 – P6	R1 – R5	
S5: Asbestos pipe network	If ACM is disturbed / weathered and fibre release is possible, exposure via inhalation of fibres (P2) is possible	R1 and R2	
S6: Electrical transmission fluids	P1 – P6	R1 – R5	

9. Sampling and Analysis Quality Plan

9.1 Data Quality Objectives

The DSI was devised with reference to the seven-step data quality objective process which is provided in Appendix B Schedule B2, NEPC (2013). The data quality objective process is outlined in Appendix B.

9.2 Soil Sampling Rationale

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

A targeted sampling strategy was undertaken in the PAECs listed in Table 2 and (where possible) systematic low density sampling was undertaken elsewhere at the site. The sampling strategy for PAECs was initially in line with Table A of NSW EPA Contaminated Sites, Sampling Design Guidelines (NSW EPA, 1995); for PAECs where asbestos was observed double the requirements of Table A of NSW EPA (1995). It was necessary to either reduce or eliminate a number of the proposed sampling locations for one or more of the following reasons:

- Advice from Urbis identified that heritage artefacts may be present, and testing should either be eliminated or reduced at this time to prevent damage to such artefacts;
- Dense riparian corridor areas prevented access with machinery without damaging existing riparian flora and fauna. Therefore, the scope of work was reduced or eliminated in these areas accordingly; and/or
- Significant waterlogging from La Niña season conditions inhibited safe access on foot or using machinery in areas close to the riparian corridors.

The proposed scope and the amended scope is outlined in Table 4 on the following page and includes the sampling density – noting that the testing density is provided for information only for PAECs because a targeted sampling strategy was adopted, the testing density requirements of EPA (1995) would not typically be used as a primary sampling design guide.

Table 4: Proposed and Amended SAQP

PAEC	PAEC Area	Amendments Required	Test Location Reference	Equivalent Testing Density (points per ha)
1	350 m ²	None required	157	28.6
2	9,300 m ²	None required	116 - 130	16.1
3	11,600 m ²	Test location density partially reduced prior to field work to accommodate heritage requirements; no testing possible at the site in between Locations 100/101 and 87/88	83 – 89 100 – 111	15.5
4	4,000 m ²	None required	243 – 249	17.5
5	2,630 m ²	Test location density reduced prior to field work to accommodate heritage requirements	158 and 162	7.6
6	3,000 and 1,400 m ³	Test location density reduced prior to field work to accommodate heritage requirements	141 – 145	11.4
7	800 m ²	None required	165	
8	250 m ²	Access with machine not possible owing to dense bush cover. Hand auger samples collected	71 - 75	200
9	N/A – targeted feature	N/A – ACM sighted in walk over	N/A	-
10	N/A – targeted feature	None required	132, 133, 165, 166, 214 and 215	-
11	N/A – targeted feature	None required	209	-
12	3,800 m ²	None required	4 – 18	39.5
	2,080 m ²	Locations 51 to 54 completed using hand auger	49 and 51 - 54	24.0
13	400 m ²	None required	14 and 16	50.0
14	560 m ²	None required	19 – 22	35.7
15	9,700 m ²	None required	90 – 98 and 110 – 115	15.5

PAEC	PAEC Area	Amendments Required	Test Location Reference	Equivalent Testing Density (points per ha)
16	800 m ²	Test locations 178 – 181 and 183 cancelled due to significant waterlogging inhibiting safe access	182 and 184 – 186	50.0
17	N/A – targeted feature	None required	148 – 152	-
18	N/A – targeted feature	None required	244 and 245	-
19	N/A – targeted feature	None required	246	-
20	4,000 m ²	None required	Captured with test locations across general proximity of this portion of the site also undertaken for PAEC 4 (243 – 249)	17.5
21	N/A – targeted feature	None required	241	-
22	N/A – targeted feature	None required	233	-
23	N/A – targeted feature	None required	N/A – Physical inspection only	-
24	N/A – targeted feature	None required	222 – 224	-
25	N/A – targeted feature	Test location moved to avoid damage to vegetation	221	-
26	44,000 m ²	General western riparian corridor area: Test location density in riparian corridor reduced prior to field work to accommodate heritage requirements. Test locations 165 – 168, 174 – 177, 198, 203, 204, 206, 207 and 209 cancelled due to a combination of dense bush cover and significant waterlogging preventing access	General western riparian corridor area: 154 – 156, 159 – 161, 164, 169 – 173, 187 – 191, 193 – 197, 199 – 202, 205, 208 and 210 – 213	7.3

PAEC	PAEC Area	Amendments Required	Test Location Reference	Equivalent Testing Density (points per ha)
27	N/A – targeted feature	None required	201	-
28	N/A – targeted feature	General western riparian corridor area: Test location density in riparian corridor reduced prior to field work to accommodate heritage requirements	199 and 201	-
29	N/A – targeted feature	None required	192	-
30	N/A – targeted feature	None required	168	-
31	2,800 m ³	None required	26 – 39	50.0
32	N/A – targeted feature	None required	50	-
33	N/A – targeted feature	None required	41 and 46 – 47	-
34	6,300 m ²	Test location density reduced prior to field work to accommodate heritage requirements	135 – 140, 142 – 144 and 146 – 148	19.0
35	1,800 m ²	Procedure amended to hand auger sampling because machinery access to this portion of the site was not possible	59 – 70	66.6
Remainder of site	Site area less PAEC sum (107,490 m ²): 277,510 m ² / 27.75 ha	Test location density reduced prior to field work to accommodate heritage requirements Test locations 221 – 224, 226 – 229, 233 cancelled due to a combination of dense bush cover and significant waterlogging preventing access	1 – 3, 23 – 25, 40 – 45, 48, 55 – 57, 79, 99, 131, 134, 149, 153, 163, 216 – 220, 230 – 232, 234 – 240 and 242	1.4

The sampling densities generally met or exceeded the NSW EPA (1995) guidance which ranges from 11 to 100 points/ha except for the following:

- PAEC 5 – The area stated for the whole of PAEC 5 was generalised and likely did not target where rubbish was observed by JBS & G and as such applying the sampling density to this PAEC does not accurately reflect the contamination status of this PAEC.

- PAEC 26 – Sampling densities were restricted both by heritage requirements and by dense bush cover. Notwithstanding this restriction on investigation locations, the locations undertaken effectively targeted where rubbish and materials were observed during the detailed site walk over (DP, 2020) and portions of the riparian corridor that were previously freely accessible via Fourth Avenue, i.e. prior to AusGrid possession of the access road along the western site boundary.
- Remainder of the site – The adopted sampling density provides a low-density assessment of at least one test location per ha which is an effective way to assess the contamination status for the remainder of the site owing to the anticipated homogenous nature of the possible contamination sources associated with the remainder of the site (largely comprising low density agricultural land use).

The test locations are shown on Drawing 3, Appendix A.

Soil samples were collected from each borehole / test location representative of surface and near surface soils, fill strata observed including any possible contamination or anthropogenic inclusions (where relevant), and changes in lithology or signs of contamination.

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

10. Site Assessment Criteria

The site assessment criteria (SAC) applied in the current investigation are informed by the CSM (Section 8) 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 presented in Schedule B1 of NEPC (2013).

The investigation and screening levels applied in the current investigation comprise levels adopted for a generic residential land use scenario and include ecological criteria for areas of ecological significance (AES) for the riparian corridor. The derivation of the SAC is included in Appendix D and the adopted SAC are listed on the summary analytical results tables in Appendix E.

11. Results

11.1 Field Work Methodology

Field work was undertaken on sporadic days depending on weather conditions between 16 November and 27 January 2021. As previously noted, field work occurred during La Niña season and mean monthly rainfall during the field works was approximately 42 mm/day. Site conditions were waterlogged particularly in and near to the riparian corridor areas which inhibited access in this portion of the site. These have been documented in Section 9.

11.2 Field Work Results

Soil logs are included in Appendix F. The logs recorded the following general sub-surface profile:

- Topsoil: Silty clay with rootlets, sand, sandstone and ironstone gravel in parts was observed at the top of the soil profile in the majority of test locations. In most locations, the topsoil appeared to comprise a residual soil. The topsoil profile typically extended to depths of 0.2 m (average) and up to 0.8 m bgl.
- Fill: Silty clay with sand, sandstone and ironstone gravel in parts.
Anthropogenic material was observed in fill topsoil in locations 29 (two ACM fragments), 31 (mulch), 32 (tile and ACM), 33 (woodchips, plastic and ACM) 34 (mulch), 123 (one plastic bag) and 199 (three ACM fragments).
- Silty clay and clay residual soil: Observed in all locations advanced below the topsoil and/or fill horizon and comprised high plastic primarily clays of varying colour and mottling and trace rootlets.
- Bedrock was observed in select locations that were advanced past residual soil horizons and as follows:
 - o Shale: Brown / grey shale of varying strength with clay seams and high strength shale bands observed from an average depth of 1.7 m bgl (range 1.3 – 2.1 m bgl) in locations 2, 6, 23, 40, 41, 106B, 112, 113 and 141.
 - o Sandstone: Yellow brown with clay seams sandstone was observed in locations 134 and 152 only.

The observed residual soil and bedrock horizons appear consistent with regional mapping as outlined in Section 5. Key PAEC-specific observations made during the field work are summarised in Table 5 below. Observations from background locations are also included in Table 5.

Table 5: Summary of PAEC Specific Key Observations

PAEC	General Site (Above Ground) Conditions	Soil Conditions
1	No stockpile sighted here at the time of field works. No anthropogenic material observed.	0.3 m of silty clay topsoil above silty clay natural strata. No anthropogenic material observed.
2	Grass covered ground.	Up to 1.8 m of fill comprising silty clay observed. Except for a plastic bag in fill at one location (123), no anthropogenic material or obvious evidence of possible contamination was observed.
3	Grass and bush covered ground with minor litter on surface.	Up to 2.2 m of fill comprising silty clay observed. No anthropogenic material or obvious evidence of possible contamination was observed.
4	Grass covered ground. Tile and ACM fragments were observed near to location 246 including on the adjacent residence.	Silty clay topsoil in the top 0.2 m of the soil strata above clay residual soils. Except for the presence of ACM, no obvious evidence of possible contamination was observed.
5	Tipped rubbish appears to have since been removed.	Silty clay topsoil in the top 0.2 m of the soil strata above clay residual soils. No obvious evidence of possible contamination was observed.
6	An abandoned car and large tyre was observed here.	N/A – visual inspection only.
7	Tipped rubbish appears to have since been removed.	Silty clay topsoil in the top 0.2 m of the soil strata above clay residual soils. No obvious evidence of possible contamination was observed.
8	Surficial material observed including cigarette, plastic, milk crate. ACM drainage conduit could not be sighted – it may have been covered with soil build up since previous observed by JBS&G.	Surface samples (i.e. top 0.2 m) observed fill / silty clay – no anthropogenic material was observed.
9	Pipe inspected and suspected to contain gravel and cement only. No visual evidence of the presence of asbestos observed. The pipe was intact – it was not possible to safely obtain a sample for laboratory analysis.	N/A – visual inspection only.
10	Grass covered ground.	Silty clay topsoil in the top 0.2 m of the soil strata above clay residual soils. No obvious evidence of possible contamination was observed.

PAEC	General Site (Above Ground) Conditions	Soil Conditions
11	Road base comprises gravel, sandstone and some anthropogenic material (glass, plastic).	Surface sample (i.e. top 0.2 m) observed fill/silty clay – no anthropogenic material was observed.
12	Grass covered ground and riparian corridor in part. Styrofoam fragments on the site surface near location 52.	Silty clay topsoil in the top 0.3 m of the soil strata above clay residual soils. No obvious evidence of possible contamination was observed.
13	Mixture of grass covered ground and roadbase.	Silty clay topsoil in the top 0.25 m of the soil strata above clay residual soils. No obvious evidence of possible contamination was observed.
14	Mixture of grass covered ground and roadbase.	Silty clay topsoil in the top 0.15 m of the soil strata above clay residual soils. No obvious evidence of possible contamination was observed.
15	Mixture of grass covered ground and road.	Fill topsoil and fill comprising silty clay with sand and gravels was observed in locations 90, 93, 94 and 98 to depths of between 0.3 and more than 2.5 m (base of test location). No anthropogenic material or obvious evidence of possible contamination was observed in fill. The soil conditions in the remainder of test locations comprised natural silty clay/clay below topsoil.
16	Grass covered ground and riparian corridor reeds / waterlogged area.	Fill was not observed in sample locations undertaken here. Natural strata comprised silty clay.
17	Grass cover and bare ground.	Topsoil and fill was observed in the top 0.3 m of the site profile. No anthropogenic material or obvious evidence of possible contamination was observed.
18	Grass cover and bare ground.	Silty clay topsoil in the top 0.3 m of the soil strata above clay residual soils. No obvious evidence of possible contamination was observed.
19	Suspected ACM fragments were observed along the fence line between the site and the adjacent residence, and on the ground surface within the adjacent residence.	Silty clay topsoil in the top 0.3 m of the soil strata above clay residual soils. No obvious evidence of possible contamination was observed.
20	Localised minor rubbish observed (windblown) except for along the site boundary (see PAEC 19 key observations)	Silty clay topsoil in the top 0.2 m of the soil strata above clay residual soils. No obvious evidence of possible contamination was observed.
21	Materials on site adjacent appears to have been removed since the walk over.	Silty clay topsoil in the top 0.2 m of the soil strata above clay residual soils. No obvious evidence of possible contamination was observed.

PAEC	General Site (Above Ground) Conditions	Soil Conditions
22	Rubble/waste appears to have been removed since the walk over.	Surface sample observed silty clay soil. No anthropogenic material or obvious evidence of possible contamination was observed.
23	Metal rod inspected further – confirmed to be a fence post.	N/A – visual inspection only.
24	Significant dense riparian plant life and waterlogging here – unable to be accessed.	
25	Significant dense riparian plant life and waterlogging here – unable to be accessed.	
26	Sporadic surficial waste rusty metal sheeting observed (location 205). Dense bush cover in the riparian corridor.	Up to 0.5 m of silty clay topsoil above residual soil (silty clay/clay). Except for three ACM fragments in soil at location 1999, no anthropogenic material or evidence of obvious contamination was observed in the soils.
27	Soil mound was inspected, and no anthropogenic material observed.	No fill observed.
28	Soil mound was inspected, and no anthropogenic material observed.	No fill or ACM fragments observed.
29	Terracotta tile and brick debris on surface.	No fill observed. Soil comprised silty clay topsoil above silty clay natural soil.
30	No evidence of ground disturbance observed – area comprises grass cover.	No fill observed. Soil comprised silty clay topsoil above silty clay natural soil.
31	ACM fragments observed across the site surface during previous investigation (DP, 2020).	Fill observed to depths of up to 1.6 m in all test locations (average observed depth: 0.6 m). ACM fragments were observed in fill in three locations (29, 32 and 33).
32	Grass covered ground.	N/A – surface sample only.
33	Grass cover and bare ground.	No fill observed. Soil comprised silty clay topsoil above silty clay natural soil and shale at depth.
34	Grass covered ground.	Fill was observed in most locations in the top 0.3 m of the soil profile. No anthropogenic material or evidence of obvious contamination was observed in fill.
35	This portion of the site could only be accessed on foot and sampled using a hand auger because of dense bush cover in the riparian corridor. Anthropogenic material including plastic, Styrofoam and paper.	Fill/silty clay up to 0.4 m thick about natural strata observed, where base of fill was sighted. No odours/staining or anthropogenic material was sighted in the hand auger sampling.

PAEC	General Site (Above Ground) Conditions	Soil Conditions
Background	Generally grass covered ground.	No fill was observed in any background locations undertaken across the site. The general soil profile comprised silty clay topsoil above silty clay residual soil and bedrock at depth.

As previously noted, much of the site in and near the riparian corridor was waterlogged during the field works. Groundwater was observed in residual soil at one location (230 at 0.8 m). Owing to the seasonal conditions, groundwater levels in residual soils are anticipated to be representative of higher than during typical site conditions.

11.3 Laboratory Analytical Results

The results of laboratory analysis are summarised in the tables provided in Appendix E.

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

The analytical results for all contaminants tested were below the SAC except for nickel which exceeded the corresponding ecological SAC (10 mg/kg) in 22 out of 222 samples analysed (approximately 10 % of the dataset). As defined in Section 10, the ecological SAC is informed by the most sensitive receptor (riparian corridor community). All measured nickel concentrations were below the ecological criterion for residential land use (35 mg/kg). Observed concentrations that exceed the ecological SAC and their corresponding PAEC (or if background) are provided below:

- Background: Locations 1 (12 mg/kg), 2 (13 mg/kg), 3 (12 mg/kg), 40 (11 mg/kg) and 242 (11 mg/kg).
- PAEC 2: Location 127 (11 mg/kg).
- PAEC 3: Locations 103 (11 mg/kg), 104 (20 mg/kg) and 110 (13 mg/kg).
- PAECs 4 and 18⁶: Locations 244 (11 mg/kg) and 249 (11 mg/kg).
- PAEC 5: Location 97 (12 mg/kg).
- PAEC 12: Locations 11 (11 mg/kg), 12 (11 mg/kg), 17 (13 mg/kg) and 18 (11 mg/kg).
- PAEC 14: Location 19 (11 mg/kg).
- PAEC 15: Locations 90 (11 mg/kg; 1.5 m depth) and 3 (16 mg/kg; 1.5 m depth)
- PAEC 35: Locations 64 (12 mg/kg), 65 (13 mg/kg) and 66 (14 mg/kg).

All observed exceedances were from portions of the site outside of the riparian corridor, except for PAECs 5, 12 and 35.

All exceedances were from surface soils, unless otherwise stated. Key statistical observations for the whole dataset using ProUCL (Version 5.1) are summarised below:

⁶ PAECs 4 and 18 (along with 19 and 20) are in the same portion of the site and are therefore considered together.

- All observed nickel exceedances were less than 2.5 times the SAC and range between 2 and 20 mg/kg (average 7.5 mg/kg).
- The 95 %ile Upper Confidence Limit (UCL) was calculated for most PAECs and for background areas. The calculated UCL ranged between 8.2 and 10 mg/kg except for PAECs 15 and 35 where the calculated UCL is 10.9 and 10.4 mg/kg respectively. The UCL for PAECs with datasets of less than 10 test locations (i.e. PAECs 5, 4 and 18) were not calculated.

ProUCL outputs are provided in Appendix H.

Perfluorooctanesulfonic acid (PFOS) and perfluorobutanoic acid (PFBA) were recorded slightly above the laboratory PQL in surface soils from location 50 (0.3 and 0.2 µg/kg respectively). The most relevant criteria for PFOS in the current NSW EPA endorsed PFAS guidelines⁷ are as follows:

- Residential with garden / accessible soil: 10 µg/kg for sum of PFOS and perfluorohexanesulfonic acid (PFHxS); and
- Ecological direct exposure (all land uses): 10 µg/kg for PFOS.

The recorded concentration of PFHxS in soils from location 50 were <0.1 µg/kg. Therefore, a conservatively assumed sum of PFOS and PFHxS is 0.3 µg/kg, which is below the adopted residential criteria. The recorded concentration of PFOS is below the adopted ecological criteria. There is no criteria for PFBA in Australia however, given the recorded concentration is equal to the PQL it is not considered to represent a significant potential of harm to receptors.

Chrysotile asbestos was recorded in surface soils from Location 173 and laboratory advice indicates that the overall concentration is likely <0.1 g/kg.

12. Discussion

Field work observations and soil analytical results for each PAEC and for the remainder of the site are discussed in Table 6 below in respect to whether each PAEC are an Area of Environmental Concern (AEC) that require further assessment and / or management. AECs are shown on Drawing 4, Appendix A.

⁷ Heads of EPA, *PFAS National Environmental Management Plan* (PFAS NEMP) version 2.0, May 2020.

Table 6: PAEC and Remainder of Site – Discussion on Field Work and Laboratory Findings

PAEC or Background	Description	Field Work Results	Laboratory Results	Summary of Findings
1	Small stockpile next to (eastern side) of westernmost riparian corridor	No stockpile, fill or anthropogenic material observed	No exceedances except for one nickel exceedance reported above the adopted ecological SAC. Further assessment of land use for this PAEC (which is not within the riparian corridor area) and statistical assessment establishes that nickel does not pose a significant risk to ecological receptors.	Not an AEC.
2	Disturbed soil/spread fill next to the western side of the pump station	Fill is present to depths of up to 1.8 m, however no obvious evidence of potential contamination and/or anthropogenic material observed.	No reported exceedances except for one nickel exceedance reported above the adopted ecological SAC. Further assessment of land use for this PAEC (which is not within the riparian corridor area) and statistical assessment establishes that nickel does not pose a significant risk to ecological receptors.	Not an AEC.
3	Disturbed soil/spread fill in the south central portion of the site, near the Edmondson Avenue entrance	Fill is present to depths of up to 2.2 m, however no obvious evidence of potential contamination and/or anthropogenic material observed.	No reported exceedances except for one nickel exceedance reported above the adopted ecological SAC. Further assessment of land use for this PAEC (which is not within the riparian corridor area) and statistical assessment establishes that nickel does not pose a significant risk to ecological receptors.	Not an AEC.
4	Former agricultural land use in the southernmost part of the southern strip fronting Gurner Avenue	Fill/disturbed residual soil was observed in the top 0.2 m of the soil profile. Surficial material was observed near Location 246 on the site boundary comprising tile and ACM.	Two nickel exceedances above the adopted ecological SAC. Further assessment of land use for this PAEC (which is not within the riparian corridor area) establishes that nickel does not pose a significant risk to ecological receptors.	Not an AEC.

PAEC or Background	Description	Field Work Results	Laboratory Results	Summary of Findings
5	Tipped rubbish next to (eastern side) of western riparian corridor	Fill/disturbed residual soil was observed in the top 0.2 m of the soil profile. No rubbish visible on the site surface.	One nickel exceedance against ecological SAC, noting that the observed nickel concentration is below the corresponding residential criterion. This PAEC is partially within the riparian corridor. Given the soil profile in this part of the site has been subject to negligible change (in comparison to background areas of the site), the land use within the riparian corridor appears to be in a healthy condition (no signs of vegetation stress) and it is not anticipated to be altered as part of the development, this exceedance is not considered to represent a significant risk to ecological receptors.	Not an AEC.
6	Tipped rubbish in two areas in south western portion of site, next to access road	Abandoned car and large tyre observed.	N/A – visual inspection only.	Not an AEC. Rubbish to be removed prior to bulk earthworks.
7	Tipped rubbish in north western portion of site, next to northern site boundary	No tipped rubbish visible at the time of the investigation.	No observed exceedances.	Not an AEC.
8	Tipped rubbish and ACM drainage conduit next to (south western side) of eastern riparian corridor	ACM drainage conduit could not be sighted – it may have been covered with soil build up since being previously observed by JBS&G. Surficial material was observed in this portion of the site.	No reported exceedances.	ACM drainage conduit to be removed and validated prior to bulk earthworks. The process for remediation and validation is to be documented in a Remediation Action Plan (RAP).

PAEC or Background	Description	Field Work Results	Laboratory Results	Summary of Findings
9	ACM drainage conduit in eastern portion of the site next to Jemena asset	The drainage conduit was inspected and appears to comprise gravel and cement.	N/A – visual inspection only.	Drainage conduit to be removed and inspected prior to bulk earthworks. If asbestos is suspected, laboratory analysis is to be conducted to confirm or otherwise. If the conduit does contain asbestos, it must be removed and validated prior to bulk earthworks. The process for remediation and validation is to be documented in a RAP.
10	Electrical metal pylons		No reported exceedances.	Not an AEC.
11	Service/construction roads near the pylons		No reported exceedances.	Not an AEC.
12	Possible ground disturbances in south eastern portion of the site	Fill/disturbed residual soil was observed in the top 0.3 m of the soil profile. No evidence of possible contamination was observed, and no anthropogenic material was observed. Styrofoam fragments observed on the site surface in places.	No exceedances except for four nickel exceedances above the adopted ecological SAC. Further statistical assessment establishes that nickel does not pose a significant risk to ecological receptors.	Not an AEC.

13	Possible structures in south eastern portion of the site	Structures/infrastructure associated with the Jemena gas easement are present here. Ground disturbance near the structures appear to be localised to the top 0.25 m of the soil profile. No obvious evidence of possible contamination was observed, and no anthropogenic material was observed.	No reported exceedances.	Not an AEC.
14	Small structure	Structures/infrastructure associated with the Jemena gas easement are present here. Ground disturbance near the structures appear to be localised to the top 0.15 m of the soil profile. No obvious evidence of possible contamination was observed, and no anthropogenic material was observed.	No exceedances except for one nickel exceedance above the adopted ecological SAC. Further assessment of land use for this PAEC (which is not within the riparian corridor area) and statistical assessment establishes that nickel does not pose a significant risk to ecological receptors.	Not an AEC.
15	Ground disturbance/earth works associated with pump station	Ground disturbance has occurred in portions of the easement associated with the pump station to depths of more than 2.5 m in parts. No anthropogenic material or obvious evidence of possible contamination was observed in fill.	No exceedances except for one nickel exceedance above the adopted ecological SAC, noting that the observed nickel concentration is below the corresponding residential criterion. Further assessment of land use for this PAEC (which is not within the riparian corridor area) establishes that nickel does not pose a significant risk to ecological receptors.	Not an AEC.
16	Ground disturbance	No significant evidence of ground disturbance or obvious possible contamination was observed here.	No reported exceedances.	Not an AEC.

17	Additional service road in the centre of the site	Ground disturbance along the service road appears to be limited to the top 0.3 m of the soil profile only. No anthropogenic material or obvious evidence of possible contamination was observed.	No reported exceedances.	Not an AEC.
18	Possible gathering or bonfire area (timber and minor domestic refuse)	Ground disturbance appeared to be limited to the top 0.3 m of the soil profile only, and no visual and olfactory evidence of possible contamination was observed.	Two nickel exceedances above the adopted ecological SAC. Further assessment of land use for this PAEC (which is not within the riparian corridor area) establishes that nickel does not pose a significant risk to ecological receptors.	Not an AEC.
19	Construction and demolition rubble visible on boundary	Surficial ACM observed on the site boundary and the adjacent site. Ground disturbance appeared to be limited to the top 0.3 m of the soil profile only, and no visible evidence of surficial ACM impacting underlying soils was observed. No visual and olfactory evidence of possible contamination was observed.	No reported exceedances.	Localised surficial ACM impact on the site boundary to be removed prior to earthworks. A RAP is required to document the process for remediation of ACM.
20	Possible fill	Ground disturbance appeared to be limited to the top 0.2 m of the soil profile only, and no visual and olfactory evidence of possible contamination was observed.	No reported exceedances.	Not an AEC.

21	Site adjacent - two drums (near one is empty) and terracotta services tiles on surface. Darker staining near drums (in site)	Ground disturbance appeared to be limited to the top 0.2 m of the soil profile only, and no visual and olfactory evidence of possible contamination was observed. Drums, terracotta tiles and staining no longer present.	No reported exceedances.	Not an AEC. The area should be inspected for any remaining rubbish on the site boundary and removed before earthworks. If suspected contamination is observed, follow the Unexpected Finds Protocol (refer to Section 14).
22	Topsoil scrape fill containing construction and demolition rubble and domestic waste		No reported exceedances.	Not an AEC.
23	Metal pipe extruding from ground (possible vent pipe?)	Pipe confirmed to be fencing only.	N/A – visual inspection only	Not an AEC.
24	Hummocky ground	N/A – could not be accessed	N/A – could not be accessed	This portion of the site is to be retained in its current condition as part of the riparian corridor and will not be subject to development. Given the condition of the riparian corridor appears to be good, no further assessment or remediation is required. Not an AEC.

25	Grass and leaf litter cover with some concrete visible	N/A – could not be accessed	N/A – could not be accessed	This portion of the site is to be retained in its current condition as part of the riparian corridor and will not be subject to development. Given the condition of the riparian corridor appears to be good, no further assessment or remediation is required. Not an AEC.
26	Fly tipping and surface refuse in proximity of the western riparian corridor	PAECs 26 – 28 are in close proximity and ACM has been sighted on the site surface here.	Chrysotile asbestos was recorded in surface soils from one location (173), likely at concentrations below 0.1 g/kg.	Surficial waste including ACM and deleterious material to be removed. The removal and validation of ACM impact to be documented in the RAP. Detailed asbestos assessment of asbestos in fill in and surrounding location 173.
27	Soil mound	PAECs 26 – 28 are in close proximity and ACM has been sighted on the site surface here.	PAECs 26 – 28 are in close proximity and ACM has been recorded in test pits in this area of the site.	Detailed asbestos assessment of asbestos in fill in this AEC.
28	Fragments of asbestos and ceramic	PAECs 26 – 28 are in close proximity and ACM has been sighted on the site surface here.	PAECs 26 – 28 are in close proximity and ACM has been recorded in test pits in this area of the site.	Detailed asbestos assessment of asbestos in fill in this AEC.

29	Terracotta tile and brick – possible old structure	Topsoil in the top 0.4 m of the soil profile. No anthropogenic material or evidence of obvious contamination was observed in fill.	No reported exceedances.	Not an AEC.
30	Possible earthworks/disturbed ground	No evidence of earthworks or disturbed ground.	No reported exceedances.	Not an AEC.
31	Possible filling/fragments of ACM	Fill to depths of up to 1.6 m across this AEC. ACM fragments were observed in fill in test pits in three locations.	No reported exceedances.	Detailed asbestos assessment prior to earthworks to establish if remediation is required.
32	Rubbish visible along eastern riparian corridor	N/A – surface sample only.	No reported exceedances.	Not an AEC.
33	Possible ground disturbance – hole in ground	No fill observed.	No reported exceedances.	Not an AEC.
34	Uneven ground	Fill was observed in most locations in the top 0.3 m of the soil profile. No anthropogenic material or obvious evidence of possible contamination was observed in fill.	No reported exceedances.	Not an AEC.

35	Possible fill in creek	Fill/silty clay up to 0.4 m thick about natural strata observed, where base of fill was sighted. No odours/staining or anthropogenic material was sighted in hand auger locations undertaken.	No exceedances except for three nickel exceedances above the adopted ecological SAC (locations 64 (12 mg/kg), 65 (13 mg/kg) and 66 (14 mg/kg)). The calculated 95% UCL was marginally above the ecological SAC. The ecological SAC is adopted using the calculated Added Contaminant Limit (ACL) for nickel and can be further refined by adding the ambient background concentration (ABC) which for the site ranges between 3 and 13 mg/kg (median 7 mg/kg). All three concentrations are below the amended SAC using the median background nickel concentration (adjusted SAC: 17 mg/kg).	Not an AEC. The area should be inspected for any remaining rubbish on the site boundary and removed before earthworks. If suspected contamination is observed, follow the Unexpected Finds Protocol (discussed in recommendations in Section 14).
Background	Background areas of the site	No fill was observed in any background locations undertaken across the site. No anthropogenic material or evidence of possible contamination was observed.	No exceedances except for five nickel exceedances above the adopted ecological SAC. Further assessment of land use for test locations undertaken in this PAEC (which are not within the riparian corridor area) and statistical assessment establishes that nickel does not pose a significant risk to ecological receptors.	No AECs identified in background areas.

12.1 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.

13. Revised Conceptual Site Model

The data collected for this DSI has generally confirmed that certain PAEC outlined in the CSM outlined in Section 0 pose a potentially complete pathway to the identified receptor(s) whilst others do not. No other sources of contamination have been identified from the testing results. This is summarised in Table 7 below.

Table 7: Updated Summary of Potentially Complete Exposure Pathways (Proposed Land Use)

PAEC/AEC	Source Type	Transport Pathway	Receptor	Remediation Action Required
PAEC 8/AEC 1	ACM drainage conduit	P1 – Ingestion and dermal contact of soil or dust P2 – Inhalation of fibres and/or dust and/or vapours	R1 – Current/future site users (construction and maintenance workers and residents in a low density residential setting)	ACM drainage conduit to be removed and validated prior to bulk earthworks. The process for remediation and validation is to be documented in a RAP.
PAEC 9/AEC 2	Possible ACM drainage conduit	P1 – Ingestion and dermal contact of soil or dust P2 – Inhalation of fibres and/or dust and/or vapours	R1 – Current/future site users (construction and maintenance workers and residents in a low density residential setting)	Drainage conduit to be removed and inspected prior to bulk earthworks. If asbestos is suspected, laboratory analysis to be undertaken to confirm or otherwise. If the conduit does contain asbestos, it must be removed and validated prior to bulk earthworks. The process for remediation and validation is to be documented in a RAP.

PAEC/AEC	Source Type	Transport Pathway	Receptor	Remediation Action Required
PAEC 19/AEC 3	Localised surficial ACM impact on the site boundary.	P1 – Ingestion and dermal contact of soil or dust P2 – Inhalation of fibres and/or dust and/or vapours	R1 – Current/future site users (construction and maintenance workers and residents in a low density residential setting) R2 – Land users in adjacent areas including residential	Localised surficial ACM impact on the site boundary to be removed prior to earthworks. A RAP is required to document the process for remediation of ACM.
PAECs 26 – 28/AEC 4	Surficial waste – ACM and deleterious material. Asbestos in fill in location 173	P1 – Ingestion and dermal contact of soil or dust P2 – Inhalation of fibres and/or dust and/or vapours	R1 – Current/future site users (construction and maintenance workers and residents in a low density residential setting) R2 – Land users in adjacent areas including residential	Surficial waste including ACM and deleterious material to be removed. The removal and validation of ACM impact to be documented in the RAP. Detailed asbestos assessment of asbestos in fill in and surrounding location 173 and across the PAEC area.
PAEC 31/AEC 5	ACM impact in surface and fill soils	P1 – Ingestion and dermal contact of soil or dust P2 – Inhalation of fibres and/or dust and/or vapours	R1 – Current/future site users (construction and maintenance workers and residents in a low density residential setting) R2 – Land users in adjacent areas including residential	Detailed asbestos assessment of asbestos in fill to establish if the fill is suitable (all or in part) for retention on the site as part of the proposed development.

AECs are shown on Drawing 4, Appendix A.

14. Conclusions and Recommendations

The scope of this DSI included a review of previous investigations (Section 6), preparation of a preliminary Conceptual Site Model (Section 8), intrusive investigation of Potential Areas of Environmental Concern (PAEC) identified in previous investigations, or general site conditions, analysis of soil samples and review of analytical results against appropriate current NSW EPA endorsed assessment criteria for relevant receptors for the proposed land use.

Previous reports indicate that the site was historically used for pastoral purposes and then parts of it were utilised for infrastructure located both on site (ie. the Jemena gas easement and Sydney Water pump house) and to the north west of the site (ie. the TransGrid substation). Prior to the occupation of land to the north west of the site by TransGrid, the western part of the site was likely accessible along the historical alignment of Fourth Avenue adjacent to the western side of the western riparian corridor. Evidence of illegal dumping was observed in portions of the site, particularly along the perimeter of the riparian corridors. Localised contamination in some AECs was observed as requiring further investigation, delineation and/or remediation. These AECs requiring further works are summarised below.

- AEC 1 – ACM drainage conduit to be removed, chased out and validated. The remediation and validation process should be documented in a RAP.
- AEC 2 – possible ACM drainage conduit. Drainage conduit to be removed and inspected prior to bulk earthworks. If asbestos is suspected, laboratory analysis of the conduit materials is to be conducted to confirm presence/absence. If the conduit does contain asbestos, it must be removed and validated prior to bulk earthworks. The process for remediation and validation is to be documented in a RAP.
- AEC 3 – localised surficial ACM impact on the site boundary. Where observed, ACM fragments on the surface should be removed by hand. A RAP is required to document the process for the remediation and validation works.
- AEC 4 – ACM and deleterious material on the site surface and ACM in fill. Where observed, ACM fragments on the surface should be removed by hand. A RAP is required to document the process for the remediation and validation works. A detailed asbestos assessment of asbestos in fill should be undertaken to delineate impact in fill.
- AEC 5 – ACM on the site surface and in fill. Where observed, ACM fragments on the surface should be removed by hand. A RAP is required to document the process for the remediation and validation works. A detailed asbestos assessment of asbestos in fill can be undertaken to delineate impact in fill and establish if the fill is (all or in part) suitable for retention on the site as part of the development.

It is noted that the majority of the observed impact at each AEC as outlined above are typical of sites in the south west Sydney region and does not impinge on the suitability of the site for rezoning from a contamination perspective. The above additional works should be undertaken to facilitate the DA process for subdivision.

The site is therefore suitable for subdivision and development from a contamination perspective subject to the above additional investigations and / or remediation works being undertaken.

Occasional soil mounds have been observed on the site. The UFP protocol should be referred to if asbestos is encountered once these materials are disturbed. A waste classification assessment will be required for off-site disposal for materials that are not pre-classified.

15. Limitations

Douglas Partners Pty Ltd (DP) has prepared this report (or services) for this project at Gurner Avenue, Austral in accordance with DP's proposal references NSW190074 and MAC200250 and acceptance received from Steven Boukatos. The work was carried out under Landcom Contract reference 13023 dated 20 September 2019. This report is provided for the exclusive use of Landcom 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.

Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been sampled and analysed. This is either due to undetected variations in ground conditions or to budget constraints (as discussed above), or to parts of the site being inaccessible and not available for inspection/sampling, or to vegetation preventing visual inspection and reasonable access. It is therefore considered possible that contamination, including asbestos, may be present in unobserved or untested parts of the site, between and beyond sampling locations, and hence no warranty can be given that asbestos is not present.

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 as previously referenced.

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.

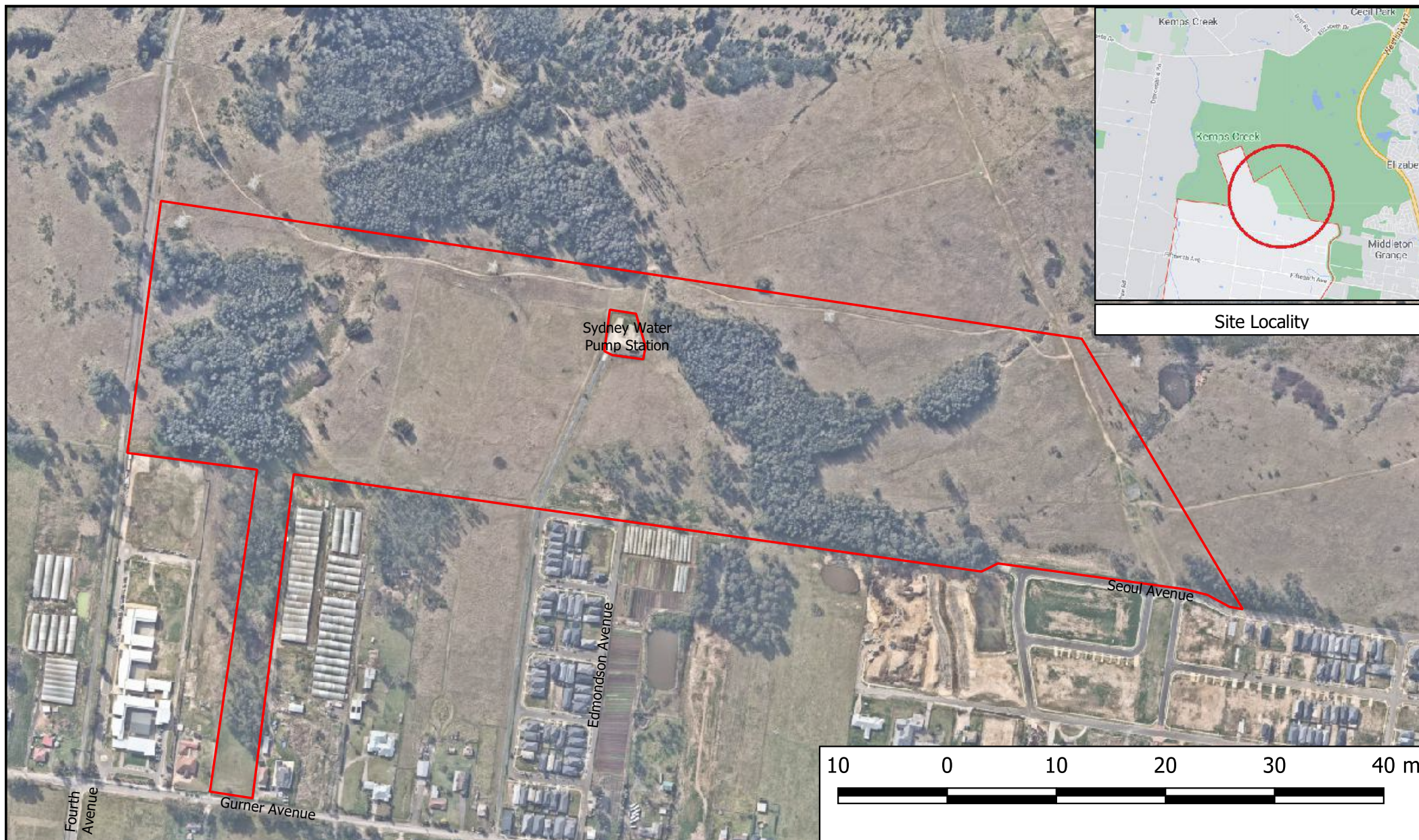
This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation,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

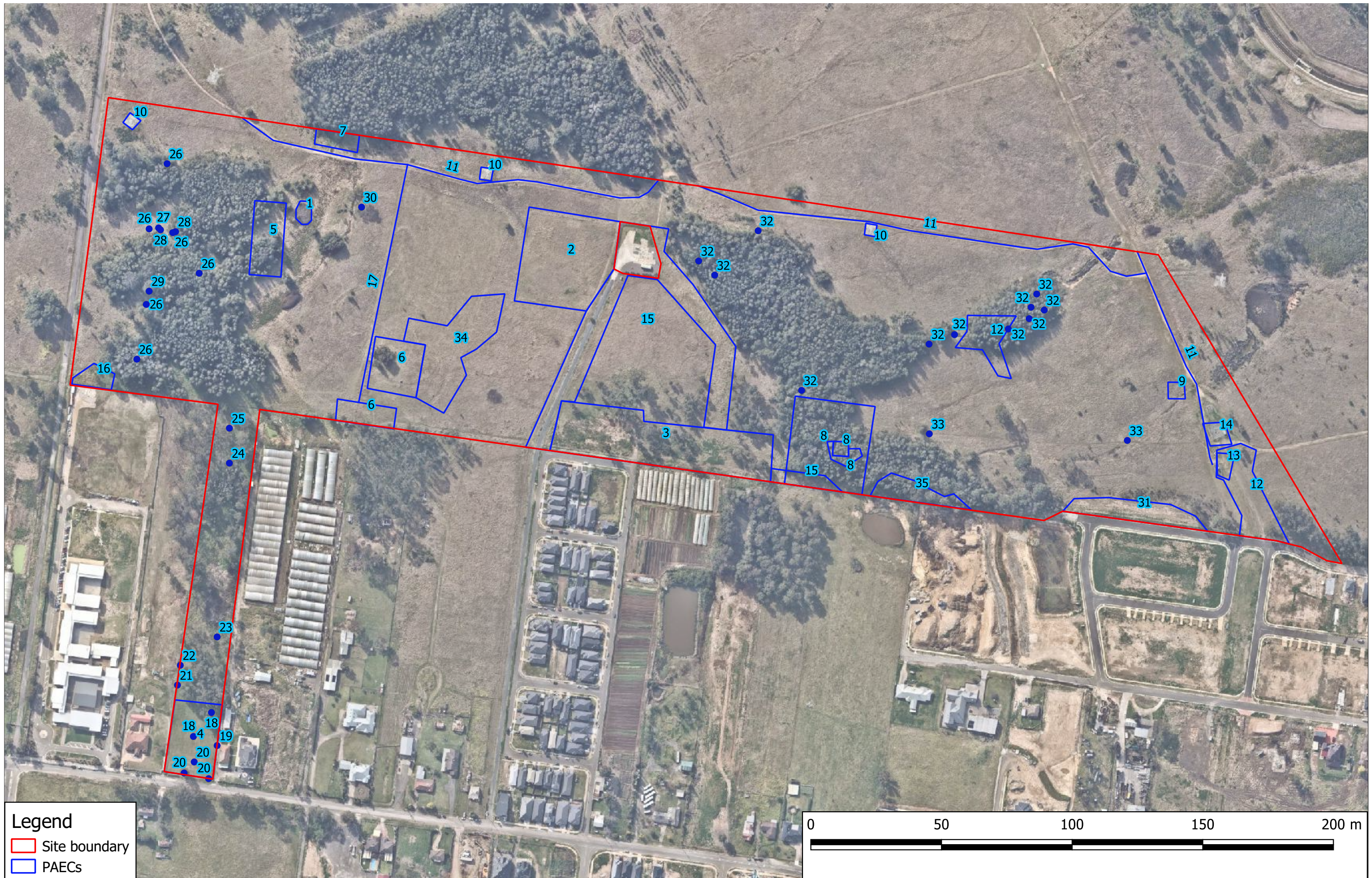
This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

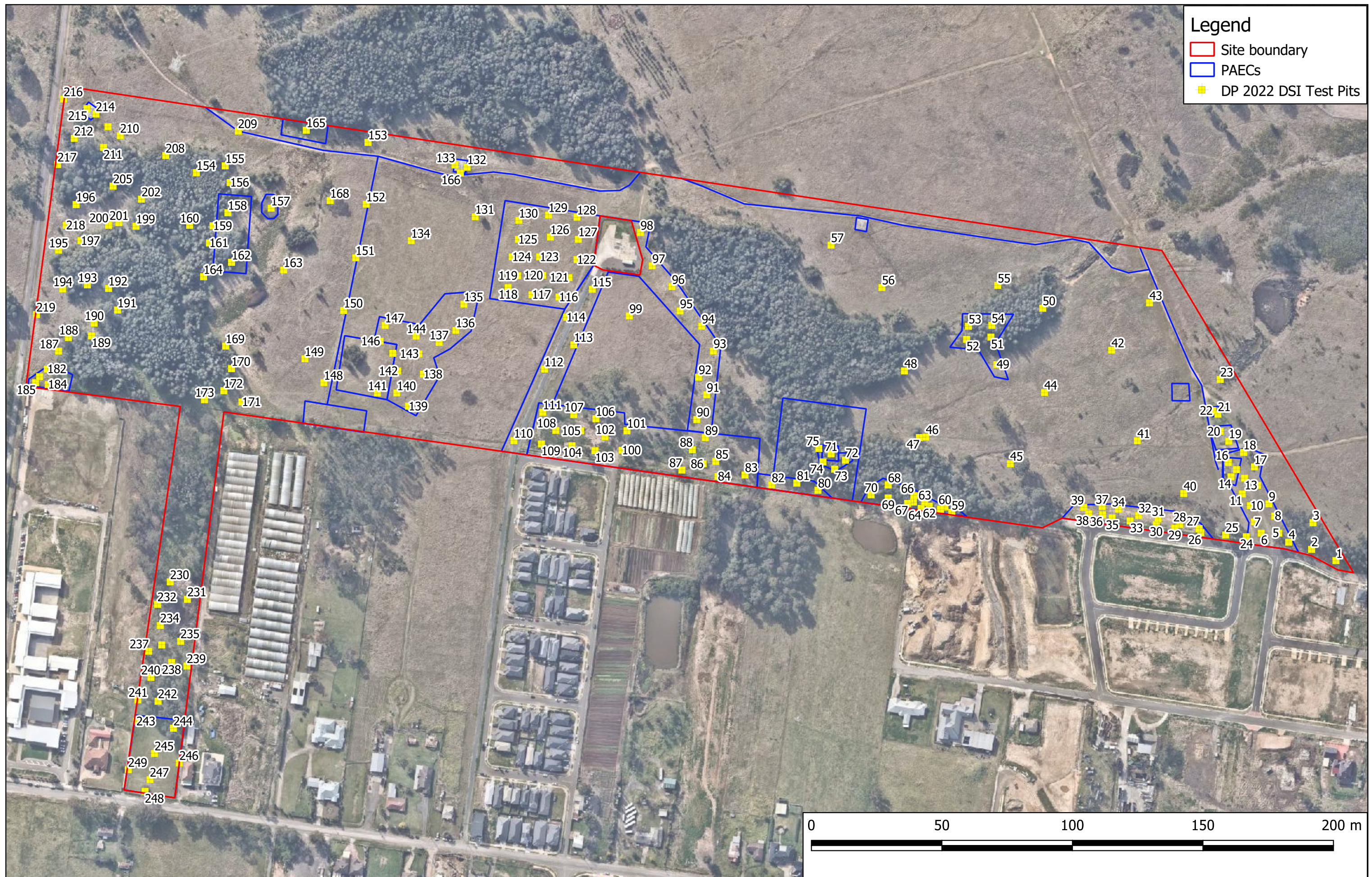
Douglas Partners Pty Ltd

Appendix A

Drawings
About This Report









Legend

Site boundary

AECs

 Douglas Partners Geotechnics Environment Groundwater	CLIENT: Landcom		TITLE: AECs Detailed Site Investigation for Contamination Gurner Avenue, Austral	 MGA	PROJ. #: 94562.02
	OFFICE: Macarthur	DRAWN BY: EME			DRAWING No: 4
	SCALE: As shown	DATE: 4 February 2022			REVISION: 0

About this Report

Douglas Partners



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.

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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 B

Data Quality Objectives

Appendix B

Data Quality Objectives

Part Lot 184 Deposited Plan 1237400

B1.0 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) [NEPM]* (NEPC, 2013).

Step	Summary
1: State the problem	The objective of the investigation is to confirm the contamination status of the site with respect to the proposed land use. The report is being undertaken as the land is to be subdivided for residential land use with portions of the site to be retained as riparian corridor. The requirements of the regulator, Liverpool City Council, will also be considered by consulting their Development Control Plan (DCP), Local Environment Plan (LEP) and any other requirements based on our recent experience with Council on similar sites. A preliminary conceptual site model (CSM) has been prepared (Section 8) for the proposed development. The project team consisted of experienced environmental engineers and scientists working in the roles of Project Principal, Project Reviewer, Project Manager, field staff. The DSI was undertaken in consultation with Urbis Pty Ltd (Urbis) who have been engaged by Landcom to provide archaeological advice for the site. The consultation process included Urbis' review of the proposed scope of works for the DSI and adjustments to avoid any harm to known or possible Aboriginal objects within the site. Sensitive riparian corridors were also required to be protected from damage during the DSI field works. The field works occurred during La Niña season and mean monthly rainfall during the field works was approximately 42 mm/day. Site conditions were waterlogged particularly in and near to the riparian corridor areas which inhibited access in this portion of the site.
2: Identify the decisions / goal of the study	The site history has identified possible contaminating previous uses which are identified in the CSM (Section 8). 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 Appendix D. The decision is to establish whether or not the results fall below the SAC, whether or not the 95% upper confidence limit of the sample population falls below the SAC or if exceedances are present in a portion of the site that warrants refinement of the adopted SAC (land use in that part of the site). 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 concentrations of COPC identified in the CSM (Section 8) at the site using NATA accredited laboratories and methods, where possible. The SAC for each of the COPC are detailed in Appendix E. A photoionization detector (PID) was made available to screen select soils for VOC. PID readings inform sample selection for laboratory analysis, where relevant.
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 history assessment and site observations. The assessment is limited to the timeframe over which the field investigation was undertaken. Constraints to the assessment are identified and discussed in the conclusions of the report, Section 14 and 15.
5: Develop the analytical approach (or decision rule)	The decision rule is to compare all analytical results with SAC (Appendix D, based on NEPC (2013)). Where guideline values are absent, other sources of guideline values accepted by NEPC (2013) shall be adopted where possible. 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). 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, triplicates 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 (NEPC, 2013). The field and laboratory quality assurance assessment is included in Appendix I.
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 pose a potentially unacceptable risk to receptors (null hypothesis). • Alternative condition: Contaminants at the site and statistical analysis of data (in line with NEPC (2013)) comply with human health and environmental SAC and as such, do not pose a potentially unacceptable risk to receptors (alternative hypothesis). • Unless conclusive information from the collected data is sufficient to reject the null hypothesis, it is assumed that the baseline condition is true. Uncertainty that may exist due to the above potential decision errors shall be mitigated as follows: • 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. • 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. Further details regarding the proposed sampling plan are presented in Section 9.

B1.0 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.

Appendix C

Field Work Methodology

Appendix C

Field Work Methodology

Part Lot 184 Deposited Plan 1237400

C1.0 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) [NEPM] (NEPC, 2013).
- HEPA *PFAS National Environmental Management Plan (NEMP)* (HEPA, 2020).

C2.0 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 backhoe bucket or auger at the nominated sample depth;
- Collect near surface samples using hand tools;
- Transfer samples in laboratory-prepared glass jars with Teflon lined lids by hand or (in the case of PFAS analysis) in in laboratory-prepared container specific for PFAS, capping immediately and minimising headspace within the sample jar;
- Collect replicate samples in zip-lock bags for PID screening if and where volatile contamination is suspected based on field observations;
- 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 approximately 20% replicate samples for 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.

Reference was made to HEPA (2020) for requirements specific to PFAS.

C2.1 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.

C3.0 References

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.

Appendix D

Site Assessment Criteria

Appendix D

Site Assessment Criteria

Part Lot 184 Deposited Plan 1237400

D1.0 Introduction

D1.1 Guidelines

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

- NEPC National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) [NEPM] (NEPC, 2013).
- CRC CARE *Health screening levels for petroleum hydrocarbons in soil and groundwater* (CRC CARE, 2011).
- HEPA *PFAS National Environmental Management Plan (NEMP)* (HEPA, 2020).

D1.2 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: residential 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. Riparian corridor is also present that require consideration.
- Soil type: clay.

D2.0 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 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
Pentachlorophenol	100
OCP	
DDT+DDE+DDD	240
Aldrin and dieldrin	6
Chlordane	50
Endosulfan	270
Endrin	10
Heptachlor	6
HCB	10
Methoxychlor	300
Mirex	10
Toxaphene	20
OPP	
Chlorpyrifos	160
PCB	
PCB	1
VOC (various analytes)	-

Table 2: Health Screening Levels (mg/kg)

Contaminant	HSL-A&B
SAND	0 m to <1 m
Benzene	0.5
Toluene	160
Ethylbenzene	55
Xylenes	40
Naphthalene	3
TRH F1	45
TRH F2	110
SILT	0 m to <1 m
Benzene	0.6
Toluene	390
Ethylbenzene	NL
Xylenes	95
Naphthalene	4
TRH F1	40
TRH F2	230
CLAY	0 m to <1 m
Benzene	0.7
Toluene	480
Ethylbenzene	NL
Xylenes	110
Naphthalene	5
TRH F1	50
TRH F2	280

Notes: TRH F1 is TRH C₆-C₁₀ minus BTEX

TRH F2 is TRH >C₁₀-C₁₆ minus naphthalene

The soil saturation concentration (C_{sat}) 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 C_{sat}, a soil vapour source concentration for a petroleum mixture could not exceed a level that would result 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 in Table 3.

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

Contaminant	DC HSL-A
Benzene	100
Toluene	14 000
Ethylbenzene	4500
Xylenes	12 000
Naphthalene	1400
TRH F1	4400
TRH F2	3300
TRH F3	4500
TRH F4	6300

Notes: TRH F1 is TRH C₆-C₁₀ minus BTEX
 TRH F2 is TRH >C₁₀-C₁₆ minus naphthalene

D3.0 Health Investigation Levels for Per- and Poly-Fluoroalkyl Substances in Soil

The laboratory analytical results for per- and poly-fluoroalkyl substances (PFAS) in soil have been assessed against HIL published in HEPA (2020). The HIL represent a nationally-agreed suite that should be used to inform site investigations. The HIL are intentionally conservative, and an exceedance of these criteria may not constitute a risk if other exposure pathways are controlled. An exceedance of the HIL should trigger further investigations, such as a site-specific risk assessment. At the time of this investigation, screening values were available only for perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexane sulfonate (PFHxS).

The HIL derived from Table 2 of HEPA (2020) are in Table 4.

Table 4: Health Investigation Levels (mg/kg)

Contaminant	HIL-A
PFOS and PFHxS *	0.01
PFOA	0.1

Notes: * Includes PFOS only, PFHxS only and the sum of the two.

D4.0 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.

D5.0 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 on the NEPM toolbox website are shown in Table 6, with inputs into their derivation shown in Table 5.

Table 5: Inputs to the Derivation of the Ecological Investigation Levels

Variable	Input	Rationale
Age of contaminants	"Aged" (>2 years)	No recent introduction of "fresh" metal contamination from the site history review.
pH	4 (assumed)	Conservative assumption in the first instance.
CEC	5 cmol _c /kg	Conservative assumption in the first instance – clay soils in the region are known to have a generally low CEC.
Clay content	40 %	It is reasonable to assume a clay-based soil has at least 40 % of clays in the soil matrix.
Traffic volumes	high / low	Standard assumed traffic volume for a site that is neither a new suburb or has no evidence of possible contamination sources in its history.
State / Territory	NSW	-

While the prevailing ecological SAC will be informed by the most sensitive receptor at the site (the riparian corridor ecological community) there are portions of the site (ie. the developable portion) that a less conservative criteria informed by residential land use can be adopted. Hence, both criteria are presented in Table 6 below.

Table 6: Ecological Investigation Levels (mg/kg)

Contaminant	EIL-AES	EIL-A-B-C
Metals		
Arsenic	40	100
Copper	40	65
Nickel	10	35
Chromium III	220	640
Lead	470	1100
Zinc	140	190
PAH		
Naphthalene	10	170
OCP		
DDT	3	180

Notes: EIL-AES area of ecological significance

EIL-A-B-C urban residential and public open space

D6.0 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 7.

Table 7: Ecological Screening Levels (mg/kg)

Contaminant	Soil Type	EIL-AES	EIL-A-B-C
Benzene	Coarse	8	50
Toluene	Coarse	10	85
Ethylbenzene	Coarse	1.5	70
Xylenes	Coarse	10	105
TRH F1	Coarse/ Fine	125*	180*
TRH F2	Coarse/ Fine	25*	120*
TRH F3	Coarse	-	300
TRH F4	Coarse	-	2800
B(a)P	Coarse	0.7	0.7
Benzene	Fine	10	65
Toluene	Fine	65	105

Contaminant	Soil Type	EIL-AES	EIL-A-B-C
Ethylbenzene	Fine	40	125
Xylenes	Fine	1.6	45
TRH F1	Coarse/ Fine	125*	180*
TRH F2	Coarse/ Fine	25*	120*
TRH F3	Fine	-	1300
TRH F4	Fine	-	5600
B(a)P	Fine	0.7	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 C₆-C₁₀ minus BTEX
 TRH F2 is TRH >C₁₀-C₁₆ including naphthalene
 EIL-AES is area of ecological significance
 EIL-A-B-C urban residential and public open space

D7.0 Ecological Soil Guideline Values

The interim ecological soil guideline values (EGV) derived from Table 3 of HEPA (2020) are in Table 8. To account for all applicable exposure scenarios, the lowest SGV for each contaminant has been applied.

Table 8: Ecological Soil Guideline Values (mg/kg) – All Land Uses

Contaminant	Direct Exposure	Indirect Exposure
PFOS	1	0.01
PFOA	10	NC
PFHxS	NC	NC

Notes: NC no criterion

D8.0 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 eg: penetration of, or damage to, in-ground services.

The adopted management limits are in Table 9.

Table 9: Management Limits (mg/kg)

Contaminant	Soil Type	ML-A-B-C
TRH F1	Coarse	700
TRH F2	Coarse	1000
TRH F3	Coarse	2500
TRH F4	Coarse	10 000
TRH F1	Fine	800
TRH F2	Fine	1000
TRH F3	Fine	3500
TRH F4	Fine	10 000

Notes: TRH F1 is TRH C₆-C₁₀ including BTEX
 TRH F2 is TRH >C₁₀-C₁₆ including naphthalene
 ML-A-B-C residential, parkland and public open space

D9.0 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.

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.

Appendix E

Summary Tables

Table 3: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

			Metals										TRH							BTEX										PAH				
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Manganese (Inorganic)	Nickel	Zinc	TRHOS - ClO	TRHOS - ClO	TRH-ClO-ClO	F1 (OS-ClO-BTEX)	F1 (OS-ClO-BTEX)	F2 (+ClO-ClO less Naphthalene)	F3 (+ClO-ClO)	F4 (+ClO-ClO)	Benzene	Benzene	Toluene	Toluene	Ethylbenzene	Ethylbenzene	Total Xylenes	Naphthalene ^b	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs					
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	µg/l	mg/kg	µg/l	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
1	0.1 m	29/11/2021	6	<0.4	28	16	27	<0.1	12	45	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
2	0.1 m	29/11/2021	4	<0.4	15	16	17	<0.1	9	39	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
3	0.1 m	29/11/2021	4	<0.4	22	16	28	<0.1	12	48	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
4	0.1 m	29/11/2021	5	<0.4	15	16	17	<0.1	9	39	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
5	0.1 m	29/11/2021	5	<0.4	16	16	21	<0.1	9	35	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
6/0-1	0 m	24/11/2021	5	<0.4	15	13	18	<0.1	10	34	-	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
7	0.1 m	29/11/2021	<4	<0.4	14	12	18	<0.1	7	29	-	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
8	0.1 m	29/11/2021	100	<0.4	200	200	400	<0.1	100	700	<140	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
9	0.1 m	29/11/2021	100	<0.4	200	200	400	<0.1	100	700	<140	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
10	0.1 m	29/11/2021	6	<0.4	16	17	23	<0.1	8	35	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
11	0.1 m	29/11/2021	5	<0.4	15	18	23	<0.1	11	46	-	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
12	0.1 m	29/11/2021	5	<0.4	17	19	24	<0.1	11	41	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
13	0.1 m	29/11/2021	19	<0.4	21	15	26	<0.1	8	33	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
14	0.1 m	29/11/2021	5	<0.4	19	16	26	<0.1	10	37	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
15	0.1 m	29/11/2021	4	<0.4	18	13	21	<0.1	8	29	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
16	0.1 m	29/11/2021	7	<0.4	22	11	26	<0.1	8	36	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
17	0.1 m	29/11/2021	6	<0.4	21	22	28	<0.1	13	49	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
18	0.1 m	29/11/2021	6	<0.4	23	15	29	<0.1	11	40	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
19	0.1 m	29/11/2021	5	<0.4	21	16	26	<0.1	11	37	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
20	0.1 m	29/11/2021	6	<0.4	20	14	30	<0.1	10	40	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
23	0.1 m	29/11/2021	8	<0.4	12	11	13	<0.1	6	25	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
24	0.1 m	29/11/2021	6	<0.4	16	13	19	<0.1	9	29	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
25	0 - 0.5 m	18/11/2021	100	<0.4	200	200	400	<0.1	100	700	<140	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
26	0 - 0.5 m	18/11/2021	100	<0.4	200	200	400	<0.1	100	700	<140	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
27	0.5 - 1 m	18/11/2021	6	<0.4	16	31	21	<0.1	6	31	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
27	0 - 0.5 m	18/11/2021	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
28	0 - 0.5 m	18/11/2021	100	<0.4	200	200	400	<0.1	100	700	<140	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
29	0 - 0.7 m	18/11/2021	5	<0.4	13	11	19	<0.1	5	19	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	0.97	<0.5	0.1					
30	0 - 0.5 m	18/11/2021	100	<0.4	200	200	400	<0.1	100	700	<140	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
31	0 - 0.8 m	18/11/2021	5	<0.4	11	10	14	<0.1	5	20	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
32	0 - 0.5 m	18/11/2021	6	<0.4	16	16	19	<0.1	6	27	<25	NT	<50	<25	NT	<50	<100	<100	<0.2	NT	<0.5	NT	<1	<1	NT	<1	<0.1	<0.05	<0.5	<0.05				
802	0 m	18/11/2021	7	<0.4	18	18	21	<0.1	6	23	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
33	0 - 0.4 m	18/11/2021	7	<0.4	13	19	20	<0.1	10	31	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
33	0.4 - 1.6 m	18/11/2021	<4	<0.4	13	13	11	<0.1	5	16																								

[illegible]

Table 3: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

			Metals										TRH								BTEX										PAH			
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH-Q1-C10	TRH-Q1-C10	TRH-Q1-C16	F1 (Q1-C10-STEAL)	F1 (Q1-C10-STEAL)	F2 (Q1-C16-SEA Naphthalene)	F3 (Q1-C16-SEA)	F4 (Q1-C16)	Benzene	Benzene	Toluene	Toluene	Ethylbenzene	Ethylbenzene	Total Xylenes	Naphthalene b	Benzofluorene (BFL)	Benzofluorene TED	Total PAH					
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	25	10	50	25	10	50	100	100	0.2	1	0.5	1	1	1	1	0.1	0.05	0.5	0.05					
39B-0.3	0 m	17/11/2021	<4	<0.4	8	8	7	<0.1	4	10	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
40B-1	0 m	24/11/2021	6	<0.4	18	18	23	<0.1	11	32	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
41B-15	0 m	24/11/2021	6	<0.4	11	7	13	<0.1	6	10	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
42B-2	0 m	24/11/2021	6	<0.4	14	8	14	<0.1	4	10	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
43B-2	0 m	24/11/2021	6	<0.4	18	7	16	<0.1	6	13	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
44	0.1 m	29/11/2021	5	<0.4	17	7	15	<0.1	6	9	-	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
45	0.1 m	29/11/2021	6	<0.4	18	10	19	<0.1	7	19	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
46B-2	0 m	24/11/2021	6	<0.4	18	19	19	<0.1	9	10	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
47	0.1 m	29/11/2021	6	<0.4	14	7	17	<0.1	6	12	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
48B-2	0 m	24/11/2021	6	<0.4	17	9	16	<0.1	6	15	-	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
49B-2	0 m	24/11/2021	6	<0.4	14	11	16	<0.1	8	23	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
50	0 m	21/01/2022	5	<0.4	13	9	15	<0.1	5	17	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
BH51	0.1 m	3/12/2021	7	<0.4	16	11	17	<0.1	6	18	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
52B-0.2	0 m	14/12/2021	8	<0.4	19	11	23	<0.1	9	19	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.0					
BH53	0.1 m	3/12/2021	<4	<0.4	12	18	7	<0.1	7	17	-	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
BH54	0.1 m	3/12/2021	6	<0.4	18	17	17	<0.1	10	17	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
BH55	0.1 m	3/12/2021	6	<0.4	16	11	11	<0.1	10	11	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
BH56	0.1 m	3/12/2021	6	<0.4	15	8	16	<0.1	6	14	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
57B-2	0 m	24/11/2021	6	<0.4	15	10	20	<0.1	6	20	-	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
59B-0.2	0 m	15/12/2021	6	<0.4	14	16	21	<0.1	9	31	<25	-	<50	<25	-	<50	190	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
60B-0.2	0 m	15/12/2021	6	<0.4	15	12	22	<0.1	8	21	<25	-	<50	<25	-	<50	129	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
61B-0.1	0 m	15/12/2021	10	<0.4	19	15	28	<0.1	19	23	<25	-	<50	<25	-	<50	138	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
62B-0.2	0 m	15/12/2021	6	<0.4	18	19	26	<0.1	8	26	<25	-	<50	<25	-	<50	216	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
63B-0.2	0 m	15/12/2021	4	<0.4	12	17	21	<0.1	9	40	<25	-	<50	<25	-	<50	128	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
64B-0.2	0 m	15/12/2021	7	<0.4	14	20	21	<0.1	12	41	<25	-	<50	<25	-	<50	120	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
65B-0.2	0 m	15/12/2021	8	<0.4	16	22	22	<0.1	13	42	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
66B-0.2	0 m	15/12/2021	9	<0.4	15	23	26	<0.1	14	50	<25	-	<50	<25	-	<50	106	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
67B-0.2	0 m	15/12/2021	5	<0.4	12	8	18	<0.1	4	9	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
68	0 m	21/01/2022	<4	<0.4	9	1	17	<0.1	3	18	<25	-	<50	<25	-	<50	14	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
69	0 m	21/01/2022	<4	<0.4	8	1	12	<0.1	3	14	<25	-	<50	<25	-	<50	14	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
70	0 m	21/01/2022	<4	<0.4	9	1	13	<0.1	3	17	<25	-	<50	<25	-	<50	14	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
71	0 m	21/01/2022	<4	<0.4	10	1	16	<0.1	3	27	<25	-	<50	<25	-	<50	14	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
72	0 m	21/01/2022	<4	<0.4	12	7	12	<0.1	4	18	<25	-	<50	<25	-	<50	18	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
73	0 m	21/01/2022	<4	<0.4	9	5	19	<0.1	4	33	<25	-	<50	<25	-	<50	12	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
74	0 m	21/01/2022	<4	<0.4	10	14	18	<0.1	6	40	<25	-	<50	<25	-	<50	29	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
75	0 m	21/01/2022	<4	<0.4	10	14	18	<0.1	6	41	<25	-	<50	<25	-	<50	29	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
83B-2	0 m	24/11/2021	6	<0.4	11	18	11	<0.1	5	18	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
84	0.5 m	30/11/2021	7	<0.4	14	18	15	<0.1	7	27	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
85	0.2 m	30/11/2021	10	<0.4	16	10	18	<0.1	7	26	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
86	0.1 m	30/11/2021	16	<0.4	18	28	17	<0.1	8	41	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
87	0.5 m	30/11/2021	6	<0.4	12	21	12	<0.1	8	21	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
88	1 m	30/11/2021	8	<0.4	18	18	11	<0.1	8	28	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
89	0.1 m	30/11/2021	11	<0.4	20	14	26	<0.1	8	16	-	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					
90	1.5 m	30/11/2021	9	<0.4	15	24	15	<0.1	11	34	<25	-	<50	<25	-	<50	<100	<100	<0.2	-	<0.5	-	<1	-	<1	<0.1	<0.05	<0.5	<0.05					

90 1.5 m 30/11/2021

Table 3: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

			Metals										TRH										BTEX										PAH			
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (organoic)	Nickel	Zinc	TRH Q1 - C10	TRH Q2 - C10	TRH +C10-C16	F1 (Q1-C10)-BTEX	F1 (Q1-C10)-BTEX	F2 (+C10-C16 less Naphthalene)	F3 (+C10-C24)	F4 (+C20-C40)	Benzene	Benzene	Toluene	Toluene	Ethylbenzene	Ethylbenzene	Total Xylenes	Naphthalene b	Benzo[a]pyrene BaP	Benzo[a]pyrene B[a]P	Total PAH							
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	µg/l	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg						
91	0.05 m	30/11/2021	7	<0.4	13	14	16	<0.1	8	22	<25																									
92	0.1 m	30/11/2021	12	<0.4	15	15	16	<0.1	10	30	<25																									
93	1.5 m	30/11/2021	12	<0.4	9	34	14	<0.1	16	81	<25																									
94	0.5 m	30/11/2021	10	<0.4	22	25	18	<0.1	18	19	<25																									
95	0.1 m	30/11/2021	10	<0.4	21	8	28	<0.1	6	16	<25																									
960.2	0 m	23/11/2021	9	<0.4	19	14	21	<0.1	8	26	<25																									
97	0.1 m	30/11/2021	7	<0.4	14	21	16	<0.1	12	31	<25																									
98	0.5 m	30/11/2021	12	<0.4	15	15	16	<0.1	10	30	<25																									
990.2	0 m	23/11/2021	12	<0.4	15	15	16	<0.1	10	30	<25																									
1000-0.2	0 m	16/11/2021	14	<0.4	15	16	18	<0.1	18	33	<25																									
TP1030-0.2	0 m	17/11/2021	10	<0.4	13	33	15	<0.1	11	40	<25																									
1030.2-0.3	0 m	16/11/2021	18	<0.4	16	17	22	<0.1	7	28	<25																									
1040-1.1	0 m	16/11/2021	14	<0.4	15	38	18	<0.1	12	82	<25																									
1050-0.3	0 m	16/11/2021	10	<0.4	11	21	19	<0.1	8	30	<25																									
1060-0.2	0 m	16/11/2021	9	<0.4	11	13	18	<0.1	6	30	<25																									
1070-1.0	0 m	16/11/2021	4	<0.4	9	16	14	<0.1	6	24	<25																									
1080-0.1	0 m	16/11/2021	10	<0.4	12	17	19	<0.1	10	42	<25																									
1090-0.8	0 m	16/11/2021	11	<0.4	13	22	14	<0.1	6	38	<25																									
1100.3-0.8	0 m	16/11/2021	10	<0.4	14	21	11	<0.1	13	38	<25																									
1110.3-0.4	0 m	16/11/2021	17	<0.4	7	14	18	<0.1	8	20	<25																									
1120.2	0 m	24/11/2021	10	<0.4	12	20	17	<0.1	10	28	<25																									
1130.2	0 m	24/11/2021	9	<0.4	17	18	25	<0.1	10	34	<25																									
BH14	0.1 m	3/12/2021	9	<0.4	16	14	17	<0.1	8	22	<25																									
BH15	0.1 m	3/12/2021	6	<0.4	15	14	18	<0.1	10	24	<25																									
BH16	0.1 m	3/12/2021	10	<0.4	14	21	19	<0.1	11	31	<25																									
BH17	0.1 m	3/12/2021	9	<0.4	19	16	18	<0.1	9	30	<25																									
BH18	0.1 m	3/12/2021	6	<0.4	16	16	13	<0.1	6	16	<25																									
1190.2	0 m	23/11/2021	10	<0.4	21	16	23	<0.1	10	23	<25																									
121	1 m	30/11/2021	5	<0.4	16	11	17	<0.1	9	27	<25																									
122	0.1 m	30/11/2021	6	<0.4	15	13	16	<0.1	9	27	<25																									
123	1.5 m	30/11/2021	8	<0.4	14	12	13	<0.1	5	14	<25																									
123 - [TRIPPLICATE]	1.5 m	30/11/2021	6	<0.4	19	16	16	<0.1	7	18	<25																									
124	0.1 m	30/11/2021	10	<0.4	19	17	23	<0.1	10	31	<25																									
125	0.1 m	30/11/2021	8	<0.4	16	19	21	<0.1	9	38	<25																									
127	0.1 m	30/11/2021	7	<0.4	16	23	18	<0.1	11	32	<25																									
BH28	0.1 m	3/12/2021	6	<0.4	19	19	23	<0.1	7	16	<25																									
BH29	0.1 m	3/12/2021	8	<0.4	18	11	22	<0.1	5	13	<25																									
1300.2	0 m	23/11/2021	6	<0.4	12	11	11	<0.1	4	14	<25																									
131	0 - 0.1 m	19/11/2021	7	<0.4	19	13	13	<0.1	8	16	<25																									

Table 3: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

			Metals									TRH							BTEX							PAH				
		PQL	Arsenic	Cadmium	Total Chromium	Copper	Lead	Manganese (Inorganic)	Nickel	Zinc	TRHGB - C10	TRHGB - C10	TRH - C10-C16	F1 (GC-C10-BTEX)	F1 (GC-C10-BTEX)	F2 (+C10-C16 less Naphthalene)	F3 (+C16-C24)	F4 (+C16-C24)	Benzene	Benzene	Toluene	Toluene	Ethylbenzene	Ethylbenzene	Total Xylenes	Naphthalene ^b	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs	
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	µg/l	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
134	0 - 0.1 m	19/11/2021	11	<0.4	24	6	18	<0.1	3	7	-	-	-	-	-	<50	<100	<100	<0.2	1	0.5	1	1	1	1	1	0.1	0.05	0.5	0.05
135	0 - 0.1 m	19/11/2021	11	<0.4	23	14	14	<0.1	7	13	-	-	<50	<25	<10	<50	<100	<100	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05	
136	0 - 0.1 m	19/11/2021	8	<0.4	26	13	26	<0.1	<0.1	7	<25	-	<50	<25	<10	<50	<100	<100	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05	
137	0 - 0.3 m	19/11/2021	11	<0.4	22	13	21	<0.1	9	23	<25	-	<50	<25	<10	<50	<100	<100	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05	
BH138	0.1 m	3/12/2021	18	<0.4	26	21	17	<0.1	8	28	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
139	0.1 m	02/12/2021	12	<0.4	22	12	21	<0.1	6	28	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
BH140	0.5 m	3/12/2021	8	<0.4	19	28	12	<0.1	7	31	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
141/0.2	0 m	23/11/2021	18	<0.4	26	13	18	<0.1	7	22	<25	-	<50	<25	<10	<50	<100	<100	<100	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
BH142	0.1 m	3/12/2021	9	<0.4	21	11	20	<0.1	7	18	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
TP143	0 - 0.2 m	19/11/2021	9	<0.4	19	13	21	<0.1	8	28	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
TP144	0 - 0.2 m	19/11/2021	7	<0.4	14	14	26	<0.1	8	17	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
TP145	0 - 0.1 m	19/11/2021	8	<0.4	19	14	19	<0.1	8	17	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
TP146	0 - 0.2 m	19/11/2021	11	<0.4	26	16	22	<0.1	8	21	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
TP147	0 - 0.3 m	19/11/2021	9	<0.4	26	11	21	<0.1	7	21	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
BH148	0.1 m	3/12/2021	19	<0.4	28	12	23	<0.1	6	17	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
BH149	0.1 m	3/12/2021	18	<0.4	24	29	9	<0.1	6	17	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
150	0 - 0.2 m	19/11/2021	7	<0.4	21	12	17	<0.1	6	18	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
151	0 - 0.1 m	19/11/2021	11	<0.4	26	8	18	<0.1	5	12	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
BD1	0 m	18/11/2021	6	<0.4	16	16	24	<0.1	6	130	<25	NT	<50	<25	NT	<50	<100	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05
152	0 - 0.1 m	19/11/2021	7	<0.4	19	9	16	<0.1	5	8	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
BH153	0.1 m	3/12/2021	12	<0.4	24	19	21	<0.1	5	12	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
154	0.1 m	02/12/2021	8	<0.4	18	8	17	<0.1	5	10	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
155	0.1 m	02/12/2021	8	<0.4	14	7	26	<0.1	5	12	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
156	0.1 m	02/12/2021	7	<0.4	16	9	17	<0.1	5	22	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
157	0.1 m	02/12/2021	<4	<0.4	10	8	12	<0.1	6	9	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
158	0.1 m	02/12/2021	11	<0.4	26	2	14	<0.1	2	3	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
159	0.1 m	02/12/2021	6	<0.4	11	4	13	<0.1	2	5	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
160	0.1 m	02/12/2021	19	<0.4	22	8	16	<0.1	4	11	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
160	0.5 m	02/12/2021	4	<0.4	14	8	7	<0.1	3	9	<25	-	<50	<25	<10	<50	<100	<100	<100	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
161	0.1 m	02/12/2021	11	<0.4	26	6	16	<0.1	6	9	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
162	0.1 m	02/12/2021	8	<0.4	13	9	13	<0.1	5	16	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
163/0.2	0 m	23/11/2021	8	<0.4	28	6	16	<0.1	4	9	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
164	0.1 m	02/12/2021	9	<0.4	17	18	18	<0.1	7	21	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
165	0 m	20/01/2022	6	<0.4	23	11	17	<0.1	6	23	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
166	0 m	20/01/2022	4	<0.4	14	4	12	<0.1	2	27	<25	<50	<25	<10	<50	<100	<100	<100	<100	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
168	0 m	20/01/2022	<4	<0.4	18	9	16	<0.1	3	24	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
165 - (TRIPPLICATE)	0 m	20/01/2022	7	<0.4	13	14	22	<0.1	7	26	-	-	-	-	-	-	-	-	-	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05
169/0.2	0 m	23/11/2021	11	<0.4	21	9	21	<0.1	8	12	<25	-	<50	<25	<10	<50														

Table 3: Summary of Laboratory Results – 1

			Phenol	OCF										OPP	PCB									Asbestos
			Phenol	ODD	DDT-COPELCO C	DDE	DDT	Aldin & Dieldrin	Total Chlordane	Endrin	Total Heptachlorin	Heptachlor	Hexachlorobenzene	Methoxychlor	Chlorpyrifos	Aroclor 1016	Total PCB	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Asbestos
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	-
134	0 - 0.1 m	19/11/2021	<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	<0.1	-
135	0 - 0.1 m	19/11/2021	<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	<0.1	-
136	0 - 0.1 m	19/11/2021	<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	<0.1	NAD
137	0 - 0.3 m	19/11/2021	<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	<0.1	-
BH138	0.1 m	3/12/2021	<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	<0.1	NAD
139	0.1 m	02/12/2021	<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	<0.1	NAD
BH140	0.5 m	3/12/2021	<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	<0.1	NAD
141/O.2	0 m	23/11/2021	<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	<0.1	-
BH142	0.1 m	3/12/2021	<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	<0.1	NAD
TP143	0 - 0.2 m	19/11/2021	<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	<0.1	NAD
TP144	0 - 0.2 m	19/11/2021	<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	<0.1	NAD
TP145	0 - 0.1 m	19/11/2021	<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	<0.1	NAD
TP146	0 - 0.2 m	19/11/2021	<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	<0.1	NAD
TP147	0 - 0.3 m	19/11/2021	<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	<0.1	NAD
BH148	0.1 m	3/12/2021	<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	<0.1	NAD
BH149	0.1 m	3/12/2021	<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	<0.1	NAD
150	0 - 0.2 m	19/11/2021	<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	<0.1	-
151	0 - 0.1 m	19/11/2021	<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	<0.1	-
BD1	0 m	18/11/2021	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	-
152	0 - 0.1 m	19/11/2021	<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	<0.1	-
BH153	0.1 m	3/12/2021	<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	<0.1	NAD
154	0.1 m	02/12/2021	<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	<0.1	NAD
155	0.1 m	02/12/2021	<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	<0.1	NAD
156	0.1 m	02/12/2021	<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	<0.1	NAD
157	0.1 m	02/12/2021	<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	<0.1	NAD
158	0.1 m	02/12/2021	<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	<0.1	NAD
159	0.1 m	02/12/2021	<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	<0.1	NAD
160	0.1 m	02/12/2021	<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	<0.1	NAD
160	0.5 m	02/12/2021	<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	<0.1	NAD
161	0.1 m	02/12/2021	<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	<0.1	NAD
162	0.1 m	02/12/2021	<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	<0.1	NAD
163/O.2	0 m	23/11/2021	<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	<0.1	NAD
164	0.1 m	02/12/2021	<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	<0.1	NAD
165	0 m	20/01/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
166	0 m	20/01/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
168	0 m	20/01/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
165 - (TRIPPLICATE)	0 m	20/01/2022	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<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
168/O.2	0 m	23/11/2021	<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	<0.1	NAD
168/O.5	0 m	23/11/2021	<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							

Table 3: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

			Metals										TRH							BTEX										PAH				
		PS	Arsenic	Cadmium	Total Chromium	Copper	Lead	Manganese (Organic)	Nickel	Zinc	TRH Q1 - C10	TRH Q1 - C10	TRH C10-C16	F1 (Q1-C10-BTEX)	F1 (Q1-C10-BTEX)	F2 (C10-C16 less Naphthalene)	F3 (C10-C14)	F4 (C10-C14)	Benzene	Benzene	Toluene	Toluene	Ethylbenzene	Ethylbenzene	Total Xylenes	Naphthalene ^b	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAH					
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	µg/l	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg					
187/0-0.1	0 m	22/12/2021	7	<0.4	19	12	19	<0.1	10	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
187/0-0.1 - (TRIPPLICATE)	0 m	22/12/2021	6	<0.4	28	11	19	<0.1	8	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
188/0-0.1	0 m	22/12/2021	5	<0.4	21	5	20	<0.1	5	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
189/0-0.1	0 m	22/12/2021	7	<0.4	14	9	13	<0.1	3	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
190/0-0.1	0 m	22/12/2021	8	<0.4	22	11	20	<0.1	5	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
191/0-0.1	0 m	22/12/2021	8	<0.4	23	14	21	<0.1	8	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
192/0-0.1	0 m	22/12/2021	6	<0.4	17	10	19	<0.1	6	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
193/0-0.1	0 m	22/12/2021	5	<0.4	13	14	17	<0.1	10	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
194/0-0.1	0 m	22/12/2021	7	<0.4	18	13	18	<0.1	9	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
195/0-0.1	0 m	22/12/2021	5	<0.4	18	10	17	<0.1	7	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
196/0-0.1	0 m	22/12/2021	8	<0.4	21	11	19	<0.1	7	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
197/0-0.1	0 m	22/12/2021	6	<0.4	22	17	17	<0.1	10	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
199/0-0.1	0 m	22/12/2021	4	<0.4	14	15	14	<0.1	5	24	<25	<25	<25	<25	<25	<50	<100	<100	<100	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05				
200/0-0.1	0 m	22/12/2021	6	<0.4	17	13	15	<0.1	8	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
201/0-0.1	0 m	22/12/2021	5	<0.4	13	13	15	<0.1	7	86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
202/0-0.1	0 m	22/12/2021	6	<0.4	17	18	15	<0.1	8	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
205/0-0.1	0 m	22/12/2021	8	<0.4	22	14	20	<0.1	9	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
208	0.1 m	02/12/2021	7	<0.4	18	13	21	<0.1	19	32	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
209	0 m	21/01/2022	5	<0.4	14	13	13	<0.1	7	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
210	0.1 m	02/12/2021	7	<0.4	16	12	19	<0.1	7	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
211	0.1 m	02/12/2021	10	<0.4	24	18	20	<0.1	9	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
212	0.1 m	02/12/2021	7	<0.4	18	8	17	<0.1	7	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
213	0.1 m	02/12/2021	10	<0.4	23	11	20	<0.1	9	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
214	0.1 m	02/12/2021	7	<0.4	19	10	18	<0.1	7	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
215	0.1 m	02/12/2021	8	<0.4	16	8	15	<0.1	8	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
216/0-0.1	0 m	22/12/2021	8	<0.4	18	14	16	<0.1	8	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
217/0-0.1	0 m	22/12/2021	8	<0.4	18	9	17	<0.1	7	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
218/0-0.1	0 m	22/12/2021	9	<0.4	26	13	18	<0.1	9	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
801	0 m	22/12/2021	10	<0.4	22	13	22	<0.1	9	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
219/0-0.1	0 m	22/12/2021	9	<0.4	20	11	19	<0.1	8	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
BH220	0.1 m	3/12/2021	8	<0.4	18	18	19	<0.1	5	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
230/0-0.1	0 m	21/12/2021	8	<0.4	19	12	22	<0.1	5	14	<25	<25	<25	<25	<25	<50	<100	<100	<100	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05				
231/0-0.1	0 m	21/12/2021	9	<0.4	18	12	21	<0.1	8	16	<25	NT	<25	<25	NT	<50	<100	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05				
803	0 m	21/12/2021	8	<0.4	20	9	19	<0.1	6	12	<25	NT	<25	<25	NT	<50	<100	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05				
232/0-0.1	0 m	21/12/2021	9	<0.4	20	12	24	<0.1	8	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
233	0 m	20/01/2022	7	<0.4	14	11	17	<0.1	6	34	<25	<25	<25	<25	<25	<50	<100	<100	<100	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05				
234/0-0.1	0 m	21/12/2021	10	<0.4	22	11	19	<0.1	7	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
235/0-0.1	0 m	21/12/2021	8	<0.4	17	16	19	<0.1	10	39	<25	<25	<25	<25	<25	<50	<100	<100	<100	<0.2	<1	<0.5	<1	<1	<1	<1	<0.1	<0.05	<0.5	<0.05				
236/0-0.1	0 m	21/12/2021	10	<0.4	24	11	15	<0.1	7	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
237/0-0.1	0 m	21/12/2021	7	<0.4	18	13	20	<0.1	7	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
238/0-0.1	0 m	21/12/2021	6	<0.4	12	15	17	<0.1	8	33	<25	NT	<25	<25	NT	<50	<100	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05				
239/0-0.1	0 m	21/12/2021	9	<0.4	14	15	19	<0.1	8	65	-	-	-	-	-	-	-	-	-	-	-	-												

Table 3: Summary of Laboratory Results – I

			Phenol	OCP												OPP	PCB								Asbestos
			Phenol	DDT	DDT (DE/ODD)	DEE	DDT	Alrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Heptachlor epoxide	Methoxychlor	Chlorpyrifos	Aroclor 1016	Total PCB	Aroclor 1221	Aroclor 1222	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Asbestos	
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	-
1870-0-1	0 m	22/12/2021																							-
(TRIPPLICATE)	0 m	22/12/2021																							-
1880-0-1	0 m	22/12/2021																							NAD
1890-0-1	0 m	22/12/2021		<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									NAD
1900-0-1	0 m	22/12/2021		-																					NAD
1910-0-1	0 m	22/12/2021		<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									NAD
1920-0-1	0 m	22/12/2021																							NAD
1930-0-1	0 m	22/12/2021		<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									-
1940-0-1	0 m	22/12/2021																							NAD
1950-0-1	0 m	22/12/2021		<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									-
1960-0-1	0 m	22/12/2021																							-
1970-0-1	0 m	22/12/2021		<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	<0.1	-
1980-0-1	0 m	22/12/2021		<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	<0.1	NAD
2000-0-1	0 m	22/12/2021		<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	<0.1	-
2010-0-1	0 m	22/12/2021																							NAD
2020-0-1	0 m	22/12/2021		<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	<0.1	-
2050-0-1	0 m	22/12/2021																							NAD
208	0.1 m	02/12/2021		<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	<0.1	NAD
209	0 m	21/01/2022																							NAD
210	0.1 m	02/12/2021		<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	<0.1	NAD
211	0.1 m	02/12/2021		<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	<0.1	NAD
212	0.1 m	02/12/2021		<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	<0.1	NAD
213	0.1 m	02/12/2021		<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	<0.1	NAD
214	0.1 m	02/12/2021		<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	<0.1	NAD
215	0.1 m	02/12/2021		<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	<0.1	NAD
2160-0-1	0 m	22/12/2021		<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	<0.1	-
2170-0-1	0 m	22/12/2021																							NAD
2180-0-1	0 m	22/12/2021		<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	<0.1	-
BD1	0 m	22/12/2021	NT	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NT	NT	NT	NT	NT	NT	NT	NT	-
2190-0-1	0 m	22/12/2021	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NAD
BH220	0.1 m	3/12/2021		<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									NAD
2300-0-1	0 m	21/12/2021																							NAD
2310-0-1	0 m	21/12/2021	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NAD
BD3	0 m	21/12/2021	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NAD
2320-0-1	0 m	21/12/2021	-	<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	-	-	-	-	-	-	-	-	NAD
233	0 m	20/01/2022																							NAD
2340-0-1	0 m	21/12/2021		<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	-	-	-	-	-	-	-	-	-
2350-0-1	0 m	21/12/2021																							NAD
2360-0-1	0 m	21/12/2021		<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									NAD
2370-0-1	0 m	21/12/2021		<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									-
2380-0-1	0 m	21/12/2021	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NAD
2390-0-1	0 m	21/12/2021																							NAD
2400-0-1	0 m	21/12/2021		<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	-	-	-	-	-	-	-	-	-

Table 3: Summary of Laboratory Results – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos

			Metals										TRH								BTEX										PAH			
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Manganese (Inorganic)	Nickel	Zinc	TRH Q1 - C10	TRH Q1 - C10	TRH C10-C16	F1 (Q1-C10-BTEX)	F1 (Q1-C10-BTEX)	F2 (+C10-C16 less Naphthalene)	F3 (+C10-C14)	F4 (+C10-C10)	Benzene	Benzene	Toluene	Toluene	Ethylbenzene	Ethylbenzene	Total Xylenes	Naphthalene ^b	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEO	Total PAHs					
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	µg/l	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
241/0-0.1	0 m	21/12/2021	7	<0.4	19	16	28	<0.1	8	31	25	10	50	25	10	50	100	100	0.2	1	0.5	1	1	1	1	1	0.1	0.05	0.5	0.05				
242/0-0.1	0 m	21/12/2021	9	<0.4	13	29	30	<0.1	11	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
243/0-0.1	0 m	21/12/2021	7	<0.4	19	29	18	<0.1	8	30	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
244/0-0.1	0 m	21/12/2021	7	<0.4	18	16	24	<0.1	9	30	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
BD2	0 m	21/12/2021	7	<0.4	16	17	22	<0.1	11	32	<25	NT	<25	<25	NT	<25	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05					
245/0-0.1	0 m	21/12/2021	7	<0.4	17	17	22	<0.1	8	34	NT	NT	<25	<25	NT	<25	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05					
246/0-0.2	0 m	21/12/2021	6	<0.4	20	17	21	<0.1	10	30	NT	NT	<25	<25	NT	<25	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05					
247/0-0.1	0 m	21/12/2021	6	<0.4	19	14	18	<0.1	7	26	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
248/0-1-0.2	0 m	21/12/2021	5	<0.4	14	14	18	<0.1	6	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
249/0-0.1	0 m	21/12/2021	7	<0.4	16	20	24	<0.1	8	40	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				
BD1	0 m	21/12/2021	7	<0.4	16	17	24	<0.1	11	34	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT				

Lab result

HL/HSL valueEIL/ESL value

HL/HSL exceedance

EIL/ESL exceedance

HL/HSL and EIL/ESL exceedance

ML exceedance

ML and HL/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 HL/HSL/EIL/ESL (as applicable) or Not applicable

NL = Non limiting

AD = Asbestos detected

NAD = No Asbestos detected

HL = 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
- QAVC 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	
HSL 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 AES	Areas of Ecological Significance (NEPC, 2013)
ML RPIPOS	Residential, Parkland and Public Open Space (NEPC, 2013)

Table 3: Summary of Laboratory Results – I

				Phenol	OPP											OPP	PCB										Asbestos
			Phenol	DDO	DDT+DDE+DDD	DDE	DDT	Alidin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Heptachlorobenzene	Methoxychlor	Chlorpyrifos	Aroclor 1016	Total PCB	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	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	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	-			
241/0-0.1	0 m	21/12/2021		<0.1	0.02																			-			
242/0-0.1	0 m	21/12/2021			0.02																			NAD			
243/0-0.1	0 m	21/12/2021		<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								-			
244/0-0.1	0 m	21/12/2021	NT	NT	0.02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NAD			
BD2	0 m	21/12/2021	NT	NT	0.02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NAD			
245/0-0.1	0 m	21/12/2021		<0.1	0.02																			-			
246/0-0.2	0 m	21/12/2021		<0.1	0.02																			NAD			
247/0-0.1	0 m	21/12/2021		<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								-			
248/0.1-0.2	0 m	21/12/2021			0.02																			NAD			
249/0-0.1	0 m	21/12/2021		<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								-			
BD1	0 m	21/12/2021	NT	NT	0.02	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	-			

Lab result
HL/HSL value
EIL/ESL value

Notes:

- a QAVC replicate of sample listed directly ;
b Reported naphthalene laboratory result of
c Criteria applies to DDT only

Site Assessment Criteria (SAC):

Refer to the SAC section of report for information of SAC source

SAC based on generic land use threshold

HL A	Residential / Low-H
HSL A/B	Residential / Low-H
DC HSL A	Direct contact HSL A
EIL/ESL AES	Areas of Ecological
ML R/PIPOS	Residential, Parklan

Appendix F

Logs

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298878
NORTHING: 6245721
DIP/AZIMUTH: 90°/--

BORE No: 1
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, red-brown, trace rootlets, w<PL, probably stiff, residual		E	0.2					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298853
NORTHING: 6245733
DIP/AZIMUTH: 90°/--

BORE No: 2
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1							
		Silty CLAY CH: high plasticity, red mottled grey, trace rootlets, w<PL, stiff, residual		D/E	0.5							
		- becoming grey mottled brown, very stiff, below 0.6m - becoming hard below 0.75m		D	1.0		pp = 450					
	1.4	SHALE: mottled brown and grey, extremely low strength, extremely weathered, with clay seams and very low strength shale bands, Bringelly Shale		D	1.5							
				D	2.0							
		- becoming mottled grey and red below 2.1m		D	2.5							
	2.5	Bore discontinued at 2.5m - limit of investigation										
	3											

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298854
NORTHING: 6245760
DIP/AZIMUTH: 90°/--

BORE No: 3
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1							
		Silty CLAY CH: high plasticity, mottled red, grey and brown, trace ironstone gravel and rootlets, w~PL, stiff, residual		E	0.5							
				B								
1	1.0				1.0		pp = 250	1				
					1.5		pp = 300					
2	2.0	- extremely weathered shale bands below 1.9m			2.0		pp = 300	2				
	2.5	Bore discontinued at 2.5m - limit of investigation			2.5		pp = 400					
3												

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298830
NORTHING: 6245740
DIP/AZIMUTH: 90°/--

BORE No: 4
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled brown, trace ironstone gravel and rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298820
NORTHING: 6245749
DIP/AZIMUTH: 90°/--

BORE No: 5
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled grey, red and brown, trace ironstone gravel and rootlets, w<PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298802
NORTHING: 6245749
DIP/AZIMUTH: 90°/--

BORE No: 6
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)
				Type	Depth	Sample	Results & Comments		
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, brown, with rootlets, w<PL		E	0.1				
		Silty CLAY CH: high plasticity, brown, trace rootlets, w<PL, very stiff, residual		E	0.5				
					0.6				
				U ₅₀	0.8				
	1	- becoming brown mottled grey below 0.9m							
		- extremely weathered shale bands below 1.4m							
	1.6	SHALE: brown, very low strength, highly weathered, with extremely weathered shale bands, Bringelly Shale							
	1.8	Bore discontinued at 1.8m - refusal on low strength shale							
	2								
	3								

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 ₁ 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	W Water level	V Shear vane (kPa)	

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298795
NORTHING: 6245760
DIP/AZIMUTH: 90°/--

BORE No: 7
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled red-brown and grey, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298816
NORTHING: 6245766
DIP/AZIMUTH: 90°/--

BORE No: 8
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled grey, trace ironstone gravel and rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298810
NORTHING: 6245779
DIP/AZIMUTH: 90°/--

BORE No: 9
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled grey, trace ironstone gravel and rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298791
NORTHING: 6245777
DIP/AZIMUTH: 90°/--

BORE No: 10
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled grey and red, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298782
NORTHING: 6245789
DIP/AZIMUTH: 90°/--

BORE No: 11
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, brown and red mottled grey and brown, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298798
NORTHING: 6245797
DIP/AZIMUTH: 90°/--

BORE No: 12
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled red, red-brown and grey, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

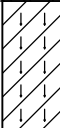
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298785
NORTHING: 6245805
DIP/AZIMUTH: 90°/--

BORE No: 13
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
	0.6	Silty CLAY CH: high plasticity, brown, trace sand, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298771
NORTHING: 6245806
DIP/AZIMUTH: 90°/--

BORE No: 14
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with sand and rootlets, w~PL		E	0.1					
	0.6	Silty CLAY CH: high plasticity, dark brown, trace sand and rootlets, w~PL probably firm to stiff - becoming red-brown below 0.4m								
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298776
NORTHING: 6245813
DIP/AZIMUTH: 90°/--

BORE No: 15
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with sand and rootlets, w~PL		E	0.1					
	0.6	Silty CLAY CH: high plasticity, brown and red mottled grey brown, trace rootlets, w<PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298768
NORTHING: 6245820
DIP/AZIMUTH: 90°/--

BORE No: 16
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, trace sand, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red-brown, trace rootlets, w~PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation		E	0.5					
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

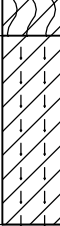
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298795
NORTHING: 6245816
DIP/AZIMUTH: 90°/--

BORE No: 17
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL Silty CLAY CH: high plasticity, red-brown mottled grey, trace ironstone gravel and rootlets, w~PL, probably stiff, residual		E	0.1					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298784
NORTHING: 6245831
DIP/AZIMUTH: 90°/--

BORE No: 18
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, trace sand, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled grey, trace ironstone gravel and rootlets, w~PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

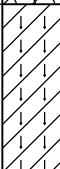
SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298769
NORTHING: 6245842
DIP/AZIMUTH: 90°/--

BORE No: 19
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled brown, trace rootlets, w<PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298760
NORTHING: 6245852
DIP/AZIMUTH: 90°/--

BORE No: 20
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled grey, trace rootlets, w<PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298760
NORTHING: 6245905
DIP/AZIMUTH: 90°/--

BORE No: 23
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.3	TOPSOIL/Silty CLAY CI: medium plasticity, dark brown, with sand and rootlets, w>PL		E	0.1					
		Silty CLAY CH: high plasticity, dark brown, with sand, trace rootlets, w~PL, probably firm to stiff		D/E	0.5					
		- becoming red-brown and brown below 0.6m								
	1									
		- becoming brown mottled grey, with highly weathered shale bands below 1.3m								
	1.7									
	1.8	SHALE: grey brown, very low strength, highly weathered, Bringelly Shale								
		Bore discontinued at 1.8m								
		- refusal on low strength shale								
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298787
NORTHING: 6245745
DIP/AZIMUTH: 90°/--

BORE No: 24
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled red and brown, trace ironstone gravel and rootlets, w<PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298766
NORTHING: 6245747

PIT No: 25
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _s	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298741
NORTHING: 6245749

PIT No: 26
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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



TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298739
NORTHING: 6245754

PIT No: 27
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Replicate sample BD2/181121 collected

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _s	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test (s(50) (MPa)
		PL(D)	Point load diametral test (s(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298719
NORTHING: 6245758

PIT No: 28
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _s	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



Douglas Partners
Geotechnics | Environment | Groundwater

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298714
NORTHING: 6245754

PIT No: 29
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/Silty CLAY CL: low plasticity, brown and red, with shale and siltstone gravel, twigs, woodchips and rootlets, w<PL, 2 potential embedded ACM fragments		E/B	0.0							
	0.7	CLAY CH: high plasticity, orange mottled brown mottled pale grey, trace silt and rootlets, w~PL, residual		E	0.7							
	1.2	Pit discontinued at 1.2m - limit of investigation			1.2							
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 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)	

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298695
NORTHING: 6245758

PIT No: 30
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _s	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



Douglas Partners
Geotechnics / Environment / Groundwater

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298697
NORTHING: 6245764

PIT No: 31
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY Cl: medium plasticity, red-brown, with rootlets, woodchips and mulch (organic mulch odour noted), w~PL		E	0.0							
	0.8	CLAY CH: high plasticity, orange mottled pale grey, trace ironstone gravel and silt, w~PL		E	0.8							
	1.5	Pit discontinued at 1.5m - limit of investigation			1.5							
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298677
NORTHING: 6245767

PIT No: 32
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Replicate sample BD1/181121 collected

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test (s(50) (MPa)
		PL(D)	Point load diametral test (s(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298669
NORTHING: 6245761

PIT No: 33
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/Silty CLAY CL: low plasticity, brown, trace sandstone cobbles, shale gravel, sand, woodchips, plastic and rootlets, w<PL, potential ACM fragment observed		E/B	0.0							
	0.4	FILL/Silty CLAY CL: low plasticity, red-brown, trace shale gravel and cobbles, woodchips, rootlets and plastic, w<PL			0.4							
1				E/B	1.0							
	1.6	CLAY CL: medium plasticity, red and orange, trace rootlet, w~PL		E	1.6							
2												
	2.2	Pit discontinued at 2.2m - limit of investigation			2.2							
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Test pit excavated adjacent to stockpile of anthropogenic material comprising wood

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

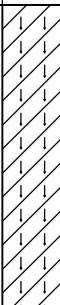
SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298657
NORTHING: 6245773

PIT No: 34
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		Silty CLAY Cl: medium plasticity, brown mottled orange, with tree debris, woodchips and rootlets, w~PL		E	0.0							
	0.8	CLAY CH: high plasticity, red and orange, trace silt and rootlets, w~PL		E	0.8							
	1.3	Pit discontinued at 1.3m - limit of investigation			1.3							
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298650
NORTHING: 6245764

PIT No: 35
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/Silty CLAY CL: medium plasticity, orange mottled brown, trace shale gravel and cobbles, mudstone cobbles and rootlets, w<PL		E	0.0							
1												
	1.2	FILL/Silty CLAY CL: low plasticity, red-brown, trace shale gravel and rootlets, w<PL		E	1.2							
	1.6	CLAY CH: high plasticity, red and orange, trace rootlets, w~PL, residual		E	1.6							
2												
	2.2	Pit discontinued at 2.2m - limit of investigation			2.2							
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298641
NORTHING: 6245768

PIT No: 36
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/Silty CLAY Cl: medium plasticity, orange mottled pale grey, trace sandstone cobbles, shale gravel and cobbles and rootlets, w~PL		E	0.0							
	0.4	TOPSOIL/Silty CLAY CL: low plasticity, brown, trace rootlets, w<PL		E	0.4							
	0.5	CLAY CH: high plasticity, orange mottled brown, trace rootlets, w~PL, residual		E	0.5							
1	1.0	Pit discontinued at 1.0m - limit of investigation			1.0							
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298640
NORTHING: 6245776

PIT No: 37
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test (s(50) (MPa)
		PL(D)	Point load diametral test (s(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298640
NORTHING: 6245776
DIP/AZIMUTH: 90°/--

BORE No: 37A
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1							
		Silty CLAY CH: high plasticity, red-brown, trace rootlets, w<PL, stiff, residual										
				D/E	0.5		pp = 200					
				B								
1		- becoming very stiff below 0.9m		D	1.0		pp = 250	1				
		- with sand below 1.3m										
				D	1.5		pp = 250					
		- becoming brown below 1.6m										
2		- becoming mottled red, brown and grey below 2.0m		D	2.0		pp = 400	2				
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5							
3												

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298627
NORTHING: 6245769

PIT No: 38
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _s	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



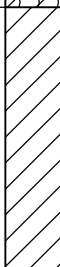
Douglas Partners
Geotechnics | Environment | Groundwater

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298622
NORTHING: 6245775

PIT No: 39
PROJECT No: 94562.02
DATE: 18/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)				
				Type	Depth	Sample	Results & Comments		5	10	15	20	
		TOPSOIL/Silty CLAY Cl: medium plasticity, red-brown, with rootlets, trace tree woodchips, w<PL		E	0.0								
	0.3	CLAY Cl: medium plasticity, red mottled brown, trace silt and rootlets, w~PL, residual		E	0.3								
1	1.0	Pit discontinued at 1.0m - limit of investigation			1.0				1				

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _s	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298622
NORTHING: 6245775
DIP/AZIMUTH: 90°/--

BORE No: 39A
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL										
		Silty CLAY CH: high plasticity, red, trace rootlets, w<PL, stiff, residual										
					0.6							
				U ₅₀								
					0.9							
	1				1.0		pp = 225		1			
		- becoming brown, trace ironstone gravel below 1.3m										
					1.5		pp = 270					
		- becoming red mottled brown below 1.8m										
	2				2.0		pp = 200		2			
	2.5	Bore discontinued at 2.5m - limit of investigation			2.5		pp = 250					
	3											

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298723
NORTHING: 6245789
DIP/AZIMUTH: 90°/--

BORE No: 40
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.1	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1							
		Silty CLAY CH: high plasticity, mottled grey, red and brown, trace rootlets, w~PL, stiff, residual										
				D/E	0.5		pp = 375					
	1			D	1.0		pp = 350	1				
		- becoming grey mottled red and brown below 1.4m		D	1.5		pp = 375					
		- extremely weathered shale bands below 1.8m										
	2			D	2.0			2				
	2.1	SHALE: dark brown, low to medium strength, highly weathered, Bringelly Shale										
	2.2	Bore discontinued at 2.2m - refusal on low to medium strength shale		D	2.2							
	3							3				

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 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	W Water level	V Shear vane (kPa)	

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298676
NORTHING: 6245842
DIP/AZIMUTH: 90°/--

BORE No: 41
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.15							
		Silty CLAY CH: high plasticity, brown, trace rootlets, w~PL, stiff, residual		E	0.5							
		- becoming very stiff below 0.45m		B	1.0							
	1											
		- becoming red mottled brown below 1.3m										
	2											
		- becoming grey mottled brown, with highly weathered shale bands below 1.9m										
	2.1	SHALE: brown, very low strength, highly weathered, Bringly Shale										
	2.5	Bore discontinued at 2.5m - limit of investigation										
	3											

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298650
NORTHING: 6245934
DIP/AZIMUTH: 90°/--

BORE No: 42
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.2							
		Silty CLAY CH: high plasticity, brown, trace ironstone gravel and rootlets, w~PL, stiff, residual		E	0.5							
				U ₅₀	0.7 0.75							
	1			D	1.0		pp = 300	1				
				D	1.5		pp = 150					
	2			D	2.0		pp = 250	2				
		- becoming mottled brown and grey, trace sand below 2.2m										
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5		pp = 200					
	3							3				

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 ₁ 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)	

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298688
NORTHING: 6245982
DIP/AZIMUTH: 90°/--

BORE No: 43
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.2							
		Silty CLAY CH: high plasticity, brown, trace rootlets, w<PL, stiff, residual		D/E	0.5							
	1			D	1.0		pp = 350					
		- brown mottled red, with ironstone gravel and sand below 1.3m		D	1.5		pp = 300					
	2			D	2.0		pp = 350					
		- becoming mottled red, brown and grey, no sand below 1.7m										
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5		pp = 325					
	3											

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 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)	

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298582
NORTHING: 6245891
DIP/AZIMUTH: 90°/--

BORE No: 44
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with sand and rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red, trace ironstone gravel and rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298547
NORTHING: 6245819
DIP/AZIMUTH: 90°/--

BORE No: 45
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1							
		Silty CLAY CH: high plasticity, red, trace rootlets, w<PL, very stiff, residual										
		- becoming brown, trace sand below 0.4m			0.5							
				U ₅₀	0.75							
1					1.0		pp = 410	1				
		- becoming mottled red and brown below 1.4m			1.5		pp = 400					
		- becoming brown and red, trace ironstone gravel, stiff below 1.7m			2.0		pp = 200	2				
2		- becoming red-brown mottled grey below 2.1m										
	2.5	Bore discontinued at 2.5m - limit of investigation			2.5		pp = 220					
3								3				

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298461
NORTHING: 6245846
DIP/AZIMUTH: 90°/--

BORE No: 46
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.2							
		Silty CLAY CH: high plasticity, brown, w<PL, stiff, residual		E	0.5							
		- becoming very stiff below 0.6m		B	1.0							
	1				1.5		pp = 300					
	2	- with sand, becoming firm below 2.0m			2.0		pp = 50					
	2.5	Bore discontinued at 2.5m - limit of investigation			2.5		pp = 50					
	3											

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298455
NORTHING: 6245846
DIP/AZIMUTH: 90°/--

BORE No: 47
PROJECT No: 94562.02
DATE: 29/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
	0.6	Silty CLAY CH: high plasticity, brown, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298440
NORTHING: 6245914
DIP/AZIMUTH: 90°/--

BORE No: 48
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.2							
		Silty CLAY CH: high plasticity, brown, trace rootlets, w<PL, residual		E	0.5							
					0.6							
		- becoming very stiff below 0.75m		U ₅₀	0.75							
	1				1.0		pp = 450		1			
		- becoming red-brown, trace ironstone gravel below 1.4m			1.5		pp = 250					
	2				2.0		pp = 300		2			
	2.5	Bore discontinued at 2.5m - limit of investigation			2.5		pp = 280					
	3											

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298533
NORTHING: 6245920
DIP/AZIMUTH: 90°/--

BORE No: 49
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.3	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.2							
		Silty CLAY CH: high plasticity, brown, trace rootlets, w<PL, stiff, residual		D/E	0.5							
		- becoming very stiff below 0.6m										
	1			D	1.0							
				D	1.5							
	2			D	2.0							
		- becoming red-brown, with ironstone gravel and sand below 1.8m										
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5							
	3											

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

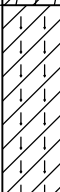
SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298528
NORTHING: 6245948
DIP/AZIMUTH: 90°/--

BORE No: 51
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.3	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
	0.8	Silty CLAY CH: high plasticity, brown, trace rootlets, w<PL, probably stiff, residual		E	0.5					
	0.8	Bore discontinued at 0.8m - limit of investigation								
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298505
NORTHING: 6245958
DIP/AZIMUTH: 90°/--

BORE No: 53
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, brown, trace rootlets, w<PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298528
NORTHING: 6245959
DIP/AZIMUTH: 90°/--

BORE No: 54
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, brown, trace rootlets, w<PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298534
NORTHING: 6246000
DIP/AZIMUTH: 90°/--

BORE No: 55
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, brown, trace rootlets, w<PL, probably stiff, residual		E	0.5					
	0.8	Bore discontinued at 0.8m - limit of investigation								
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298417
NORTHING: 6245998
DIP/AZIMUTH: 90°/--

BORE No: 56
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled red and brown, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298365
NORTHING: 6246041
DIP/AZIMUTH: 90°/--

BORE No: 57
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.3	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.2							
		Silty CLAY CH: high plasticity, mottled red, brown and grey, trace rootlets, stiff, w~PL, residual		D/E	0.5							
	1			D	1.0							
				D	1.5							
	2	- becoming brown below 1.8m		D	2.0							
		- becoming brown mottled grey, with sand below 2.2m		D	2.5							
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5							
	3											

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

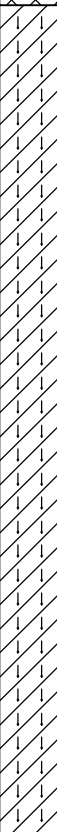
SAMPLING & IN SITU TESTING LEGEND			
A Auger sample	G Gas sample	PID Photo ionisation detector (ppm)	
B Bulk sample	P Piston sample	PL(A) Point load axial test Is(50) (MPa)	
BLK Block sample	U Tube sample (x mm dia.)	PL(D) Point load diametral test Is(50) (MPa)	
C Core drilling	W Water sample	pp Pocket penetrometer (kPa)	
D Disturbed sample	> Water seep	S Standard penetration test	
E Environmental sample	≡ Water level	V Shear vane (kPa)	

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298278
NORTHING: 6245808
DIP/AZIMUTH: 90°/--

BORE No: 83
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)
				Type	Depth	Sample	Results & Comments		
	0.3	FILL/TOPSOIL: Silty CLAY CI, medium plasticity, mottled grey and red, trace gravel and rootlets, w<PL, appears generally well compacted		E	0.2				
		Silty CLAY CH: high plasticity, brown, trace rootlets, w<PL, hard, residual		D/E	0.5				
	1			D	1.0				
		- with sand below 1.3m		D	1.5				
	2			D	2.0				
		- becoming mottled grey, red and brown below 1.8m		D	2.5				
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5				
	3								

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298250
NORTHING: 6245806
DIP/AZIMUTH: 90°/--

BORE No: 84
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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



BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298248
NORTHING: 6245821
DIP/AZIMUTH: 90°/--

BORE No: 85
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.2					
		Silty CLAY CH: high plasticity, brown mottled red-brown, trace ironstone gravel and rootlets, w~PL, probably stiff, residual								
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298236
NORTHING: 6245819
DIP/AZIMUTH: 90°/--

BORE No: 86
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	FILL/TOPSOIL: Silty CLAY CI, medium plasticity, dark brown, trace gravel and rootlets, w<PL		E	0.1					
		FILL/Silty CLAY CI: medium plasticity, mottled brown and grey, trace gravel and rootlets, w~PL								
					0.5					
				B						
	1.0			E	1.0					
	1.2	Silty CLAY CH: high plasticity, mottled brown, red and grey, trace rootlets, w~PL, appears stiff, residual								
				E	1.5					
	1.7	Bore discontinued at 1.7m - limit of investigation								
	2.0									
	3.0									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

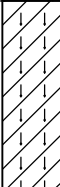
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298214
NORTHING: 6245813
DIP/AZIMUTH: 90°/--

BORE No: 87
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	FILL/TOPSOIL: Silty CLAY CI, medium plasticity, dark brown, with rootlets, trace gravel, w<PL		E	0.1					
		FILL/Silty CLAY CI: medium plasticity, mottled dark brown, red and grey, trace gravel and rootlets, w<PL			0.3					
				E	0.5					
				B						
	1.0				1.0					
	1.3	Silty CLAY CH: high plasticity, mottled grey and red, trace rootlets, w<PL, residual								
	1.8	Bore discontinued at 1.8m - limit of investigation		E	1.8					
	2.0									
	3.0									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

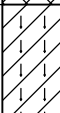
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298225
NORTHING: 6245834
DIP/AZIMUTH: 90°/--

BORE No: 88
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	FILL/TOPSOIL: Silty CLAY CI, medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		FILL/Silty CLAY CI: medium plasticity, mottled dark brown, brown, grey and red, trace sand, gravel, cobbles and rootlets, w~PL			0.3					
				B						
	1			E	1.0					
	2			E	2.0					
	2.2	Silty CLAY CH: high plasticity, mottled red and grey, trace rootlets, w~PL, possibly fill								
	2.5	Bore discontinued at 2.5m - limit of investigation								
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298238
NORTHING: 6245846
DIP/AZIMUTH: 90°/--

BORE No: 89
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, brown mottled red brown, trace rootlets, w~PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298229
NORTHING: 6245864
DIP/AZIMUTH: 90°/--

BORE No: 90
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.05	FILL/TOPSOIL: Silty CLAY Cl, medium plasticity, dark brown, with rootlets, w<PL								
		FILL/Silty CLAY Cl: medium plasticity, mottled brown, red and grey, trace ironstone gravel, gravel, sand and rootlets, w~PL		E	0.5					
	1			E	1.5					
	2			E	2.5					
	2.5	Bore discontinued at 2.5m - limit of investigation								
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298239
NORTHING: 6245889
DIP/AZIMUTH: 90°/--

BORE No: 91
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.05	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.05					
		Silty CLAY CH: high plasticity, brown, trace ironstone gravel and rootlets, w~PL, probably stiff, residual								
		- becoming grey mottled red, w<PL below 0.5m		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298231
NORTHING: 6245907
DIP/AZIMUTH: 90°/--

BORE No: 92
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<L		E	0.1					
		Silty CLAY CH: high plasticity, brown mottled red-brown, trace ironstone gravel and rootlets, w<PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298246
NORTHING: 6245934
DIP/AZIMUTH: 90°/--

BORE No: 93
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.05	FILL/TOPSOIL: Silty CLAY Cl, medium plasticity, dark brown, with rootlets, trace sand, w<PL FILL/Silty CLAY Cl: medium plasticity, mottled brown, dark brown, red and grey, trace gravel, sand, cobbles and rootlets, w~PL								
				E	0.5					
	1	- becoming w>PL below 1.7m		E	1.5					
	1.8	Bore discontinued at 1.8m - potential trench encroachment		E	1.8					
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

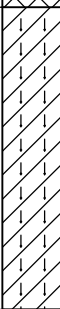
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298234
NORTHING: 6245959
DIP/AZIMUTH: 90°/--

BORE No: 94
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.05	TOPSOIL/Silty CLAY CI: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
	0.3	FILL/Silty CLAY CI: medium plasticity, mottled dark brown, red and grey, trace gravel and rootlets, w<PL								
	0.3	Silty CLAY CH: high plasticity, red, with ironstone gravel, trace rootlets, w<PL, probably stiff, residual		E	0.5					
	-1	- becoming dark brown mottled red below 0.8m							-1	
	1.1	Bore discontinued at 1.1m - limit of investigation								
	-2								-2	
	-3								-3	

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test ls(50) (MPa)
		PL(D)	Point load diametral test ls(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298212
NORTHING: 6245974
DIP/AZIMUTH: 90°/--

BORE No: 95
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, trace sand, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, brown, trace ironstone gravel and rootlets, w<PL, probably stiff, residual								
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298204
NORTHING: 6245999
DIP/AZIMUTH: 90°/--

BORE No: 96
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.4	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w>PL		E	0.2					
		Silty CLAY CH: high plasticity, brown, trace rootlets, w~PL, very stiff, residual		D/E	0.5		pp = 450			
	1	- becoming mottled red, grey and brown below 0.8m		D	1.0		pp = 320		1	
		- becoming grey mottled brown below 1.7m		D	1.5		pp = 300			
	2	- becoming brown, with extremely weathered sandstone bands below 2.2m		D	2.0				2	
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5					
	3								3	

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298184
NORTHING: 6246020
DIP/AZIMUTH: 90°/--

BORE No: 97
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled grey, trace ironstone gravel and rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298172
NORTHING: 6246054
DIP/AZIMUTH: 90°/--

BORE No: 98
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.05	FILL/TOPSOIL: Silty CLAY Cl, medium plasticity, dark brown, trace gravel, w<PL								
		FILL/Silty CLAY Cl: medium plasticity, brown, with gravel, trace rootlets, w<PL		B	0.2					
	0.5	Bore discontinued at 0.5m - potential services		E	0.5					
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298161
NORTHING: 6245969
DIP/AZIMUTH: 90°/--

BORE No: 99
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.2					
		Silty CLAY CH: high plasticity, brown mottled red-brown, trace rootlets, w~PI, stiff, residual		D	0.5		pp = 220			
				E	0.8					
	1	- becoming mottled red, grey and brown below 0.9m		50 D	1.0		pp = 250		1	
				D	1.05					
				D	1.5		pp = 250			
	2			D	2.0		pp = 350		2	
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5		pp = 325			
	3								3	

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298153
NORTHING: 6245833

PIT No: 100
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY Cl: medium plasticity, red-brown, with rootlets, w<PL		E	0.0							
	0.3	CLAY CH: high plasticity, red mottled brown, trace rootlets, w~PL, residual		E	0.3							
	0.5	Pit discontinued at 0.5m - limit of investigation			0.5							
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298158
NORTHING: 6245853

PIT No: 101
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.0	TOPSOIL/Silty CLAY Cl: medium plasticity, red-brown, with rootlets, w<PL		E	0.0							
	0.2	CLAY CH: high plasticity, red mottled pale grey, trace rootlets, w~PL, residual		E	0.2							
	0.8	Pit discontinued at 0.8m - limit of investigation			0.8							
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298136
NORTHING: 6245847

PIT No: 102
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.1	TOPSOIL/Silty CLAY CL: low plasticity, brown, trace rootlets, w<PL		E	0.0							
		CLAY CH: high plasticity, orange mottled brown, trace silt and rootlets, w~PL		E	0.1							
		- becoming orange below 0.6m										
	0.7	Pit discontinued at 0.7m - limit of investigation			0.7							
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298126
NORTHING: 6245833

PIT No: 103
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/Silty CLAY CL: low plasticity, brown, with gravel and cobbles, trace sand and rootlets, w<PL		E/B	0.0							
	0.2	Silty CLAY CL: medium plasticity, brown, trace rootlets, w<PL			0.2							
	0.3	CLAY CH: high plasticity, red and orange, trace rootlets, w~PL		E	0.3							
	0.5	Pit discontinued at 0.5m - limit of investigation			0.5							
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298102
NORTHING: 6245838

PIT No: 104
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/Silty CLAY CL: low plasticity, red-brown, with shale gravel and cobbles, trace rootlets, w<PL		E	0.0							
1	1.1	CLAY CH: high plasticity, red and orange, trace silt and rootlets, w<PL, residual		E	1.1							
	1.6	Pit discontinued at 1.6m - limit of investigation			1.6							
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298111
NORTHING: 6245853

PIT No: 105
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/Silty CLAY CL: low plasticity, pale brown and red, with shale gravel, siltstone cobbles and rootlets, w<PL		E	0.0							
	0.3	CLAY CH: high plasticity, red, trace silt and rootlets, w~PL, residual		E	0.3							
	0.5	Pit discontinued at 0.5m - limit of investigation			0.5							
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 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)	

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298126
NORTHING: 6245865

PIT No: 106
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.0	TOPSOIL/Silty CLAY CL: low plasticity, red-brown, with rootlets, w<PL		E	0.0							
	0.2	CLAY CH: high plasticity, orange red mottled grey, trace rootlets, w~PL, residual		E	0.2							
	0.8	- becoming orange mottled pale grey below 0.7m			0.8							
		Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298126
NORTHING: 6245865
DIP/AZIMUTH: 90°/--

BORE No: 106B
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL								
		Silty CLAY CH: high plasticity, brown mottled red, trace rootlets, w<PL, very stiff, residual								
	0.5				0.5					
	0.7				0.7					
	1									
	1.3	SHALE: brown, very low strength, highly weathered, with extremely weathered shale bands, Bringelly Shale								
		- becoming low strength below 1.6m								
	2									
	2.3	Bore discontinued at 2.3m - refusal on low to medium strength shale								
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298104
NORTHING: 6245869

PIT No: 107
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/Silty CLAY Cl: medium plasticity, red-brown mottled grey, with rootlets, trace shale gravel, w~PL		E	0.0							
1	1.0	CLAY CH: high plasticity, orange mottled pale grey, w~PL, residual		E	1.0							
	1.5	Pit discontinued at 1.5m - limit of investigation			1.5							
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298086
NORTHING: 6245853

PIT No: 108
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.1	TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		E*	0.0							
		CLAY CH: high plasticity, orange mottled brown, trace rootlets, w~PL, residual		E	0.1							
	0.6	Pit discontinued at 0.6m - limit of investigation			0.6							
	1											
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Replicate sample BD1/171121 collected

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298071
NORTHING: 6245839

PIT No: 109
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY Cl: medium plasticity, red-brown, trace rootlets, w<PL		E	0.0							
	0.6	CLAY CH: high plasticity, red and orange, trace rootlets, w~PL, residual		E	0.6							
	1.1	Pit discontinued at 1.1m - limit of investigation			1.1							
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298043
NORTHING: 6245843

PIT No: 110
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, red-brown, with rootlets, w<PL		E*	0.0							
	0.3	CLAY CH: high plasticity, red, trace silt and rootlets, w~PL, residual		E	0.3							
	0.8	- becoming brown and red below 0.7m										
		Pit discontinued at 0.8m - limit of investigation			0.8							
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Replicate sample BD2/171121 collected

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 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)	

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298073
NORTHING: 6245871

PIT No: 111
PROJECT No: 94562.02
DATE: 17/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, red-brown, with rootlets, w<PL		E	0.0							
	0.3	FILL/Silty CLAY CL: medium plasticity, red-brown mottled, with shale gravel, trace rootlets, w~PL		E	0.3							
	0.4	Silty CLAY CH: high plasticity, brown mottled pale grey mottled orange, trace rootlets, w~PL, residual		E	0.4							
	0.9	Pit discontinued at 0.9m - limit of investigation			0.9							
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 ₁ 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)	

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298074
NORTHING: 6245915
DIP/AZIMUTH: 90°/--

BORE No: 112
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.2							
		Silty CLAY CH: high plasticity, mottled brown, red and grey, trace ironstone gravel and rootlets, w<PL, stiff, residual		E	0.5							
	1.0			B	1.0							
	1.3	SHALE: brown, very low strength, highly weathered, with clay seas and extremely weathered shale bands, Bringelly Shale										
	2.0											
	2.1	Bore discontinued at 2.1m - refusal on low strength shale										
	3.0											

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 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)	

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298104
NORTHING: 6245940
DIP/AZIMUTH: 90°/--

BORE No: 113
PROJECT No: 94562.02
DATE: 24/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.2							
		Silty CLAY CH: high plasticity, mottled brown, grey and red, trace rootlets, w~PL, stiff, residual		D/E	0.5		pp = 400					
1				D	1.0		pp = 325	1				
	1.4	SHALE: brown, extremely low strength, extremely weathered, with clay seams, Bringelly Shale		D	1.5							
2				D	2.0			2				
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5							
3												

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298097
NORTHING: 6245968
DIP/AZIMUTH: 90°/--

BORE No: 114
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled brown, red and grey, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298123
NORTHING: 6245996
DIP/AZIMUTH: 90°/--

BORE No: 115
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled brown and grey, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.8	Bore discontinued at 0.8m - limit of investigation								
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

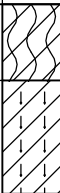
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298089
NORTHING: 6245988
DIP/AZIMUTH: 90°/--

BORE No: 116
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with gravel, sand and rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, brown, trace ironstone gravel and rootlets, w<PL, probably stiff, residual								
	0.5	Bore discontinued at 0.5m - limit of investigation		E	0.5					
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

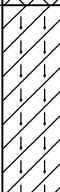
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298062
NORTHING: 6245991
DIP/AZIMUTH: 90°/--

BORE No: 117
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.05	FILL/TOPSOIL: Silty CLAY CI, medium plasticity, dark brown, with gravel and rootlets, w~PL		E	0.1					
	0.3	FILL/Silty CLAY CI: medium plasticity, yellow grey, with sand and sandstone gravel, w<PL								
		Silty CLAY CH: high plasticity, brown, trace rootlets, w<PL, residual		E	0.5					
	0.8	Bore discontinued at 0.8m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298037
NORTHING: 6245998
DIP/AZIMUTH: 90°/--

BORE No: 118
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.05	FILL/TOPSOIL: Silty CLAY CI, medium plasticity, dark brown, with gravel and rootlets, w~PL FILL/Silty CLAY CI: medium plasticity, brown, with gravel, w<PL		E	0.1					
	0.4	Silty CLAY CH: high plasticity, red, trace rootlets, w<PL, residual		E	0.5					
	0.8	Bore discontinued at 0.8m - limit of investigation								
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298047
NORTHING: 6246010
DIP/AZIMUTH: 90°/--

BORE No: 119
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/TOPSOIL: Silty CLAY CI, medium plasticity, dark brown, with rootlets, w~PL		E	0.2					
		Silty CLAY CH: high plasticity, mottled red, grey and brown, trace ironstone gravel and rootlets, w<PL		D/E	0.5		pp = 325			
	0.6	Silty CLAY CH: high plasticity, brown mottled red-brown, trace ironstone gravel and rootlets, w~PL, stiff, residual								
	1			D	1.0		pp = 200			
				D	1.5		pp = 300			
		- becoming grey mottled brown and red below 1.8m								
	2			D	2.0		pp = 350			
		- becoming brown, with very low to low strength shale bands below 2.1m								
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5					
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298073
NORTHING: 6246010
DIP/AZIMUTH: 90°/--

BORE No: 120
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL Silty CLAY CH: high plasticity, brown, trace rootlets, w~PL, probably stiff, residual		E	0.1					
	0.8	Bore discontinued at 0.8m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56. Refuse comprising rubbish bag observed in fill

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298099
NORTHING: 6246008
DIP/AZIMUTH: 90°/--

BORE No: 121
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	FILL/TOPSOIL: Silty CLAY CI, medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		FILL/Silty CLAY CI: medium plasticity, brown mottled red and grey, trace sand, gravel, cobbles and rootlets, w~PL								
	0.6	Silty CLAY CH: high plasticity, brown, trace rootlets, w~PL, probably stiff, residual								
1	1.0	Bore discontinued at 1.0m - limit of investigation		E	1.0					
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56. Refuse comprising rubbish bag observed in fill

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	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	sp	Standard penetration test
E	Environmental sample	W	Water level	S	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298108
NORTHING: 6246026
DIP/AZIMUTH: 90°/--

BORE No: 122
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.35	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
	0.8	Silty CLAY CH: high plasticity, brown, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.8	Bore discontinued at 0.8m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298070
NORTHING: 6246029
DIP/AZIMUTH: 90°/--

BORE No: 123
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.05	FILL/TOPSOIL: Silty CLAY CI, medium plasticity, dark brown, with rootlets, w~PL		E	0.2					
		FILL/Silty CLAY CI: medium plasticity, brown mottled red and grey, trace sand, gravel, cobbles and rootlets, w~PL								
	1			E	1.5					
	1.8									
	2	Silty CLAY CH: high plasticity, mottled red and grey, with ironstone gravel, trace rootlets, w~PL, probably stiff, residual								
	2.2	Bore discontinued at 2.2m - limit of investigation								
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56. Refuse comprising rubbish bag observed in fill

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298042
NORTHING: 6246029
DIP/AZIMUTH: 90°/--

BORE No: 124
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.05	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, trace sand, w~PL		E	0.1					
		FILL/Silty CLAY Cl: medium plasticity, brown mottled grey and yellow brown, trace gravel, sand and rootlets, w~PL			0.5					
	1			B						
				E	1.0					
					1.3					
	1.6	Silty CLAY CH: high plasticity, brow, trace rootlets, w~PL, probably stiff, residual								
	1.8	Bore discontinued at 1.8m - limit of investigation								
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298048
NORTHING: 6246047
DIP/AZIMUTH: 90°/--

BORE No: 125
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, trace sand, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, brown, trace rootlets, w~PL, probably very stiff, residual								
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298080
NORTHING: 6246049
DIP/AZIMUTH: 90°/--

BORE No: 126
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.05	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, trace sand, w~PL		E	0.05					
		FILL/Silty CLAY Cl: medium plasticity, brown mottled grey and yellow brown, trace gravel, sand and rootlets, w~PL		E	0.5					
	1									
	1.3	Silty CLAY CH: high plasticity, brown, trace rootlets, w~PL, probably stiff, residual		E	1.5					
	1.8	Bore discontinued at 1.8m - limit of investigation								
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

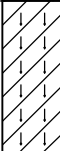
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298109
NORTHING: 6246047
DIP/AZIMUTH: 90°/--

BORE No: 127
PROJECT No: 94562.02
DATE: 30/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, trace sand, w~PL		E	0.1					
		FILL/Silty CLAY Cl: medium plasticity, brown mottled grey and yellow brown, trace gravel, sand and rootlets, w~PL		E	0.5					
	1.3	Silty CLAY CH: high plasticity, mottled brown and red-brown, trace rootlets, w~PL, probably very stiff, residual								
	1.7	Bore discontinued at 1.7m - limit of investigation								
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	sp	Standard penetration test
E	Environmental sample	W	Water level	S	Shear vane (kPa)
		W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298108
NORTHING: 6246069
DIP/AZIMUTH: 90°/--

BORE No: 128
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, brown, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298078
NORTHING: 6246072
DIP/AZIMUTH: 90°/--

BORE No: 129
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled red, grey and brown, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298048
NORTHING: 6246066
DIP/AZIMUTH: 90°/--

BORE No: 130
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
		TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL, residual		E	0.2					
		- trace rootlets below 0.2m		E	0.5					
	0.6	Silty CLAY CH: high plasticity, mottled red, grey and brown, trace rootlets, w<PL, stiff, residual		B	0.6					
	1				1.0					
	2				2.0		pp = 300			
		- becoming grey mottled dark red below 2.2m								
	2.5	Bore discontinued at 2.5m - limit of investigation			2.5		pp = 250			
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298004
NORTHING: 6246070
DIP/AZIMUTH: 90°/--

BORE No: 131
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.3	FILL/Silty CLAY CI: medium plasticity, grey brown, with rootlets		D	0.2					
	0.5	Silty CLAY CH: high plasticity, orange brown, with rootlets		D	0.4					
	0.5	Bore discontinued at 0.5m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297996
NORTHING: 6246120
DIP/AZIMUTH: 90°/--

BORE No: 132
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled red, brown and grey, trace ironstone gravel and rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297984
NORTHING: 6246122
DIP/AZIMUTH: 90°/--

BORE No: 133
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with sand and rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, brown mottled dark red, trace ironstone gravel and rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297939
NORTHING: 6246045
DIP/AZIMUTH: 90°/--

BORE No: 134
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.3	FILL/Silty CLAY CI: medium plasticity, brown, with rootlets		E	0.0					
				0.1						
		Silty CLAY CH: high plasticity, orange brown, with rootlets		E	0.3					
				0.4						
	0.5	Bore discontinued at 0.5m - limit of investigation								

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Blank sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test ls(50) (MPa)
		PL(D)	Point load diametral test ls(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

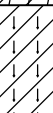


BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297939
NORTHING: 6246045
DIP/AZIMUTH: 90°/--

BORE No: 134A
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.3	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with sand and rootlets, w~PL, residual		E	0.2					
		Silty CLAY CH: high plasticity, mottled red and brown, trace rootlets, w~PI, very stiff, residual		D	0.5		pp = 400			
				E	0.6					
		- becoming mottled grey and red below 0.7m		U ₅₀	0.75					
1				D	1.0		pp = 250		1	
		- low strength sandstone bands below 1.4m		D	1.5		pp = 300			
	1.7	SANDSTONE: yellow brown, low strength, highly weathered, Bringelly Shale		D	1.8					
	1.8	Bore discontinued at 1.8m								
		- refusal on low to medium strength sandstone								
2									2	
3									3	

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297993
NORTHING: 6245981
DIP/AZIMUTH: 90°/--

BORE No: 135
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
		FILL/Silty CLAY CI: medium plasticity, grey brown, with rootlets		E	0.0					
					0.1					
	0.3	Silty CLAY CH: high plasticity, mottled grey brown, with rootlets		E	0.3					
					0.4					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

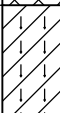
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297984
NORTHING: 6245955
DIP/AZIMUTH: 90°/--

BORE No: 136
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
		FILL/Silty CLAY CI: black and brown, with rootlets		E	0.0					
					0.1					
	0.3	Silty CLAY CH: orange brown, with rootlets		E	0.3					
					0.4					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297967
NORTHING: 6245942
DIP/AZIMUTH: 90°/--

BORE No: 137
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
		FILL/TOPSOIL: Silty CLAY CI, medium plasticity, red-brown, trace rootlets, w<PL		A	0.0					
	0.3	CLAY CH: high plasticity, orange mottled brown, trace silt and rootlets, w~PL, residual		A	0.3					
	0.8	Bore discontinued at 0.8m - limit of investigation			0.8					
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

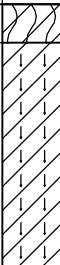
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297952
NORTHING: 6245910
DIP/AZIMUTH: 90°/--

BORE No: 138
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL Silty CLAY CH: high plasticity, mottled red and grey, trace rootlets, w<PL, probably stiff, residual		E	0.1					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

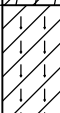
SAMPLING & IN SITU TESTING LEGEND					
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297937
NORTHING: 6245878
DIP/AZIMUTH: 90°/--

BORE No: 139
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.3	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
	0.6	Silty CLAY CH: high plasticity, red and brown mottled grey, trace ironstone gravel and rootlets, w<PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297925
NORTHING: 6245891
DIP/AZIMUTH: 90°/--

BORE No: 140
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red and brown mottled grey, with rootlets, trace ironstone gravel, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

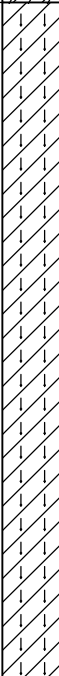
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297905
NORTHING: 6245891
DIP/AZIMUTH: 90°/--

BORE No: 141
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details		
				Type	Depth	Sample	Results & Comments				
	0.2	TOPSOIL/Silty CLAY CI: medium plasticity, dark brown, with rootlets, w~PL, residual		E	0.2						
		Silty CLAY CH: high plasticity, red mottled grey, trace rootlets, w<PL, stiff, residual			D/E						0.5
											0.8
					U ₅₀						1.05
											1.5
		- becoming grey mottled red-brown below 1.2m									
		- becoming brown mottled grey, trace ironstone gravel below 1.8m									
	2.0	SHALE: brown, very low to low strength, highly weathered, with extremely weathered shale bands, Bringelly Shale									
	2.2	Bore discontinued at 2.2m - refusal on low to medium strength shale									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U _x	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	▷	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test (s(50) (MPa)
		PL(D)	Point load diametral test (s(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297926
NORTHING: 6245913
DIP/AZIMUTH: 90°/--

BORE No: 142
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled red and brown, with ironstone gravel and rootlets, w<PL, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297947
NORTHING: 6245931
DIP/AZIMUTH: 90°/--

BORE No: 143
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY CL: low plasticity, brown, trace rootlets, w<PL		E*	0.0					
	0.2	CLAY CH: high plasticity, orange mottled pale brown, trace silt and rootlets, w~PL, residual		E	0.2					
	0.7	Bore discontinued at 0.7m - limit of investigation			0.7					
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** JH **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56. * Replicate sample BD2/191121 collected

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297944
NORTHING: 6245949
DIP/AZIMUTH: 90°/--

BORE No: 144
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/TOPSOIL: Silty CLAY CI, medium plasticity, red-brown, trace rootlets, w<PL		E*	0.0					
	0.2	CLAY CH: high plasticity, orange mottled brown, trace silt and rootlets, w~PL, residual		E	0.2					
	0.8	Bore discontinued at 0.8m - limit of investigation			0.8					
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** AJ **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56. * Replicate sample BD1/191121 collected

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297920
NORTHING: 6245931
DIP/AZIMUTH: 90°/--

BORE No: 145
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	FILL/Silty CLAY CL: low plasticity, brown, trace rootlets, w<PL		E	0.0					
		CLAY CH: high plasticity, orange mottled pale grey, trace silt and rootlets, w~PL, residual		E	0.1					
	0.6	Bore discontinued at 0.6m - limit of investigation			0.6					
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: AJ

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297920
NORTHING: 6245931
DIP/AZIMUTH: 90°/--

BORE No: 145B
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U _x	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _{sp}	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297908
NORTHING: 6245944
DIP/AZIMUTH: 90°/--

BORE No: 146
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY CL: low plasticity, brown, trace rootlets, w<PL		E	0.0					
	0.2	CLAY CH: high plasticity, orange mottled pale brown, trace silt and rootlets, w~PL, residual		E	0.2					
	0.7	Bore discontinued at 0.7m - limit of investigation			0.7					
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: AJ

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297913
NORTHING: 6245960
DIP/AZIMUTH: 90°/--

BORE No: 147
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
		FILL/TOPSOIL: Silty CLAY CI, medium plasticity, red-brown, trace rootlets, w<PL		E	0.0					
	0.3	CLAY CH: high plasticity, orange mottled brown, trace silt and rootlets, w~PL, residual		E	0.3					
	0.9	Bore discontinued at 0.9m - limit of investigation			0.9					
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** AJ **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297851
NORTHING: 6245901
DIP/AZIMUTH: 90°/--

BORE No: 148
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, trace sand, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled red and brown, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297831
NORTHING: 6245926
DIP/AZIMUTH: 90°/--

BORE No: 149
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, trace sand, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled brown, trace rootlets, w~PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation		E	0.5					
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297871
NORTHING: 6245975
DIP/AZIMUTH: 90°/--

BORE No: 150
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, brown, trace rootlets, w~PL		E	0.0					
	0.2	CLAY CH: high plasticity, red orange mottled brown, trace rootlets, w~PL, residual		E	0.2					
	0.7	Bore discontinued at 0.7m - limit of investigation			0.7					
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** AJ **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297883
NORTHING: 6246028
DIP/AZIMUTH: 90°/--

BORE No: 151
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
		FILL/Silty CLAY CI: medium plasticity, brown, with rootlets		E	0.0					
					0.1					
	0.3	Silty CLAY CH: high plasticity, brown, with rootlets		E	0.3					
	0.5				0.4					
	0.5	Bore discontinued at 0.5m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: AJ

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297894
NORTHING: 6246082
DIP/AZIMUTH: 90°/--

BORE No: 152
PROJECT No: 94562.02
DATE: 19/11/2021
SHEET 1 OF 1

[illegible]

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: AJ

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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



BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297894
NORTHING: 6246082
DIP/AZIMUTH: 90°/--

BORE No: 152A
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.3	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL, residual								
		Silty CLAY CH: high plasticity, mottled red and brown, trace ironstone gravel and rootlets, very stiff, residual			0.5		pp = 300			
				U ₅₀	0.7					
	1	- becoming mottled red and grey below 0.9m			1.0		pp = 350		1	
	1.2	Sandy CLAY Cl: medium plasticity, mottled brown and pale grey, w<PL, stiff, residual								
	1.6	SANDSTONE: yellow brown, extremely low strength, extremely weathered, with clay seams								
	2								2	
	2.5	Bore discontinued at 2.5m - limit of investigation								
	3								3	

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297896
NORTHING: 6246145
DIP/AZIMUTH: 90°/--

BORE No: 153
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled dark red and brown, trace ironstone gravel and rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297721
NORTHING: 6246114
DIP/AZIMUTH: 90°/--

BORE No: 154
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled brown and grey, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297751
NORTHING: 6246121
DIP/AZIMUTH: 90°/--

BORE No: 155
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled brown and grey, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.8	Bore discontinued at 0.8m - limit of investigation								
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297755
NORTHING: 6246104
DIP/AZIMUTH: 90°/--

BORE No: 156
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled brown and grey, with rootlets, w~PL, probably stiff, residual		E	0.5					
	0.8	Bore discontinued at 0.8m - limit of investigation								
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

SAMPLING & IN SITU TESTING LEGEND

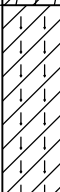
A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample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

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297797
NORTHING: 6246078
DIP/AZIMUTH: 90°/--

BORE No: 157
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.3	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
	0.8	Silty CLAY CH: high plasticity, green brown, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.8	Bore discontinued at 0.8m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: DK

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297753
NORTHING: 6246074
DIP/AZIMUTH: 90°/--

BORE No: 158
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled red and brown, trace ironstone gravel and rootlets, w<PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297738
NORTHING: 6246060
DIP/AZIMUTH: 90°/--

BORE No: 159
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, trace sand and gravel, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled brown, red and grey, trace ironstone gravel and rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: DK

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297714
NORTHING: 6246061
DIP/AZIMUTH: 90°/--

BORE No: 160
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with sand and rootlets, trace gravel, w~PL								
		Silty CLAY CH: high plasticity, mottled red and brown, with rootlets, trace ironstone gravel, w<PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297734
NORTHING: 6246043
DIP/AZIMUTH: 90°/--

BORE No: 161
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with sand, gravel and rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, pale brown mottled red, trace rootlets, w<PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: DK

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297757
NORTHING: 6246023
DIP/AZIMUTH: 90°/--

BORE No: 162
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red and brown mottled grey, trace rootlets, w<PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation		E	0.5					
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297810
NORTHING: 6246016
DIP/AZIMUTH: 90°/--

BORE No: 163
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.3	TOPSOIL/Silty CLAY Cl: medium plasticity, dark grey brown, with rootlets, trace sand, w>PL, alluvial		E	0.2							
		Sandy CLAY CH: high plasticity, brown, trace rootlets, w~PL, stiff, alluvial - becoming very stiff below 0.45m		D/E	0.5							
	1	- becoming hard below 1.05m		D	1.0							
		- becoming brown mottled grey below 1.3m		D	1.5							
	2	- becoming red mottled brown and grey, with ironstone gravel below 1.7m		D	2.0							
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5							
	3											

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297729
NORTHING: 6246009
DIP/AZIMUTH: 90°/--

BORE No: 164
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with sand and rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, pale brown mottled red, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: DK

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297751
NORTHING: 6245939
DIP/AZIMUTH: 90°/--

BORE No: 169
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.3	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL, residual		E	0.2							
		Silty CLAY CH: high plasticity, brown, trace rootlets, w~PL, very stiff, residual		D/E	0.5		pp = 300					
	1			D	1.0		pp = 300	1				
		- becoming brown mottled grey and red below 1.3m		D	1.5		pp = 300					
	2			D	2.0		pp = 350	2				
		- becoming mottled grey and brown below 1.8m										
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5		pp = 280					
	3							3				

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297757
NORTHING: 6245916
DIP/AZIMUTH: 90°/--

BORE No: 170
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per 150mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with roots, w~PL, residual		E	0.2							
		Silty CLAY CH: high plasticity, brown, trace ironstone gravel and rootlets, W~PL, firm, residual										
		- becoming stiff below 0.45m		D/E	0.5		pp = 200					
				B								
	1			D	1.0		pp = 350	1				
		- becoming brown mottled grey and red below 1.2m										
				D	1.5		pp = 350					
		- becoming mottled red, grey and brown below 1.8m										
	2			D	2.0		pp = 300	2				
	2.5	Bore discontinued at 2.5m - limit of investigation		D	2.5		pp = 300					
	3							3				

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 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)	

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297767
NORTHING: 6245882
DIP/AZIMUTH: 90°/--

BORE No: 171
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL								
		Silty CLAY CH: high plasticity, red and brown mottled grey, trace ironstone gravel and rootlets, w<PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297749
NORTHING: 6245893
DIP/AZIMUTH: 90°/--

BORE No: 172
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL								
		Silty CLAY CH: high plasticity, red and brown mottled grey, with rootlet, trace ironstone gravel, w<PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297730
NORTHING: 6245884
DIP/AZIMUTH: 90°/--

BORE No: 173
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
		TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
	0.5	Silty CLAY CH: high plasticity, red and brown mottled grey, trace ironstone gravel and rootlets, w<PL, probably stiff, residual		E	0.7					
	0.9	Bore discontinued at 0.9m - limit of investigation								
1										
2										
3										

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297570
NORTHING: 6245915

PIT No: 182
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, dark brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY Cl: medium plasticity, orange, trace silt and rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297581
NORTHING: 6245933

PIT No: 187
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, dark brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY Cl: medium plasticity, red mottled brown mottled orange, trace silt and rootlet, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297592
NORTHING: 6245947

PIT No: 188
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY CL: low plasticity, dark brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
		CLAY Cl: medium plasticity, red mottled brown mottled orange, trace silt and rootlet, w~PL, residual		A/E	0.3							
					0.4							
	0.7	Pit discontinued at 0.7m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297615
NORTHING: 6245949

PIT No: 189
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
		CLAY CH: high plasticity, red and orange mottled pale grey, trace rootlets, w~PL, residual		A/E	0.2							
					0.3							
	0.7	Pit discontinued at 0.7m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297618
NORTHING: 6245962

PIT No: 190
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY CH: high plasticity, red and orange, trace rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.7	Pit discontinued at 0.7m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Organic matter odour at 0.3 - 0.7m

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297641
NORTHING: 6245975

PIT No: 191
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
		CLAY CH: high plasticity, red and orange mottled pale grey, trace rootlets, w~PL, residual		A/E	0.2							
					0.3							
	0.7	Pit discontinued at 0.7m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297632
NORTHING: 6245997

PIT No: 192
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A/B/E	0.0							
					0.1							
	0.4	CLAY CH: high plasticity, orange mottled brown, trace silt and rootlets, w~PL, residual		A/E	0.4							
					0.5							
	0.9	Pit discontinued at 0.9m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Terracotta tile, brick and pipe debris on surface

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 _s	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297611
NORTHING: 6246001

PIT No: 193
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, dark red-brown, trace rootlets and leaves, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY CH: high plasticity, orange mottled grey, trace silt and rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Test pit excavation moved slightly to the east due to access restrictions

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297586
NORTHING: 6245996

PIT No: 194
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, dark red-brown, trace rootlets and leaves, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY CH: high plasticity, orange mottled grey, trace silt and rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297581
NORTHING: 6246036

PIT No: 195
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY Cl: medium plasticity, orange and red mottled pale grey, trace rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297599
NORTHING: 6246082

PIT No: 196
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY CL: low plasticity, brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
		CLAY Cl: medium plasticity, orange and red mottled pale grey, trace rootlets, w~PL, residual		A/E	0.2							
					0.3							
	0.7	Pit discontinued at 0.7m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297604
NORTHING: 6246045

PIT No: 197
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY Cl: medium plasticity, orange and red mottled pale grey, trace rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297660
NORTHING: 6246060

PIT No: 199
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	FILL/Silty CLAY CL: low plasticity, brown, trace rootlets, ACM fragments, w<PL		A/B/E	0.0							
					0.1							
		CLAY Cl: medium plasticity, orange and red mottled pale grey, trace rootlets, w~PL, residual		A/E	0.2							
					0.3							
	0.7	Pit discontinued at 0.7m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: 3 ACM fragments found in fill at 0 - 0.2m

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297632
NORTHING: 6246061

PIT No: 200
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A	0.0							
					0.1							
					0.2							
				A/E	0.3							
	0.7	CLAY Cl: medium plasticity, orange and red mottled pale grey, trace rootlets, w~PL, residual										
	0.7	Pit discontinued at 0.7m - limit of investigation										
	1											
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297643
NORTHING: 6246064

PIT No: 201
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY Cl: medium plasticity, orange and red mottled pale grey, trace rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: No ACM fragments found in fill/topsoil

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297666
NORTHING: 6246087

PIT No: 202
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
				A/E	0.2							
					0.3							
	0.7	CLAY Cl: medium plasticity, orange and red mottled pale grey, trace rootlets, w~PL, residual										
	0.7	Pit discontinued at 0.7m - limit of investigation										
	1											
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: No ACM fragments found in topsoil

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297637
NORTHING: 6246101

PIT No: 205
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	TOPSOIL/Silty CLAY CL: low plasticity, brown, trace rootlets, w<PL										
	0.7	CLAY Cl: medium plasticity, orange and red mottled pale grey, trace rootlets, w~PL, residual										
	0.7	Pit discontinued at 0.7m - limit of investigation										
	1											
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Test pit excavation moved slightly due to access restrictions, adjacent to rusty buried metal sheeting

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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 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)	

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297690
NORTHING: 6246132
DIP/AZIMUTH: 90°/--

BORE No: 208
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled brown and grey, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297644
NORTHING: 6246152
DIP/AZIMUTH: 90°/--

BORE No: 210
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL								
		Silty CLAY CH: high plasticity, mottled red and brown, trace rootlets, w~PL, probably stiff, residual								
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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 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)	

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297627
NORTHING: 6246140
DIP/AZIMUTH: 90°/--

BORE No: 211
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.15	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled brown, trace rootlets, w~PL, probably very stiff, residual								
	0.5	Bore discontinued at 0.5m - limit of investigation		E	0.5					
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297597
NORTHING: 6246149
DIP/AZIMUTH: 90°/--

BORE No: 212
PROJECT No: 94562.02
DATE: 23/11/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled brown, trace rootlets, w<PL, probably very stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297632
NORTHING: 6246161
DIP/AZIMUTH: 90°/--

BORE No: 213
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, red mottled brown, trace ironstone gravel and rootlets, w<PL, probably very stiff, residual		E	0.5					
	0.6	Bore discontinued at 0.6m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: SJC

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297619
NORTHING: 6246174
DIP/AZIMUTH: 90°/--

BORE No: 214
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
	0.5	Silty CLAY CH: high plasticity, red mottled brown, trace ironstone gravel and rootlets, w<PL, probably stiff, residual		E	0.5					
		Bore discontinued at 0.5m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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	W	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297610
NORTHING: 6246179
DIP/AZIMUTH: 90°/--

BORE No: 215
PROJECT No: 94562.02
DATE: 2/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w<PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled brown and grey, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: DK

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297587
NORTHING: 6246189

PIT No: 216
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
	0.4	CLAY CL: medium plasticity, red and orange, trace silt and rootlets, w~PL, residual		A/E	0.4							
					0.5							
	0.9	Pit discontinued at 0.9m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Test pit excavation moved slightly to the south due to high voltage power lines

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U ₁	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W ₁	Water seep
E	Environmental sample	W ₂	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297580
NORTHING: 6246123

PIT No: 217
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, red-brown, trace rootlets, w<PL		A/E*	0.0							
					0.1							
	0.3	CLAY Cl: medium plasticity, red and orange, trace silt and rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Replicate sample BD2/221221 collected

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297589
NORTHING: 6246061

PIT No: 218
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		TOPSOIL/Silty CLAY CL: low plasticity, brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY Cl: medium plasticity, orange mottled brown, trace rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297559
NORTHING: 6245971

PIT No: 219
PROJECT No: 94562.02
DATE: 22/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY CL, low plasticity, red-brown, trace glass and rootlets, w<PL		A/B/E*	0.0							
					0.1							
	0.4	CLAY CL: medium plasticity, red and orange mottled brown, trace silt and rootlets, w~PL, residual		A	0.4							
					0.5							
	0.9	Pit discontinued at 0.9m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Replicate sample BD1/221221 collected

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297741
NORTHING: 6245860
DIP/AZIMUTH: 90°/--

BORE No: 220
PROJECT No: 94562.02
DATE: 3/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.25	TOPSOIL/Silty CLAY Cl: medium plasticity, dark brown, with rootlets, w~PL		E	0.1					
		Silty CLAY CH: high plasticity, mottled dark red and brown, trace rootlets, w~PL, probably stiff, residual		E	0.5					
	0.7	Bore discontinued at 0.7m - limit of investigation								
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations **LOGGED:** SJC **CASING:** N/A
TYPE OF BORING: 300mm diameter auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297695
NORTHING: 6245699

PIT No: 230
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY, medium plasticity, brown, trace rootlets, w~PL,wet		A/E	0.0							
					0.1							
	0.4	CLAY Cl: medium plasticity, orange mottled grey, trace rootlets, w~PL, residual		A/E	0.4							
					0.5							
	0.9	Pit discontinued at 0.9m - limit of investigation						▼ 21-12-21				
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: Free groundwater observed at 0.8m

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U _s	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _s	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297712
NORTHING: 6245682

PIT No: 231
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY Cl, medium plasticity, brown, trace rootlets, w<PL, moist		A/E	0.0							
					0.1							
	0.3	CLAY CH: high plasticity, orange mottled grey, with silt, trace rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Replicate sample BD3/211221 collected; Test pit excavation moved slightly to the west due to wet conditions near fence line

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297682
NORTHING: 6245677

PIT No: 232
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace silt and rootlets, w<PL		A/E	0.0							
					0.1							
	0.4	CLAY CL: medium plasticity, orange mottled brown, trace rootlets, w~PL, residual		A/E	0.4							
					0.5							
	0.9	Pit discontinued at 0.9m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297685
NORTHING: 6245655

PIT No: 234
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace silt and rootlets, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY Cl: medium plasticity, orange mottled brown, trace rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297705
NORTHING: 6245639

PIT No: 235
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY, medium plasticity, brown, trace rootlets, w~PL, wet		A/E	0.0							
					0.1							
	0.4	CLAY Cl: medium plasticity, orange mottled grey, trace organic matter, roots and rootlets, w~PL, residual		A/E	0.4							
					0.5							
	0.9	Pit discontinued at 0.9m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Test pit excavation moved slightly due to access restrictions (boggy area)

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U ₁	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W ₁	Water seep
E	Environmental sample	W ₂	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297686
NORTHING: 6245636

PIT No: 236
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace rootlets, w<PL		E	0.0							
					0.1							
	0.3	CLAY CH: high plasticity, orange mottled brown mottled pale grey, trace silt and rootlets, w~PL, residual		A	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297673
NORTHING: 6245629

PIT No: 237
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace rootlets, w<PL		A/E	0.0 0.1							
		CLAY CH: high plasticity, orange mottled brown mottled pale grey, trace silt and rootlets, w~PL, residual		A/E	0.3 0.4							
	0.7	Pit discontinued at 0.7m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297696
NORTHING: 6245618

PIT No: 238
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY, medium plasticity, brown, trace rootlets, w~PL, wet		A/E	0.0							
					0.1							
	0.4	CLAY Cl: medium plasticity, orange mottled grey, trace rootlets, w~PL, residual		A/E	0.4							
					0.5							
	0.9	Pit discontinued at 0.9m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Replicate sample BD2/211221 collected

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U _s	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _s	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297711
NORTHING: 6245614

PIT No: 239
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY, medium plasticity, brown, trace rootlets, w~PL,wet		A/E	0.0							
					0.1							
	0.4	CLAY Cl: medium plasticity, orange mottled grey, trace rootlets, w~PL, residual		A/E	0.4							
					0.5							
	0.9	Pit discontinued at 0.9m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Test pit excavation moved slightly to the west due to access restrictions (boggy area)

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U _s	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W _s	Water seep
E	Environmental sample	W _l	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297675
NORTHING: 6245603

PIT No: 240
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.1	FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
		CLAY CH: high plasticity, orange mottled brown mottled pale grey, trace silt and rootlets, w~PL, residual		A/E	0.2							
					0.3							
	0.6	Pit discontinued at 0.6m - limit of investigation										
	1											
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297662
NORTHING: 6245580
DIP/AZIMUTH: 90°/--

BORE No: 241
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.1	FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace bricks and rootlets, w<PL		A/E	0.0					
		CLAY CL: medium plasticity, orange mottled grey, trace rootlets, w~PL, residual		A/E	0.1					
	0.6	Bore discontinued at 0.6m - limit of investigation			0.6					
	1									
	2									
	3									

RIG: Hyundai CR-6 6 tonne excavator **DRILLER:** Quake Excavations

LOGGED: AJ

CASING: N/A

TYPE OF BORING: 300mm diameter auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297682
NORTHING: 6245579

PIT No: 242
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
	0.3	CLAY Cl: medium plasticity, orange, trace silt and rootlets, w<PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297660
NORTHING: 6245558

PIT No: 243
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.1	FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
		CLAY Cl: medium plasticity, orange mottled pale brown, trace rootlets, w~PL, residual		A/E	0.2							
					0.3							
	0.6	Pit discontinued at 0.6m - limit of investigation										
	1											
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297698
NORTHING: 6245551

PIT No: 244
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace rootlets, w<PL		A/E*	0.0							
					0.1							
	0.3	CLAY Cl: medium plasticity, orange mottled pale brown, trace rootlets, w~PL, residual		A/E	0.3							
					0.4							
	0.8	Pit discontinued at 0.8m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: * Replicate sample BD1/211221 collected

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297679
NORTHING: 6245526

PIT No: 245
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.1	FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
		CLAY Cl: medium plasticity, orange mottled pale grey, trace silt, w~PL, residual		A/E	0.2							
					0.3							
	0.6	Pit discontinued at 0.6m - limit of investigation										
	1											
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297704
NORTHING: 6245516

PIT No: 246
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	FILL/Silty CLAY CL: low plasticity, brown, trace ceramic tile, plastic and rootlets, w<PL		A/B/E	0.0							
		CLAY CL: medium plasticity, orange mottled grey, trace silt and rootlets, w~PL, residual		A/E	0.2							
					0.3							
					0.4							
	0.7	Pit discontinued at 0.7m - limit of investigation										
1												
2												
3												

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS: ACM fragments on surface along eastern fence and residence side

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297674
NORTHING: 6245499

PIT No: 247
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.1	FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace rootlets, w<PL		A/E	0.0							
					0.1							
		CLAY CL: medium plasticity, orange mottled grey, trace silt, w~PL, residual		A/E	0.2							
					0.3							
	0.6	Pit discontinued at 0.6m - limit of investigation										
	1											
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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	W	Water seep	S	Standard penetration test
E	Environmental sample	W	Water level	V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297669
NORTHING: 6245487

PIT No: 248
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace rootlets, w<PL		A/E	0.1							
		CLAY Cl: medium plasticity, orange mottled grey, trace silt, w~PL, residual		A/E	0.2							
					0.3							
					0.4							
	0.7	Pit discontinued at 0.7m - limit of investigation										
	1											
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	>	Water seep
E	Environmental sample	≡	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)

TEST PIT LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297652
NORTHING: 6245509

PIT No: 249
PROJECT No: 94562.02
DATE: 21/12/2021
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.1	FILL/TOPSOIL: Silty CLAY CL, low plasticity, brown, trace rootlets, w<PL CLAY CL: medium plasticity, orange mottled grey, trace silt, w~PL, residual		A/E	0.0 0.1							
				A/E	0.3 0.4							
	0.6	Pit discontinued at 0.6m - limit of investigation										
	1											
	2											
	3											

RIG: Hyundai 60CR-9 SWL 510kg excavator - 400mm bucket

LOGGED: AJ

SURVEY DATUM: MGA94 Zone 56

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☒ Cone Penetrometer AS1289.6.3.2

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298580
NORTHING: 6245977
DIP/AZIMUTH: 90°/--

BORE No: HA50
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY CL: low plasticity, brown, with rootlets								
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298423
NORTHING: 6245798
DIP/AZIMUTH: 90°/--

BORE No: HA68
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY CL: low plasticity, brown, with rootlets		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298423
NORTHING: 6245785
DIP/AZIMUTH: 90°/--

BORE No: HA69
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY CH: high plasticity, brown, with rootlets		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298406
NORTHING: 6245788
DIP/AZIMUTH: 90°/--

BORE No: HA70
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY CL: low plasticity, brown, with rootlets		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56. Anthropogenic material including plastic on surface in surrounding area

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298365
NORTHING: 6245829
DIP/AZIMUTH: 90°/--

BORE No: HA71
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY CL: low plasticity, brown, with rootlets		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56. Anthropogenic material including plastic on surface in surrounding area

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298380
NORTHING: 6245823
DIP/AZIMUTH: 90°/--

BORE No: HA72
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY CH: high plasticity, brown, with rootlets		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56. Anthropogenic material including bricks on surface in surrounding area

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298369
NORTHING: 6245814
DIP/AZIMUTH: 90°/--

BORE No: HA73
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY CL: low plasticity, brown, with rootlets		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56. Anthropogenic material including plastic on surface in surrounding area

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298357
NORTHING: 6245821
DIP/AZIMUTH: 90°/--

BORE No: HA74
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, brown, with rootlets		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56. Anthropogenic material including bricks and concrete slab on surface in surrounding area

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 298353
NORTHING: 6245835
DIP/AZIMUTH: 90°/--

BORE No: HA75
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY Cl: medium plasticity, brown mottled orange, trace ironstone gravel		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297833
NORTHING: 6246157
DIP/AZIMUTH: 90°/--

BORE No: HA165
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, brown, with rootlets, wet		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297989
NORTHING: 6246114
DIP/AZIMUTH: 90°/--

BORE No: HA166
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY Cl: medium plasticity, brown, with rootlets								
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297857
NORTHING: 6246086
DIP/AZIMUTH: 90°/--

BORE No: HA168
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, brown, with rootlets		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297571
NORTHING: 6245900
DIP/AZIMUTH: 90°/--

BORE No: HA184
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY OL: dark brown, with reed rootlets								
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297558
NORTHING: 6245901
DIP/AZIMUTH: 90°/--

BORE No: HA185
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY: red-brown mottled dark grey and red, with rootlets								
	0.3	Silty CLAY: DARK BROWN								
	0.3	Bore discontinued at 0.3m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297562
NORTHING: 6245907
DIP/AZIMUTH: 90°/--

BORE No: HA186
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	Silty CLAY: dark brown, with sandstone gravel								
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING: 297764
NORTHING: 6246157
DIP/AZIMUTH: 90°/--

BORE No: HA209
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	FILL/Silty CLAY CL: low plasticity, brown, with sandstone gravel, trace glass and plastic		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger **DRILLER:** Quake Excavations **LOGGED:** JH **CASING:** N/A
TYPE OF BORING: Hand auger
WATER OBSERVATIONS: No free groundwater observed
REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

BOREHOLE LOG

CLIENT: Landcom
PROJECT: Proposed Residential Subdivision
LOCATION: Part Lot 84 Gurner Avenue, Austral

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

BORE No: HA233
PROJECT No: 94562.02
DATE: 27/1/2022
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.2	TOPSOIL/Silty CLAY Cl: medium plasticity, brown, with rootlets		A	0.2					
		Bore discontinued at 0.2m - limit of investigation								
	1									
	2									
	3									

RIG: Hand auger

DRILLER: Quake Excavations

LOGGED: JH

CASING: N/A

TYPE OF BORING: Hand auger

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Location coordinates are in MGA94 Zone 56.

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	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)

Appendix G

Laboratory Reports

CERTIFICATE OF ANALYSIS 283432

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	<u>94562.02, Austral</u>
Number of Samples	44 Soil
Date samples received	19/11/2021
Date completed instructions received	19/11/2021

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	30/11/2021
Date of Issue	30/11/2021
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 *	

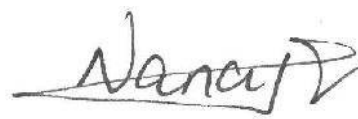
Asbestos Approved By

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
 Jeremy Faircloth, Operations Manager, Sydney
 Liam Timmins, Chemist
 Lucy Zhu, Asbestos Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil

Our Reference		283432-1	283432-7	283432-9	283432-11	283432-13
Your Reference	UNITS	100/0-0.2	103/0.2-0.3	104/0-1.1	105/0-0.3	106/0-0.2
Date Sampled		16/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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	%	81	86	96	91	95

vTRH(C6-C10)/BTEXN in Soil

Our Reference		283432-15	283432-17	283432-19	283432-22	283432-24
Your Reference	UNITS	107/0-1.0	108/0-0.1	109/0-0.6	110/0.3-0.8	111/0.3-0.4
Date Sampled		16/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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	87	83	84	88

vTRH(C6-C10)/BTEXN in Soil

Our Reference		283432-26	283432-28	283432-30	283432-34	283432-36
Your Reference	UNITS	34/0-0.6	35/0-1.2	36/0-0.4	37/0-0.5	38/0-0.5
Date Sampled		17/11/2021	17/11/2021	17/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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	%	80	95	87	95	97

vTRH(C6-C10)/BTEXN in Soil

Our Reference		283432-37
Your Reference	UNITS	39/0-0.3
Date Sampled		17/11/2021
Type of sample		Soil
Date extracted	-	25/11/2021
Date analysed	-	29/11/2021
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	%	100

svTRH (C10-C40) in Soil

Our Reference		283432-1	283432-7	283432-9	283432-11	283432-13
Your Reference	UNITS	100/0-0.2	103/0.2-0.3	104/0-1.1	105/0-0.3	106/0-0.2
Date Sampled		16/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	27/11/2021	27/11/2021
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	%	77	80	80	79	106

svTRH (C10-C40) in Soil

Our Reference		283432-15	283432-17	283432-19	283432-22	283432-24
Your Reference	UNITS	107/0-1.0	108/0-0.1	109/0-0.6	110/0.3-0.8	111/0.3-0.4
Date Sampled		16/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	27/11/2021	27/11/2021
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	%	78	79	79	78	78

svTRH (C10-C40) in Soil

Our Reference		283432-26	283432-28	283432-30	283432-34	283432-36
Your Reference	UNITS	34/0-0.6	35/0-1.2	36/0-0.4	37/0-0.5	38/0-0.5
Date Sampled		17/11/2021	17/11/2021	17/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	27/11/2021	27/11/2021
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	120	<100	110	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	120	<50	110	<50
Surrogate o-Terphenyl	%	79	72	75	82	77

svTRH (C10-C40) in Soil

Our Reference		283432-37
Your Reference	UNITS	39/0-0.3
Date Sampled		17/11/2021
Type of sample		Soil
Date extracted	-	25/11/2021
Date analysed	-	27/11/2021
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	%	73

PAHs in Soil						
Our Reference		283432-1	283432-7	283432-9	283432-11	283432-13
Your Reference	UNITS	100/0-0.2	103/0.2-0.3	104/0-1.1	105/0-0.3	106/0-0.2
Date Sampled		16/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	27/11/2021	27/11/2021
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	0.2	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.2	<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	0.1	<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	0.75	<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 <i>p</i> -Terphenyl-d14	%	91	94	89	91	130

PAHs in Soil						
Our Reference		283432-15	283432-17	283432-19	283432-22	283432-24
Your Reference	UNITS	107/0-1.0	108/0-0.1	109/0-0.6	110/0.3-0.8	111/0.3-0.4
Date Sampled		16/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	27/11/2021	27/11/2021
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 <i>p</i> -Terphenyl-d14	%	91	91	89	100	93

PAHs in Soil						
Our Reference		283432-26	283432-28	283432-30	283432-34	283432-36
Your Reference	UNITS	34/0-0.6	35/0-1.2	36/0-0.4	37/0-0.5	38/0-0.5
Date Sampled		17/11/2021	17/11/2021	17/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	27/11/2021	27/11/2021
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 <i>p</i> -Terphenyl-d14	%	85	88	90	88	85

PAHs in Soil		
Our Reference		283432-37
Your Reference	UNITS	39/0-0.3
Date Sampled		17/11/2021
Type of sample		Soil
Date extracted	-	25/11/2021
Date analysed	-	27/11/2021
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 <i>p</i> -Terphenyl-d14	%	84

Organochlorine Pesticides in soil						
Our Reference		283432-7	283432-22	283432-24	283432-26	283432-28
Your Reference	UNITS	103/0.2-0.3	110/0.3-0.8	111/0.3-0.4	34/0-0.6	35/0-1.2
Date Sampled		16/11/2021	16/11/2021	16/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	27/11/2021	27/11/2021
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	%	96	93	98	94	92

Organochlorine Pesticides in soil					
Our Reference		283432-30	283432-34	283432-36	283432-37
Your Reference	UNITS	36/0-0.4	37/0-0.5	38/0-0.5	39/0-0.3
Date Sampled		17/11/2021	17/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	27/11/2021
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	90	89	87

Organophosphorus Pesticides in Soil						
Our Reference		283432-7	283432-22	283432-24	283432-26	283432-28
Your Reference	UNITS	103/0.2-0.3	110/0.3-0.8	111/0.3-0.4	34/0-0.6	35/0-1.2
Date Sampled		16/11/2021	16/11/2021	16/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	27/11/2021	27/11/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	96	93	98	94	92

Organophosphorus Pesticides in Soil					
Our Reference		283432-30	283432-34	283432-36	283432-37
Your Reference	UNITS	36/0-0.4	37/0-0.5	38/0-0.5	39/0-0.3
Date Sampled		17/11/2021	17/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	26/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	26/11/2021
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	90	89	87

PCBs in Soil						
Our Reference		283432-7	283432-22	283432-24	283432-26	283432-28
Your Reference	UNITS	103/0.2-0.3	110/0.3-0.8	111/0.3-0.4	34/0-0.6	35/0-1.2
Date Sampled		16/11/2021	16/11/2021	16/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	27/11/2021	27/11/2021
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	%	96	93	98	94	92

PCBs in Soil					
Our Reference		283432-30	283432-34	283432-36	283432-37
Your Reference	UNITS	36/0-0.4	37/0-0.5	38/0-0.5	39/0-0.3
Date Sampled		17/11/2021	17/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	26/11/2021
Date analysed	-	27/11/2021	27/11/2021	27/11/2021	26/11/2021
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	90	89	87

Acid Extractable metals in soil

Our Reference		283432-1	283432-7	283432-9	283432-11	283432-13
Your Reference	UNITS	100/0-0.2	103/0.2-0.3	104/0-1.1	105/0-0.3	106/0-0.2
Date Sampled		16/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Arsenic	mg/kg	14	18	14	9	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	16	10	11	11
Copper	mg/kg	16	17	35	23	13
Lead	mg/kg	18	22	16	19	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	7	20	8	8
Zinc	mg/kg	33	25	62	39	30

Acid Extractable metals in soil

Our Reference		283432-15	283432-17	283432-19	283432-22	283432-24
Your Reference	UNITS	107/0-1.0	108/0-0.1	109/0-0.6	110/0.3-0.8	111/0.3-0.4
Date Sampled		16/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Arsenic	mg/kg	4	10	11	14	17
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	12	13	14	7
Copper	mg/kg	15	17	22	21	14
Lead	mg/kg	14	19	14	11	10
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	10	6	13	8
Zinc	mg/kg	24	42	38	36	20

Acid Extractable metals in soil

Our Reference		283432-26	283432-28	283432-30	283432-34	283432-36
Your Reference	UNITS	34/0-0.6	35/0-1.2	36/0-0.4	37/0-0.5	38/0-0.5
Date Sampled		17/11/2021	17/11/2021	17/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Arsenic	mg/kg	<4	6	5	<4	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	13	7	9	15
Copper	mg/kg	11	21	6	7	28
Lead	mg/kg	12	16	7	13	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	8	2	4	7
Zinc	mg/kg	16	33	9	19	62

Acid Extractable metals in soil

Our Reference		283432-37	283432-45
Your Reference	UNITS	39/0-0.3	38/0-0.5 - [TRIPLICATE]
Date Sampled		17/11/2021	17/11/2021
Type of sample		Soil	Soil
Date prepared	-	26/11/2021	26/11/2021
Date analysed	-	26/11/2021	26/11/2021
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	8	7
Copper	mg/kg	8	9
Lead	mg/kg	7	7
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	4	3
Zinc	mg/kg	10	12

Misc Soil - Inorg						
Our Reference		283432-7	283432-22	283432-24	283432-26	283432-28
Your Reference	UNITS	103/0.2-0.3	110/0.3-0.8	111/0.3-0.4	34/0-0.6	35/0-1.2
Date Sampled		16/11/2021	16/11/2021	16/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg					
Our Reference		283432-30	283432-34	283432-36	283432-37
Your Reference	UNITS	36/0-0.4	37/0-0.5	38/0-0.5	39/0-0.3
Date Sampled		17/11/2021	17/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5

Moisture						
Our Reference	UNITS	283432-1	283432-7	283432-9	283432-11	283432-13
Your Reference		100/0-0.2	103/0.2-0.3	104/0-1.1	105/0-0.3	106/0-0.2
Date Sampled		16/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Moisture	%	11	14	13	16	15

Moisture						
Our Reference	UNITS	283432-15	283432-17	283432-19	283432-22	283432-24
Your Reference		107/0-1.0	108/0-0.1	109/0-0.6	110/0.3-0.8	111/0.3-0.4
Date Sampled		16/11/2021	16/11/2021	16/11/2021	16/11/2021	16/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Moisture	%	18	23	17	21	19

Moisture						
Our Reference	UNITS	283432-26	283432-28	283432-30	283432-34	283432-36
Your Reference		34/0-0.6	35/0-1.2	36/0-0.4	37/0-0.5	38/0-0.5
Date Sampled		17/11/2021	17/11/2021	17/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Moisture	%	35	16	16	22	17

Moisture		
Our Reference	UNITS	283432-37
Your Reference		39/0-0.3
Date Sampled		17/11/2021
Type of sample		Soil
Date prepared	-	25/11/2021
Date analysed	-	26/11/2021
Moisture	%	15

Asbestos ID - soils						
Our Reference	UNITS	283432-7	283432-22	283432-24	283432-26	283432-28
Your Reference		103/0.2-0.3	110/0.3-0.8	111/0.3-0.4	34/0-0.6	35/0-1.2
Date Sampled		16/11/2021	16/11/2021	16/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 25g	Approx. 20g	Approx. 25g
Sample Description	-	Brown coarse-grained soil & rocks	Red clayey 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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	283432-30	283432-34	283432-36	283432-37
Your Reference		36/0-0.4	37/0-0.5	38/0-0.5	39/0-0.3
Date Sampled		17/11/2021	17/11/2021	17/11/2021	17/11/2021
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 30g	Approx. 35g
Sample Description	-	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

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-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-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	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.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

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

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	283432-22
Date extracted	-			25/11/2021	7	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			29/11/2021	7	29/11/2021	29/11/2021		29/11/2021	29/11/2021
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	7	<25	<25	0	95	104
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	7	<25	<25	0	95	104
Benzene	mg/kg	0.2	Org-023	<0.2	7	<0.2	<0.2	0	76	85
Toluene	mg/kg	0.5	Org-023	<0.5	7	<0.5	<0.5	0	82	91
Ethylbenzene	mg/kg	1	Org-023	<1	7	<1	<1	0	109	119
m+p-xylene	mg/kg	2	Org-023	<2	7	<2	<2	0	103	112
o-Xylene	mg/kg	1	Org-023	<1	7	<1	<1	0	93	103
Naphthalene	mg/kg	1	Org-023	<1	7	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	72	7	86	80	7	97	94

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]	36	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	36	29/11/2021	29/11/2021		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	36	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	36	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	36	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	36	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	36	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	36	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	36	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	36	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	36	97	99	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	283432-22
Date extracted	-			25/11/2021	7	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			26/11/2021	7	26/11/2021	26/11/2021		26/11/2021	27/11/2021
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	7	<50	<50	0	94	97
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	7	<100	<100	0	87	98
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	7	<100	<100	0	91	84
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	7	<50	<50	0	94	97
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	7	<100	<100	0	87	98
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	7	<100	<100	0	91	84
Surrogate o-Terphenyl	%		Org-020	73	7	80	78	3	80	89

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	36	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	36	27/11/2021	27/11/2021		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	36	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	36	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	36	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	36	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	36	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	36	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	36	77	75	3	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	283432-22
Date extracted	-			25/11/2021	7	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			27/11/2021	7	27/11/2021	27/11/2021		27/11/2021	27/11/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	90	86
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	75	79
Fluorene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	90	84
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	108	108
Anthracene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	90	84
Pyrene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	91	85
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	75	67
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	7	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	7	<0.05	<0.05	0	92	82
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	90	7	94	95	1	93	88

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	36	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	36	27/11/2021	27/11/2021		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	36	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	36	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	36	85	89	5	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	283432-22
Date extracted	-			25/11/2021	7	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			27/11/2021	7	27/11/2021	27/11/2021		27/11/2021	27/11/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	80	72
HCB	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	92	89
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	75	71
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	91	83
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	84	80
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	86	82
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	94	88
Endrin	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	117	125
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	84	80
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	74	68
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	96	7	96	98	2	97	94

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	36	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	36	27/11/2021	27/11/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	36	89	92	3	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	283432-22
Date extracted	-			25/11/2021	7	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			27/11/2021	7	27/11/2021	27/11/2021		27/11/2021	27/11/2021
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	81	68
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	93	87
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	73	67
Malathion	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	89	83
Chlorpyrifos	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	88	84
Parathion	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	68	68
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	68	66
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	96	7	96	98	2	97	94

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	36	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	36	27/11/2021	27/11/2021		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	36	89	92	3	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	283432-22
Date extracted	-			25/11/2021	7	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			27/11/2021	7	27/11/2021	27/11/2021		27/11/2021	27/11/2021
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	7	<0.1	<0.1	0	92	84
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	7	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	96	7	96	98	2	97	94

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	36	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	36	27/11/2021	27/11/2021		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	36	89	92	3	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	283432-22
Date prepared	-			26/11/2021	7	26/11/2021	26/11/2021		26/11/2021	26/11/2021
Date analysed	-			26/11/2021	7	26/11/2021	26/11/2021		26/11/2021	26/11/2021
Arsenic	mg/kg	4	Metals-020	<4	7	18	16	12	92	73
Cadmium	mg/kg	0.4	Metals-020	<0.4	7	<0.4	<0.4	0	93	77
Chromium	mg/kg	1	Metals-020	<1	7	16	14	13	93	80
Copper	mg/kg	1	Metals-020	<1	7	17	17	0	91	99
Lead	mg/kg	1	Metals-020	<1	7	22	20	10	92	72
Mercury	mg/kg	0.1	Metals-021	<0.1	7	<0.1	<0.1	0	104	96
Nickel	mg/kg	1	Metals-020	<1	7	7	8	13	94	79
Zinc	mg/kg	1	Metals-020	<1	7	25	26	4	94	83

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	36	26/11/2021	26/11/2021		[NT]	[NT]
Date analysed	-			[NT]	36	26/11/2021	26/11/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	36	7	<4	55	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	36	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	36	15	10	40	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	36	28	13	73	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	36	18	11	48	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	36	7	5	33	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	36	62	20	102	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			25/11/2021	7	25/11/2021	25/11/2021		25/11/2021	[NT]
Date analysed	-			25/11/2021	7	25/11/2021	25/11/2021		25/11/2021	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	7	<5	<5	0	100	[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 283432-36 for Cr, Cu, Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 283432-45.

CERTIFICATE OF ANALYSIS 283432-A

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	94562.02, Austral
Number of Samples	additional analysis
Date samples received	19/11/2021
Date completed instructions received	07/12/2021

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	14/12/2021
Date of Issue	13/12/2021
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 *	

Asbestos Approved By

Analysed by Asbestos Approved Analyst: Panika Wongchanda
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Lucy Zhu, Asbestos Supervisor
 Manju Dewendrage, Prep Team Leader
 Thomas Lovatt, Chemist

Authorised By



Nancy Zhang, Laboratory Manager

Acid Extractable metals in soil		
Our Reference		283432-A-42
Your Reference	UNITS	TP103/0-0.2
Date Sampled		17/11/2021
Type of sample		Soil
Date prepared	-	09/12/2021
Date analysed	-	09/12/2021
Arsenic	mg/kg	10
Cadmium	mg/kg	<0.4
Chromium	mg/kg	13
Copper	mg/kg	33
Lead	mg/kg	15
Mercury	mg/kg	<0.1
Nickel	mg/kg	11
Zinc	mg/kg	40

Moisture		
Our Reference	UNITS	283432-A-42
Your Reference		TP103/0-0.2
Date Sampled		17/11/2021
Type of sample		Soil
Date prepared	-	8/12/2021
Date analysed	-	9/12/2021
Moisture	%	11

Asbestos ID - soils		
Our Reference	UNITS	283432-A-42
Your Reference		TP103/0-0.2
Date Sampled		17/11/2021
Type of sample		Soil
Date analysed	-	10/12/2021
Sample mass tested	g	Approx. 45g
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO
Trace Analysis	-	No asbestos detected

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-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-15	[NT]
Date prepared	-			09/12/2021	[NT]	[NT]	[NT]	[NT]	09/12/2021	[NT]
Date analysed	-			09/12/2021	[NT]	[NT]	[NT]	[NT]	09/12/2021	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	100	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	91	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
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>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
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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: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.

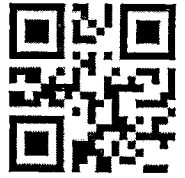
Note: Sample 283432-A-42 was sub-sampled from a bag provided by the client.

Ming To

Subject:

FW: Extra samples - reports 283432 / 283685

Ref: 284342-A.
YAT: Standard
Due: 14/12/2021
MT



283432-A

From: Emily Eden <Emily.Eden@douglaspartners.com.au>

Sent: Tuesday, 7 December 2021 10:32 AM

To: Simon Song <SSong@envirolab.com.au>

Subject: Extra samples - reports 283432 / 283685

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Simon,

Can we request analysis of extra samples you logged for 2 jobs for Austral, as follows:

283432 – sample:

- (42) • TP103/0 – 0.2 – metals and asbestos (50 g)

283685 – samples:

- TP143/0-0.2 – metals and asbestos (50 g)
- TP144/0-0.2 – metals and asbestos (50 g)
- TP145/0-0.1 – metals and asbestos (50 g)
- TP146/0-0.2 – metals and asbestos (50 g)
- TP147/0-0.3 – metals and asbestos (50 g)

Standard turnaround is fine.

Thanks,

Emily.

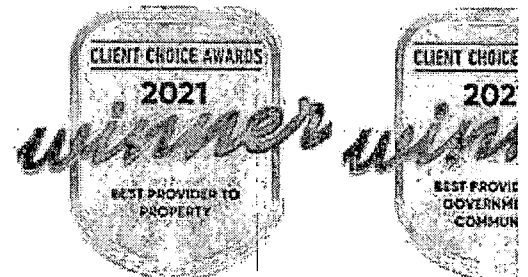
Emily Eden | Senior Associate / Environmental Manager

Douglas Partners Pty Ltd | ABN 75 053 980 117 |

www.douglaspartners.com.au

18 Waler Crescent Smeaton Grange NSW 2567

P: 02 4647 0075 | M: 0418 651 227 | E: Emily.Eden@douglaspartners.com.au



To find information on our COVID-19 measures, please visit
[douglaspartners.com.au/news/covid-19](https://www.douglaspartners.com.au/news/covid-19)

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SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden

Sample Login Details

Your reference	94562.02, Austral
Envirolab Reference	283432-A
Date Sample Received	19/11/2021
Date Instructions Received	07/12/2021
Date Results Expected to be Reported	14/12/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	15
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:



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 ID	Acid Extractable metals in soil	Asbestos ID - soils	On Hold
100/0-0.2			✓
100/0.3-0.5			✓
101/0-0.2			✓
101/0.2-0.8			✓
102/0-0.1			✓
102/0.1-0.7			✓
103/0.2-0.3			✓
103/0.3-0.5			✓
104/0-1.1			✓
104/1.1-1.6			✓
105/0-0.3			✓
105/0.3-0.6			✓
106/0-0.2			✓
106/0.2-0.8			✓
107/0-1.0			✓
107/1-1.5			✓
108/0-0.1			✓
108/0.1-0.6			✓
109/0-0.6			✓
109/0.6-1.1			✓
110/0-0.3			✓
110/0.3-0.8			✓
111/0-0.3			✓
111/0.3-0.4			✓
111/0.4-0.9			✓
34/0-0.6			✓
34/0.8-1.3			✓
35/0-1.2			✓
35/1.2-1.6			✓
36/0-0.4			✓
36/0.4-0.5			✓
36/0.5-1			✓



Sample ID	Acid Extractable metals in soil	Asbestos ID - soils	On Hold
36/1.6-2.2			✓
37/0-0.5			✓
37/0.5-1			✓
38/0-0.5			✓
39/0-0.3			✓
BD1			✓
BD2			✓
TB			✓
TS			✓
TP103/0-0.2	✓	✓	
TP38/0.5-1.0			✓
TP39			✓
38/0-0.5 - [TRIPLICATE]			✓

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.

283432

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: AJ
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Date Sampled	Sample Type	Container Type	Analytes									Notes/preservation	
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD					
100/0-0.2	1	16/11/21	S	G / P		X					X				Refer to Quotation 20SY400
100/0.3-0.5	2	16/11/21	S	G / P							X				
101/0-0.2	3	16/11/21	S	G / P							X				
101/0.2-0.8	4	16/11/21	S	G / P							X				
102/0-0.1	5	16/11/21	S	G / P							X				
102/0.1-0.7	6	16/11/21	S	G / P							X				
103/0.2-0.3	7	16/11/21	S	G / P	X						X				
103/0.3-0.5	8	16/11/21	S	G / P							X				
104/0-1.1	9	16/11/21	S	G / P		X					X				
104/1.1-1.6	10	16/11/21	S	G / P							X				
105/0-0.3	11	16/11/21	S	G / P		X					X				
105/0.3-0.6	12	16/11/21	S	G / P							X				
106/0-0.2	13	16/11/21	S	G / P		X					X				

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed:	Date & Time: 19/11/2021	Received by:	

283432

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: AJ
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes										Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD					
106/0.2-0.8	14	16/11/21	S	P								X			
107/0-1.0	15	16/11/21	S	P		X						X			
107/1-1.5	16	16/11/21	S	P								X			
108/0-0.1	17	16/11/21	S	P		X						X			
108/0.1-0.6	18	16/11/21	S	P								X			
109/0-0.6	19	16/11/21	S	P		X						X			
109/0.6-1.1	20	16/11/21	S	P								X			
110/0-0.3	21	16/11/21	S	P								X			
110/0.3-0.8	22	16/11/21	S	P	X							X			
111/0-0.3	23	16/11/21	S	P								X			
111/0.3-0.4	24	16/11/21	S	P	X							X			
111/0.4-0.9	25	16/11/21	S	P								X			
34/0-0.6	26	17/11/21	S	P	X										

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: Unit 5, 50 Topham Road, Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed:	Date & Time: 19/11/2021	Received by:	

283432

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: AJ
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes								Notes/preservation	
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD				
34/0.8-1.3	27	17/11/21	S	P							x			
35/0-1.2	28	17/11/21	S	P	x									
35/1.2-1.6	29	17/11/21	S	P							x			
36/0-0.4	30	17/11/21	S	P	x									
36/0.4-0.5	31	17/11/21	S	P							x			
36/0.5-1	32	17/11/21	S	P							x			
36/1.6-2.2	33	17/11/21	S	P							x			
37/0-0.5	34	17/11/21	S	P	x									
37/0.5-1	35	17/11/21	S	P							x			
38/0-0.5	36	17/11/21	S	P	x									
39/0-0.3	37	17/11/21	S	P	x									

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			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD			
100/0-0.2	1	16/11/21	S	G / P						x			Refer to Quotation 20SY400
100/0.3-0.5	2	16/11/21	S	G / P						x			
101/0-0.2	3	16/11/21	S	G / P						x			
101/0.2-0.8	4	16/11/21	S	G / P						x			
102/0-0.1	5	16/11/21	S	G / P						x			
102/0.1-0.7	6	16/11/21	S	G / P						x			
103/0.2-0.3	7	16/11/21	S	G / P						x			
103/0.3-0.5	8	16/11/21	S	G / P						x			
104/0-1.1	9	16/11/21	S	G / P						x			
104/1.1-1.6	10	16/11/21	S	G / P						x			
105/0-0.3	11	16/11/21	S	G / P						x			
105/0.3-0.6	12	16/11/21	S	G / P						x			
106/0-0.2	13	16/11/21	S	G / P						x			

Lab Report No:		Send Results to: Douglas Partners Pty Ltd		Address: 18 Waler Crescent Smeaton Grange 2567		Phone: (02) 4647 0075		Fax: (02) 4646 1886	
Relinquished by: EME		Transported to laboratory by:							
Signed:		Date & Time: 19/11/2021		Received by:					


Envirolab Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200
 Job No: 283432
 Date Received: 19/11/21
 Time Received: 1750
 Received by: AB
 Temp: Cool/Ambient
 Cooling: Ice/icepack
 Security: Intact/Broken/None

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: AJ
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD				
106/0.2-0.8	14	16/11/21	S	P						x				
107/0-1.0	15	16/11/21	S	P						x				
107/1-1.5	16	16/11/21	S	P						x				
108/0-0.1	17	16/11/21	S	P						x				
108/0.1-0.6	18	16/11/21	S	P						x				
109/0-0.6	19	16/11/21	S	P						x				
109/0.6-1.1	20	16/11/21	S	P						x				
110/0-0.3	21	16/11/21	S	P						x				
110/0.3-0.8	22	16/11/21	S	P						x				
111/0-0.3	23	16/11/21	S	P						x				
111/0.3-0.4	24	16/11/21	S	P						x				
111/0.4-0.9	25	16/11/21	S	P						x				
34/0-0.6	26	17/11/21	S	P	x									

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: Unit 5, 50 Topham Road, Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed:	Date & Time: 19/11/2021	Received by:	

283432
AB

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: AJ
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD				
34/0.8-1.3	27	17/11/21	S	P						x				
35/0-1.2	28	17/11/21	S	P	x									
35/1.2-1.6	29	17/11/21	S	P						x				
36/0-0.4	30	17/11/21	S	P	x									
36/0.4-0.5	31	17/11/21	S	P						x				
36/0.5-1	32	17/11/21	S	P						x				
36/1.6-2.2	33	17/11/21	S	P						x				
37/0-0.5	34	17/11/21	S	P	x									
37/0.5-1	35	17/11/21	S	P						x				
38/0-0.5	36	17/11/21	S	P	x									
39/0-0.3	37	17/11/21	S	P	x									
BD1	38	"												
BD2	39	"												

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: Unit 5, 50 Topham Road, Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed:	Date & Time: 19/11/2021	Received by:	

283432
AB.

CHAIN OF CUSTODY FORM - Client

[Copyright and Confidential]

Company:		Client Project Name/Number/Site etc (ie report title):	
Contact Person:			
Project Mgr:		PO No. (if applicable):	
Sampler:		Envirolab Quote No. :	
Address:		Date results required: Or choose: ☐ Standard ☐ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Phone:	Mob:	Note: Inform lab in advance if urgent turnaround is required - surcharges apply	
Email Results to:		Additional report format: ☐ Esdat ☐ Equis	
Email Invoice to:		Lab Comments:	

ENVIROLAB GROUP

National phone number 1300 424 344

Sydney Lab - Envirolab Services
 12 Ashley St, Chatswood, NSW 2067
 ☎ 02 9910 6200 | ✉ sydney@envirolab.com.au

Perth Lab - MPL Laboratories
 16-18 Hayden Crt, Myaree, WA 6154
 ☎ 08 9317 2505 | ✉ lab@mpl.com.au

Melbourne Lab - Envirolab Services
 25 Research Drive, Croydon South, VIC 3136
 ☎ 03 9763 2500 | ✉ melbourne@envirolab.com.au

Adelaide Office - Envirolab Services
 7a The Parade, Norwood, SA 5067
 ☎ 08 7087 6800 | ✉ adelaide@envirolab.com.au

Brisbane Office - Envirolab Services
 20a, 10-20 Depot St, Banyo, QLD 4014
 ☎ 07 3266 9532 | ✉ brisbane@envirolab.com.au

Darwin Office - Envirolab Services
 Unit 20/119 Reichardt Road, Winnellie, NT 0820
 ☎ 08 8967 1201 | ✉ darwin@envirolab.com.au

Sample information					Tests Required															Comments
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample																Provide as much information about the sample as you can
40	TB		17/11																	
41	TS		16/11																	
42	TP103 / 0-0.2		17/11																	
43	TP 38 / 0.5-1.0		18/11																	
44	TP 39		18/11																	

☐ Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company):		Received by (Company):		Lab Use Only	
Print Name:		Print Name:		Job number: 283432	Cooling: Ice / Ice pack / None
Date & Time:		Date & Time:		Temperature:	Security seal: Intact / Broken / None
Signature:		Signature:		TAT Req - SAME day / 1 / 2 / 3 / 4 / STD	

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden

Sample Login Details

Your reference	94562.02, Austral
Envirolab Reference	283432
Date Sample Received	19/11/2021
Date Instructions Received	19/11/2021
Date Results Expected to be Reported	30/11/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	44 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	15
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Extra sample received placed on hold - please refer to COC.

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

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	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
100/0-0.2	✓	✓	✓				✓			
100/0.3-0.5										✓
101/0-0.2										✓
101/0.2-0.8										✓
102/0-0.1										✓
102/0.1-0.7										✓
103/0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	
103/0.3-0.5										✓
104/0-1.1	✓	✓	✓				✓			
104/1.1-1.6										✓
105/0-0.3	✓	✓	✓				✓			
105/0.3-0.6										✓
106/0-0.2	✓	✓	✓				✓			
106/0.2-0.8										✓
107/0-1.0	✓	✓	✓				✓			
107/1-1.5										✓
108/0-0.1	✓	✓	✓				✓			
108/0.1-0.6										✓
109/0-0.6	✓	✓	✓				✓			
109/0.6-1.1										✓
110/0-0.3										✓
110/0.3-0.8	✓	✓	✓	✓	✓	✓	✓	✓	✓	
111/0-0.3										✓
111/0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	
111/0.4-0.9										✓
34/0-0.6	✓	✓	✓	✓	✓	✓	✓	✓	✓	
34/0.8-1.3										✓
35/0-1.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
35/1.2-1.6										✓
36/0-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓	
36/0.4-0.5										✓
36/0.5-1										✓

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
36/1.6-2.2										✓
37/0-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	
37/0.5-1										✓
38/0-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓	
39/0-0.3	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BD1										✓
BD2										✓
TB										✓
TS										✓
TP103/0-0.2										✓
TP38/0.5-1.0										✓
TP39										✓

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.

CERTIFICATE OF ANALYSIS 283685

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	94562.02, Austral
Number of Samples	57 Soil, 2 Water
Date samples received	23/11/2021
Date completed instructions received	23/11/2021

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	30/11/2021
Date of Issue	30/11/2021
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 *	

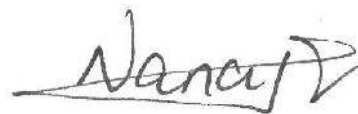
Asbestos Approved By

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
 Jeremy Faircloth, Operations Manager, Sydney
 Josh Williams, LC Supervisor
 Liam Timmins, Chemist
 Lucy Zhu, Asbestos Supervisor
 Steven Luong, Organics Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil

Our Reference		283685-3	283685-13	283685-17	283685-19	283685-21
Your Reference	UNITS	137	29	31	32	33
Depth		0-0.3	0-0.7	0-0.8	0-0.5	0-0.4
Date Sampled		19/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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	%	85	86	88	82	81

vTRH(C6-C10)/BTEXN in Soil

Our Reference		283685-22	283685-24	283685-26	283685-28	283685-30
Your Reference	UNITS	33	34	37	38	39
Depth		0.4-1.6	0-0.8	0-0.5	0-0.5	0-0.3
Date Sampled		18/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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	77	78	85	78

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		283685-32	283685-38	283685-44
Your Reference	UNITS	131	136	BD1
Depth		0-0.1	0-0.1	-
Date Sampled		19/11/2021	19/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021
TRH C ₆ - C ₉	mg/kg	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	89	91	83

svTRH (C10-C40) in Soil

Our Reference		283685-3	283685-13	283685-17	283685-19	283685-21
Your Reference	UNITS	137	29	31	32	33
Depth		0-0.3	0-0.7	0-0.8	0-0.5	0-0.4
Date Sampled		19/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
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	%	99	106	95	94	86

svTRH (C10-C40) in Soil

Our Reference		283685-22	283685-24	283685-26	283685-28	283685-30
Your Reference	UNITS	33	34	37	38	39
Depth		0.4-1.6	0-0.8	0-0.5	0-0.5	0-0.3
Date Sampled		18/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	26/11/2021
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	%	90	91	83	96	95

svTRH (C10-C40) in Soil				
Our Reference		283685-32	283685-38	283685-44
Your Reference	UNITS	131	136	BD1
Depth		0-0.1	0-0.1	-
Date Sampled		19/11/2021	19/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021
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
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50
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	%	87	94	85

PAHs in Soil						
Our Reference		283685-3	283685-13	283685-17	283685-19	283685-21
Your Reference	UNITS	137	29	31	32	33
Depth		0-0.3	0-0.7	0-0.8	0-0.5	0-0.4
Date Sampled		19/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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	0.07	<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	0.3	<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	%	80	91	85	90	86

PAHs in Soil						
Our Reference		283685-22	283685-24	283685-26	283685-28	283685-30
Your Reference	UNITS	33	34	37	38	39
Depth		0.4-1.6	0-0.8	0-0.5	0-0.5	0-0.3
Date Sampled		18/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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	%	82	84	84	88	78

PAHs in Soil				
Our Reference		283685-32	283685-38	283685-44
Your Reference	UNITS	131	136	BD1
Depth		0-0.1	0-0.1	-
Date Sampled		19/11/2021	19/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021
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 <i>p</i> -Terphenyl-d14	%	91	81	90

Organochlorine Pesticides in soil						
Our Reference		283685-1	283685-10	283685-13	283685-19	283685-21
Your Reference	UNITS	152	27	29	32	33
Depth		0-0.1	0.5-1.0	0-0.7	0-0.5	0-0.4
Date Sampled		19/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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	%	97	86	98	89	86

Organochlorine Pesticides in soil						
Our Reference		283685-22	283685-24	283685-32	283685-34	283685-36
Your Reference	UNITS	33	34	131	134	135
Depth		0.4-1.6	0-0.8	0-0.1	0-0.1	0-0.1
Date Sampled		18/11/2021	18/11/2021	19/11/2021	19/11/2021	19/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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	%	83	92	93	90	88

Organochlorine Pesticides in soil					
Our Reference		283685-38	283685-40	283685-42	283685-45
Your Reference	UNITS	136	150	151	BD2
Depth		0-0.1	0-0.2	0-0.1	-
Date Sampled		19/11/2021	19/11/2021	19/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	84	85	92	90

Organophosphorus Pesticides in Soil						
Our Reference		283685-1	283685-10	283685-13	283685-19	283685-21
Your Reference	UNITS	152	27	29	32	33
Depth		0-0.1	0.5-1.0	0-0.7	0-0.5	0-0.4
Date Sampled		19/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	97	86	98	89	86

Organophosphorus Pesticides in Soil						
Our Reference	UNITS	283685-22	283685-24	283685-32	283685-34	283685-36
Your Reference		33	34	131	134	135
Depth		0.4-1.6	0-0.8	0-0.1	0-0.1	0-0.1
Date Sampled		18/11/2021	18/11/2021	19/11/2021	19/11/2021	19/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	83	92	93	90	88

Organophosphorus Pesticides in Soil					
Our Reference		283685-38	283685-40	283685-42	283685-45
Your Reference	UNITS	136	150	151	BD2
Depth		0-0.1	0-0.2	0-0.1	-
Date Sampled		19/11/2021	19/11/2021	19/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	84	85	92	90

PCBs in Soil						
Our Reference		283685-13	283685-19	283685-21	283685-22	283685-24
Your Reference	UNITS	29	32	33	33	34
Depth		0-0.7	0-0.5	0-0.4	0.4-1.6	0-0.8
Date Sampled		18/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
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	89	86	83	92

PCBs in Soil			
Our Reference		283685-32	283685-38
Your Reference	UNITS	131	136
Depth		0-0.1	0-0.1
Date Sampled		19/11/2021	19/11/2021
Type of sample		Soil	Soil
Date extracted	-	25/11/2021	25/11/2021
Date analysed	-	29/11/2021	29/11/2021
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	93	84

Acid Extractable metals in soil

Our Reference		283685-1	283685-3	283685-10	283685-13	283685-17
Your Reference	UNITS	152	137	27	29	31
Depth		0-0.1	0-0.3	0.5-1.0	0-0.7	0-0.8
Date Sampled		19/11/2021	19/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Arsenic	mg/kg	7	11	6	5	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	22	16	13	11
Copper	mg/kg	9	13	31	11	10
Lead	mg/kg	15	21	21	19	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	9	6	5	5
Zinc	mg/kg	8	23	31	40	20

Acid Extractable metals in soil

Our Reference		283685-19	283685-21	283685-22	283685-24	283685-26
Your Reference	UNITS	32	33	33	34	37
Depth		0-0.5	0-0.4	0.4-1.6	0-0.8	0-0.5
Date Sampled		18/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Arsenic	mg/kg	6	7	<4	5	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	13	13	14	14
Copper	mg/kg	15	19	13	14	14
Lead	mg/kg	19	20	11	16	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	10	5	8	6
Zinc	mg/kg	27	51	16	30	25

Acid Extractable metals in soil

Our Reference		283685-28	283685-30	283685-32	283685-34	283685-36
Your Reference	UNITS	38	39	131	134	135
Depth		0-0.5	0-0.3	0-0.1	0-0.1	0-0.1
Date Sampled		18/11/2021	18/11/2021	19/11/2021	19/11/2021	19/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Arsenic	mg/kg	8	6	7	11	11
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	16	19	24	23
Copper	mg/kg	17	12	13	6	14
Lead	mg/kg	13	16	13	18	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	6	8	3	7
Zinc	mg/kg	22	17	15	7	13

Acid Extractable metals in soil

Our Reference		283685-38	283685-40	283685-42	283685-44	283685-45
Your Reference	UNITS	136	150	151	BD1	BD2
Depth		0-0.1	0-0.2	0-0.1	-	-
Date Sampled		19/11/2021	19/11/2021	19/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Arsenic	mg/kg	9	7	11	6	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	20	21	26	15	18
Copper	mg/kg	13	12	8	15	10
Lead	mg/kg	20	17	19	24	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	6	5	6	6
Zinc	mg/kg	18	15	12	130	23

Misc Soil - Inorg

Our Reference		283685-13	283685-19	283685-21	283685-22	283685-24
Your Reference	UNITS	29	32	33	33	34
Depth		0-0.7	0-0.5	0-0.4	0.4-1.6	0-0.8
Date Sampled		18/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		283685-32	283685-38
Your Reference	UNITS	131	136
Depth		0-0.1	0-0.1
Date Sampled		19/11/2021	19/11/2021
Type of sample		Soil	Soil
Date prepared	-	25/11/2021	25/11/2021
Date analysed	-	25/11/2021	25/11/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5

Moisture						
Our Reference	UNITS	283685-1	283685-3	283685-10	283685-13	283685-17
Your Reference		152	137	27	29	31
Depth		0-0.1	0-0.3	0.5-1.0	0-0.7	0-0.8
Date Sampled		19/11/2021	19/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Moisture	%	16	18	16	14	24

Moisture						
Our Reference	UNITS	283685-19	283685-21	283685-22	283685-24	283685-26
Your Reference		32	33	33	34	37
Depth		0-0.5	0-0.4	0.4-1.6	0-0.8	0-0.5
Date Sampled		18/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Moisture	%	9.5	9.0	11	48	19

Moisture						
Our Reference	UNITS	283685-28	283685-30	283685-32	283685-34	283685-36
Your Reference		38	39	131	134	135
Depth		0-0.5	0-0.3	0-0.1	0-0.1	0-0.1
Date Sampled		18/11/2021	18/11/2021	19/11/2021	19/11/2021	19/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Moisture	%	17	15	18	17	18

Moisture						
Our Reference	UNITS	283685-38	283685-40	283685-42	283685-44	283685-45
Your Reference		136	150	151	BD1	BD2
Depth		0-0.1	0-0.2	0-0.1	-	-
Date Sampled		19/11/2021	19/11/2021	19/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	25/11/2021	25/11/2021	25/11/2021	25/11/2021	25/11/2021
Date analysed	-	26/11/2021	26/11/2021	26/11/2021	26/11/2021	26/11/2021
Moisture	%	16	19	13	11	13

Asbestos ID - soils						
Our Reference	UNITS	283685-5	283685-7	283685-9	283685-11	283685-13
Your Reference		25	26	27	28	29
Depth		0-0.5	0-0.5	0-0.5	0-0.5	0-0.7
Date Sampled		18/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Sample mass tested	g	Approx. 55g	Approx. 60g	Approx. 40g	Approx. 45g	Approx. 40g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	283685-15	283685-19	283685-21	283685-22	283685-24
Your Reference		30	32	33	33	34
Depth		0-0.5	0-0.5	0-0.4	0.4-1.6	0-0.8
Date Sampled		18/11/2021	18/11/2021	18/11/2021	18/11/2021	18/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Sample mass tested	g	Approx. 60g	Approx. 40g	Approx. 35g	Approx. 40g	Approx. 15g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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		283685-32	283685-38
Your Reference	UNITS	131	136
Depth		0-0.1	0-0.1
Date Sampled		19/11/2021	19/11/2021
Type of sample		Soil	Soil
Date analysed	-	29/11/2021	29/11/2021
Sample mass tested	g	Approx. 25g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected

vTRH(C6-C10)/BTEXN in Water		
Our Reference		283685-49
Your Reference	UNITS	TB
Depth		-
Date Sampled		19/11/2021
Type of sample		Water
Date extracted	-	24/11/2021
Date analysed	-	24/11/2021
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	%	99
Surrogate toluene-d8	%	99
Surrogate 4-BFB	%	90

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-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-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	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.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

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

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	283685-19
Date extracted	-			25/11/2021	13	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			29/11/2021	13	29/11/2021	29/11/2021		29/11/2021	29/11/2021
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	13	<25	<25	0	89	93
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	13	<25	<25	0	89	93
Benzene	mg/kg	0.2	Org-023	<0.2	13	<0.2	<0.2	0	87	74
Toluene	mg/kg	0.5	Org-023	<0.5	13	<0.5	<0.5	0	75	80
Ethylbenzene	mg/kg	1	Org-023	<1	13	<1	<1	0	98	108
m+p-xylene	mg/kg	2	Org-023	<2	13	<2	<2	0	93	102
o-Xylene	mg/kg	1	Org-023	<1	13	<1	<1	0	84	93
Naphthalene	mg/kg	1	Org-023	<1	13	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	89	13	86	81	6	85	91

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	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	32	29/11/2021	29/11/2021		[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	89	78	13	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	283685-19
Date extracted	-			25/11/2021	13	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			25/11/2021	13	25/11/2021	25/11/2021		25/11/2021	25/11/2021
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	13	<50	<50	0	91	84
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	13	<100	<100	0	85	80
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	13	<100	<100	0	96	116
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	13	<50	<50	0	91	84
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	13	<100	<100	0	85	80
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	13	<100	<100	0	96	116
Surrogate o-Terphenyl	%		Org-020	100	13	106	108	2	86	94

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	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	32	26/11/2021	26/11/2021		[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	87	88	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	283685-19
Date extracted	-			25/11/2021	13	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			29/11/2021	13	29/11/2021	29/11/2021		29/11/2021	29/11/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	84	86
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	83	85
Fluorene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	86	86
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	114	114
Anthracene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	13	0.1	<0.1	0	112	110
Pyrene	mg/kg	0.1	Org-022/025	<0.1	13	0.1	<0.1	0	115	111
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	83	87
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	13	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	13	0.07	<0.05	33	90	98
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	88	13	91	84	8	114	110

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-23	[NT]
Date extracted	-			[NT]	32	25/11/2021	25/11/2021		25/11/2021	[NT]
Date analysed	-			[NT]	32	29/11/2021	29/11/2021		29/11/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	32	<0.1	<0.1	0	90	[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	91	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	32	<0.1	<0.1	0	93	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	32	<0.1	<0.1	0	106	[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	92	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	32	<0.1	<0.1	0	95	[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	73	[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	104	[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	91	92	1	88	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	283685-19
Date extracted	-			25/11/2021	13	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			29/11/2021	13	29/11/2021	29/11/2021		29/11/2021	29/11/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	80	78
HCB	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	85	79
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	99	97
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	99	93
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	104	100
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	107	109
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	120	118
Endrin	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	98	98
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	104	104
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	96	94
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	101	13	98	89	10	93	89

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	32	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	32	29/11/2021	29/11/2021		[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	93	102	9	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	283685-19
Date extracted	-			25/11/2021	13	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			29/11/2021	13	29/11/2021	29/11/2021		29/11/2021	29/11/2021
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	83	83
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	106	102
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	75	73
Malathion	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	89	91
Chlorpyrifos	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	110	108
Parathion	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	76	76
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	78	79
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	101	13	98	89	10	93	89

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	32	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	32	29/11/2021	29/11/2021		[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]
Chlorpyrifos-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]
Chlorpyrifos	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	93	102	9	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	283685-19
Date extracted	-			25/11/2021	13	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			29/11/2021	13	29/11/2021	29/11/2021		29/11/2021	29/11/2021
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	13	<0.1	<0.1	0	120	100
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	88	13	98	89	10	93	89

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	32	25/11/2021	25/11/2021		[NT]	[NT]
Date analysed	-			[NT]	32	29/11/2021	29/11/2021		[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	93	102	9	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	283685-19
Date prepared	-			26/11/2021	13	26/11/2021	26/11/2021		26/11/2021	26/11/2021
Date analysed	-			26/11/2021	13	26/11/2021	26/11/2021		26/11/2021	26/11/2021
Arsenic	mg/kg	4	Metals-020	<4	13	5	6	18	87	#
Cadmium	mg/kg	0.4	Metals-020	<0.4	13	<0.4	<0.4	0	87	73
Chromium	mg/kg	1	Metals-020	<1	13	13	16	21	87	74
Copper	mg/kg	1	Metals-020	<1	13	11	16	37	86	81
Lead	mg/kg	1	Metals-020	<1	13	19	23	19	85	74
Mercury	mg/kg	0.1	Metals-021	<0.1	13	<0.1	<0.1	0	92	101
Nickel	mg/kg	1	Metals-020	<1	13	5	7	33	87	70
Zinc	mg/kg	1	Metals-020	<1	13	40	53	28	87	73

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	26/11/2021	26/11/2021		[NT]	[NT]
Date analysed	-			[NT]	32	26/11/2021	26/11/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	32	7	10	35	[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	19	23	19	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	32	13	13	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	32	13	15	14	[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	8	7	13	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	32	15	13	14	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	283685-19
Date prepared	-			25/11/2021	13	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Date analysed	-			25/11/2021	13	25/11/2021	25/11/2021		25/11/2021	25/11/2021
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	13	<5	<5	0	100	104

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			24/11/2021	[NT]	[NT]	[NT]	[NT]	24/11/2021	[NT]
Date analysed	-			24/11/2021	[NT]	[NT]	[NT]	[NT]	24/11/2021	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	95	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	95	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	90	[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]	86	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate toluene-d8	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate 4-BFB	%		Org-023	89	[NT]	[NT]	[NT]	[NT]	94	[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

8 metals in soil - # Percent recovery is not possible to report due to the inhomogeneous nature of the element in the sample. However an acceptable recovery was obtained for the LCS.

Asbestos: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.

Note: Samples 283685-5, 7, 9, 11, 15 were sub-sampled from bags provided by the client.

CERTIFICATE OF ANALYSIS 283685-A

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	94562.02, Austral
Number of Samples	additional analysis
Date samples received	23/11/2021
Date completed instructions received	07/12/2021

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	14/12/2021
Date of Issue	13/12/2021
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 *	

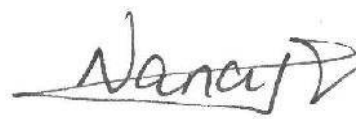
Asbestos Approved By

Analysed by Asbestos Approved Analyst: Panika Wongchanda
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Lucy Zhu, Asbestos Supervisor
 Manju Dewendrage, Prep Team Leader
 Thomas Lovatt, Chemist

Authorised By



Nancy Zhang, Laboratory Manager

Acid Extractable metals in soil						
Our Reference		283685-A-50	283685-A-52	283685-A-54	283685-A-56	283685-A-58
Your Reference	UNITS	TP143	TP144	TP145	TP146	TP147
Depth		0-0.2	0-0.2	0-0.1	0-0.2	0-0.3
Date Sampled		19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Arsenic	mg/kg	9	7	8	11	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	14	19	25	20
Copper	mg/kg	13	14	14	10	11
Lead	mg/kg	21	20	19	22	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	8	8	8	7
Zinc	mg/kg	28	32	24	21	21

Moisture						
Our Reference		283685-A-50	283685-A-52	283685-A-54	283685-A-56	283685-A-58
Your Reference	UNITS	TP143	TP144	TP145	TP146	TP147
Depth		0-0.2	0-0.2	0-0.1	0-0.2	0-0.3
Date Sampled		19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	8/12/2021	8/12/2021	8/12/2021	8/12/2021	8/12/2021
Date analysed	-	9/12/2021	9/12/2021	9/12/2021	9/12/2021	9/12/2021
Moisture	%	17	20	16	14	17

Asbestos ID - soils						
Our Reference	UNITS	283685-A-50	283685-A-52	283685-A-54	283685-A-56	283685-A-58
Your Reference		TP143	TP144	TP145	TP146	TP147
Depth		0-0.2	0-0.2	0-0.1	0-0.2	0-0.3
Date Sampled		19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Sample mass tested	g	Approx. 35g	Approx. 30g	Approx. 30g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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

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-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-15	[NT]
Date prepared	-			09/12/2021	[NT]	[NT]	[NT]	[NT]	09/12/2021	[NT]
Date analysed	-			09/12/2021	[NT]	[NT]	[NT]	[NT]	09/12/2021	[NT]
Arsenic	mg/kg	4	Metals-020	<4	[NT]	[NT]	[NT]	[NT]	100	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	[NT]	[NT]	[NT]	[NT]	91	[NT]
Chromium	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Copper	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Lead	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	[NT]	[NT]	[NT]	[NT]	110	[NT]
Nickel	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Zinc	mg/kg	1	Metals-020	<1	[NT]	[NT]	[NT]	[NT]	95	[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: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.

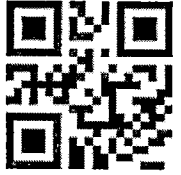
Note: Samples 283685-A-50, 52, 54, 56, 58 were sub-sampled from bags provided by the client.

Ming To

Subject:

FW: Extra samples - reports 283432 / 283685

Ref: 283685-A
TAT: Standard.
Due: 14/12/2021
M7.



283685-A

From: Emily Eden <Emily.Eden@douglaspartners.com.au>

Sent: Tuesday, 7 December 2021 10:32 AM

To: Simon Song <SSong@envirolab.com.au>

Subject: Extra samples - reports 283432 / 283685

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Simon,

Can we request analysis of extra samples you logged for 2 jobs for Austral, as follows:

283432 – sample:

- TP103/0 – 0.2 – metals and asbestos (50 g)

283685 – samples:

- TP143/0-0.2 – metals and asbestos (50 g)
- TP144/0-0.2 – metals and asbestos (50 g)
- TP145/0-0.1 – metals and asbestos (50 g)
- TP146/0-0.2 – metals and asbestos (50 g)
- TP147/0-0.3 – metals and asbestos (50 g)

Standard turnaround is fine.

Thanks,

Emily.

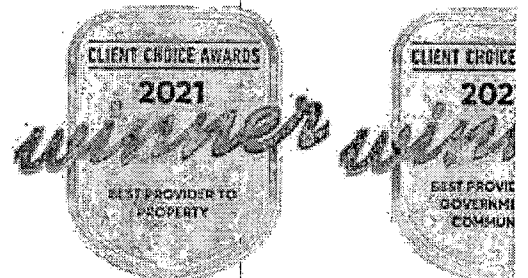
Emily Eden | Senior Associate / Environmental Manager

Douglas Partners Pty Ltd | ABN 75 053 980 117 |

www.douglaspartners.com.au

18 Waler Crescent Smeaton Grange NSW 2567

P: 02 4647 0075 | M: 0418 651 227 | E: Emily.Eden@douglaspartners.com.au



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

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SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden

Sample Login Details

Your reference	94562.02, Austral
Envirolab Reference	283685-A
Date Sample Received	23/11/2021
Date Instructions Received	07/12/2021
Date Results Expected to be Reported	14/12/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	additional analysis
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18
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:



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 ID	Acid Extractable metals in soil	Asbestos ID - soils	On Hold
152-0-0.1			✓
152-0.3-0.4			✓
137-0-0.3			✓
137-0.3-0.8			✓
25-0-0.5			✓
25-0.5-1.0			✓
26-0-0.5			✓
26-0.5-1.0			✓
27-0-0.5			✓
27-0.5-1.0			✓
28-0-0.5			✓
28-0.5-1.0			✓
29-0-0.7			✓
29-0.7-1.8			✓
30-0-0.5			✓
30-0.5-1.0			✓
31-0-0.8			✓
31-0.8-1.5			✓
32-0-0.5			✓
32-0.5-1.0			✓
33-0-0.4			✓
33-0.4-1.6			✓
33-1.6-2.2			✓
34-0-0.8			✓
34-0.8-1.3			✓
37-0-0.5			✓
37-0.5-1.0			✓
38-0-0.5			✓
38-0.5-1.0			✓
39-0-0.3			✓
39-0.3-1.0			✓
131-0-0.1			✓



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 ID	Acid Extractable metals in soil	Asbestos ID - soils	On Hold
131-0.3-0.4			✓
134-0-0.1			✓
134-0.3-0.4			✓
135-0-0.1			✓
135-0.3-0.4			✓
136-0-0.1			✓
136-0.3-0.4			✓
150-0-0.2			✓
150-0.2-0.7			✓
151-0-0.1			✓
151-0.3-0.4			✓
BD1			✓
BD2			✓
BD1			✓
BD2			✓
TB			✓
TB			✓
TP143-0-0.2	✓	✓	
TP143-0.2-0.7			✓
TP144-0-0.2	✓	✓	
TP144-0.2-0.8			✓
TP145-0-0.1	✓	✓	
TP145-0.1-0.6			✓
TP146-0-0.2	✓	✓	
TP146-0.2-0.7			✓
TP147-0-0.3	✓	✓	
TP147-0.3-0.9			✓

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.

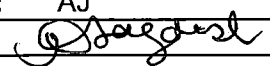
Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: AJ	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au; ashika.jagdish@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Date Sampled	Sample Type	Container Type	Analytes								Notes/preservation	
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos (50 g)			
152/0-0.1	1	19.11.21	S	G / P			x							Refer to Quotation 20SY400
152/0.3-0.4	2	19.11.21	S	G / P						x				
137/0-0.3	3	19.11.21	S	G / P		x								
137/0.3-0.8	4	19.11.21	S	G / P						x				
25/0-0.5	5	18.11.21	S	G / P							x			
25/0.5-1.0	6	18.11.21	S	G / P						x				
26/0-0.5	7	18.11.21	S	G / P							x			
26/0.5-1.0	8	18.11.21	S	G / P						x				
27/0-0.5	9	18.11.21	S	G / P							x			
27/0.5-1.0	10	18.11.21	S	G / P			x							
28/0-0.5	11	18.11.21	S	G / P								x		
28/0.5-1.0	12	18.11.21	S	G / P						x				
29/0-0.7	13	18.11.21	S	G / P	x									

Envirolab Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200
 Job No: 283685
 Date Received: 23.11.21
 Time Received: 1800
 Received By: K.G.
 Temp: Cool/Ambient
 Cooling: Ice/Repack 18°C
 Security: Intact/broken/None

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: AJ		Transported to laboratory by:	
Signed: 	Date & Time: 23/11/2021	Received by: ELS Syd K. Gore.	

Project Name: Austrál		To: Envirolab Services	
Project No: 94562.02	Sampler: AJ	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au; ashika.jagdish@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos (50 g)			
29/0.7-1.8	14	18.11.21	S	G / P						x				
30/0-0.5	15	18.11.21	S	G / P							x			
30/0.5-1.0	16	18.11.21	S	G / P						x				
31/0-0.8	17	18.11.21	S	G / P		x								
31/0.8-1.5	18	18.11.21	S	G / P						x				
32/0-0.5	19	18.11.21	S	G / P	x									
32/0.5-1.0	20	18.11.21	S	G / P						x				
33/0-0.4	21	18.11.21	S	G / P	x									
33/0.4-1.6	22	18.11.21	S	G / P	x									
33/1.6-2.2	23	18.11.21	S	G / P						x				
34/0-0.8	24	18.11.21	S	G	x									
34/0.8-1.3	25	18.11.21	S	G						x				
37/0-0.5	26	18.11.21	S	G		x								

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: AJ	Transported to laboratory by:		
Signed: <i>AJ Jagdish</i>	Date & Time: 23/11/2021	Received by:	

283685 23/11
K9

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: AJ	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au; ashika.jagdish@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD				
37/0.5-1.0	27	18.11.21	S	G						x				
38/0-0.5	28	18.11.21	S	G		x								
38/0.5-1.0	29	18.11.21	S	G						x				
39/0-0.3	30	18.11.21	S	G		x								
39/0.3-1.0	31	18.11.21	S	G						x				
131/0-0.1	32	19.11.21	S	G/P	x									
131/0.3-0.4	33	19.11.21	S	G/P						x				
134/0-0/1	34	19.11.21	S	G/P			x							
134/0.3-0.4	35	19.11.21	S	G/P						x				
135/0-0.1	36	19.11.21	S	G/P			x							
135/0.3-0.4	37	19.11.21	S	G/P						x				
136/0-0.1	38	19.11.21	S	G/P	x									
136/0.3-0.4	39	19.11.21	S	G/P						x				

Lab Report No:		Send Results to: Douglas Partners Pty Ltd		Address: 18 Waler Crescent Smeaton Grange 2567		Phone: (02) 4647 0075		Fax: (02) 4646 1886	
Relinquished by: AJ		Transported to laboratory by:							

283685 23/11
KG

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: AJ	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au; ashika.jagdish@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

Signed:		Date & Time:		Received by:										Notes/preservation
Sample ID	Lab ID	Sampling Date	Sample Type S - soil W - water	Container Type G - glass P - plastic	Analytes									
					Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Volatile analysis			
150/0-0.2	40	19.11.21	S	G/P			x							
150/0.2-0.7	41	19.11.21	S	G/P							x			
151/0-0.1	42	19.11.21	S	G/P			x							
151/0.3-0.4	43	19.11.21	S	G/P							x			
BD1	44	18.11.21	S	G		x								
BD2	45	18.11.21	S	G			x							
BD1	46	19.11.21	S	G							x			
BD2	47	19.11.21	S	G							x			
TB	48	18.11.21	W	G							x			
TB	49	19.11.21	W	G								x		
extras on next page - KC														

Lab Report No:		Send Results to: Douglas Partners Pty Ltd		Address: 18 Waler Crescent Smeaton Grange		Phone: (02) 4647 0075		Fax: (02) 4646 1886	
Relinquished by: AJ				Transported to laboratory by:					
Signed: <i>Ashika Jagdish</i>		Date & Time: 23/11/2021		Received by:					

283685 23/11
KC

CHAIN OF CUSTODY FORM - Client

ENVIROLAB GROUP

National phone number 1300 424 344

Sydney Lab - Envirolab Services

12 Ashley St, Chatswood, NSW 2067

☎ 02 9910 6200 | ✉ sydney@envirolab.com.au

Perth Lab - MPL Laboratories

16-18 Hayden Crt, Myaree, WA 6154

☎ 08 9317 2505 | ✉ lab@mpl.com.au

Melbourne Lab - Envirolab Services

25 Research Drive, Croydon South, VIC 3136

☎ 03 9763 2500 | ✉ melbourne@envirolab.com.au

Adelaide Office - Envirolab Services

7a The Parade, Norwood, SA 5067

☎ 08 7087 6800 | ✉ adelaide@envirolab.com.au

Brisbane Office - Envirolab Services

20a, 10-20 Depot St, Banyo, QLD 4014

☎ 07 3266 9532 | ✉ brisbane@envirolab.com.au

Darwin Office - Envirolab Services

Unit 20/119 Reichardt Road, Winnellie, NT 0820

☎ 08 8967 1201 | ✉ darwin@envirolab.com.au

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Company:		Client Project Name/Number/Site etc (ie report title):	
Contact Person:			
Project Mgr:		PO No. (if applicable):	
Sampler:		Envirolab Quote No. :	
Address:		Date results required: ☐ Or choose: ☐ Standard ☐ Same Day ☐ 1 day ☐ 2 day ☐ 3 day	
Phone:	Mob:	Note: Inform lab in advance if urgent turnaround is required - surcharges apply	
Email Results to:		Additional report format: ☐ Esdat ☐ Equis	
Email Invoice to:		Lab Comments:	

Sample information					Tests Required															Comments
Envirolab Sample ID (Lab use only)	Client Sample ID or Information	Depth	Date Sampled	Type of Sample																Provide as much information about the sample as you can
50	TP143/0-0.2		19/11	soil																
51	143/0.2-0.7																			
52	144/0-0.2																			
53	144/0.2-0.8																			
54	145/0-0.1																			
55	145/0.1-0.6																			
56	146/0-0.2																			
57	146/0.2-0.7																			
58	147/0-0.3																			
59	147/0.3-0.9																			



Please tick the box if observed settled sediment present in water samples is to be included in the extraction and/or analysis

Relinquished by (Company):		Received by (Company): <i>ELW Syd</i>		Lab Use Only	
Print Name:		Print Name: <i>K-Care</i>		Job number: <i>283685</i>	Cooling: Ice / Ice pack / None
Date & Time:		Date & Time: <i>23/11/21 1800</i>		Temperature: <i>15.0°C</i>	Security seal: ☒ Intact / Broken / None
Signature:		Signature: <i>[Signature]</i>		TAT Req - SAME day / 1 / 2 / 3 / 4 / ☒ STD	

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden

Sample Login Details

Your reference	94562.02, Austral
Envirolab Reference	283685
Date Sample Received	23/11/2021
Date Instructions Received	23/11/2021
Date Results Expected to be Reported	30/11/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	57 Soil, 2 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Extra samples received placed on hold. Please refer to COC.

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	VTRH(C6-C10)/BTEXN in Water	On Hold
152-0-0.1				✓	✓		✓				
152-0.3-0.4											✓
137-0-0.3	✓	✓	✓				✓				
137-0.3-0.8											✓
25-0-0.5									✓		
25-0.5-1.0											✓
26-0-0.5									✓		
26-0.5-1.0											✓
27-0-0.5									✓		
27-0.5-1.0				✓	✓		✓				
28-0-0.5									✓		
28-0.5-1.0											✓
29-0-0.7	✓	✓	✓	✓	✓	✓	✓	✓	✓		
29-0.7-1.8											✓
30-0-0.5									✓		
30-0.5-1.0											✓
31-0-0.8	✓	✓	✓				✓				
31-0.8-1.5											✓
32-0-0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓		
32-0.5-1.0											✓
33-0-0.4	✓	✓	✓	✓	✓	✓	✓	✓	✓		
33-0.4-1.6	✓	✓	✓	✓	✓	✓	✓	✓	✓		
33-1.6-2.2											✓
34-0-0.8	✓	✓	✓	✓	✓	✓	✓	✓	✓		
34-0.8-1.3											✓
37-0-0.5	✓	✓	✓				✓				
37-0.5-1.0											✓
38-0-0.5	✓	✓	✓				✓				
38-0.5-1.0											✓
39-0-0.3	✓	✓	✓				✓				
39-0.3-1.0											✓
131-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓		

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	VTRH(C6-C10)/BTEXN in Water	On Hold
131-0.3-0.4											✓
134-0-0.1				✓	✓		✓				
134-0.3-0.4											✓
135-0-0.1				✓	✓		✓				
135-0.3-0.4											✓
136-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓		
136-0.3-0.4											✓
150-0-0.2				✓	✓		✓				
150-0.2-0.7											✓
151-0-0.1				✓	✓		✓				
151-0.3-0.4											✓
BD1	✓	✓	✓				✓				
BD2				✓	✓		✓				
BD1											✓
BD2											✓
TB											✓
TB										✓	
TP143-0-0.2											✓
TP143-0.2-0.7											✓
TP144-0-0.2											✓
TP144-0.2-0.8											✓
TP145-0-0.1											✓
TP145-0.1-0.6											✓
TP146-0-0.2											✓
TP146-0.2-0.7											✓
TP147-0-0.3											✓
TP147-0.3-0.9											✓

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.

CERTIFICATE OF ANALYSIS 284368

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	<u>94562.02, Austral</u>
Number of Samples	42 Soil
Date samples received	02/12/2021
Date completed instructions received	02/12/2021

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	08/12/2021
Date of Issue	08/12/2021
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 *	

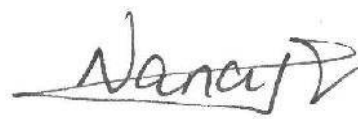
Asbestos Approved By

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
 Liam Timmins, Chemist
 Lucy Zhu, Asbestos Supervisor
 Manju Dewendrage, Prep Team Leader

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil

Our Reference		284368-19	284368-25	284368-29	284368-31	284368-35
Your Reference	UNITS	83/0.2	112/0.2	119/0.2	130/0.2	141/0.2
Date Sampled		24/11/2021	24/11/2021	23/11/2021	23/11/2021	23/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Date analysed	-	06/12/2021	06/12/2021	06/12/2021	06/12/2021	06/12/2021
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	%	79	83	77	74	76

vTRH(C6-C10)/BTEXN in Soil

Our Reference		284368-39
Your Reference	UNITS	169/0.2
Date Sampled		23/11/2021
Type of sample		Soil
Date extracted	-	02/12/2021
Date analysed	-	06/12/2021
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	%	80

svTRH (C10-C40) in Soil

Our Reference		284368-19	284368-25	284368-29	284368-31	284368-35
Your Reference	UNITS	83/0.2	112/0.2	119/0.2	130/0.2	141/0.2
Date Sampled		24/11/2021	24/11/2021	23/11/2021	23/11/2021	23/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
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	%	91	86	86	82	87

svTRH (C10-C40) in Soil

Our Reference		284368-39
Your Reference	UNITS	169/0.2
Date Sampled		23/11/2021
Type of sample		Soil
Date extracted	-	02/12/2021
Date analysed	-	03/12/2021
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	%	85

PAHs in Soil						
Our Reference		284368-19	284368-25	284368-29	284368-31	284368-35
Your Reference	UNITS	83/0.2	112/0.2	119/0.2	130/0.2	141/0.2
Date Sampled		24/11/2021	24/11/2021	23/11/2021	23/11/2021	23/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
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 <i>p</i> -Terphenyl-d14	%	95	92	95	86	92

PAHs in Soil		
Our Reference		284368-39
Your Reference	UNITS	169/0.2
Date Sampled		23/11/2021
Type of sample		Soil
Date extracted	-	02/12/2021
Date analysed	-	03/12/2021
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 <i>p</i> -Terphenyl-d14	%	90

Organochlorine Pesticides in soil						
Our Reference		284368-1	284368-3	284368-5	284368-7	284368-9
Your Reference	UNITS	6/0.1	40/0.1	41/0.15	42/0.2	43/0.2
Date Sampled		24/11/2021	24/11/2021	24/11/2021	24/11/2021	24/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
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	109	106	104	108

Organochlorine Pesticides in soil						
Our Reference		284368-11	284368-13	284368-15	284368-17	284368-19
Your Reference	UNITS	46/0.2	48/0.2	49/0.2	57/0.2	83/0.2
Date Sampled		24/11/2021	24/11/2021	24/11/2021	24/11/2021	24/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
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	%	103	101	99	110	105

Organochlorine Pesticides in soil						
Our Reference		284368-21	284368-23	284368-27	284368-29	284368-33
Your Reference	UNITS	96/0.2	99/0.2	113/0.2	119/0.2	134/0.2
Date Sampled		23/11/2021	23/11/2021	24/11/2021	23/11/2021	23/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
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	105	107	104	96

Organochlorine Pesticides in soil			
Our Reference		284368-37	284368-40
Your Reference	UNITS	163/0.2	169/0.5
Date Sampled		23/11/2021	23/11/2021
Type of sample		Soil	Soil
Date extracted	-	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021
alpha-BHC	mg/kg	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate TCMX	%	93	91

Organophosphorus Pesticides in Soil						
Our Reference	UNITS	284368-1	284368-3	284368-5	284368-7	284368-9
Your Reference		6/0.1	40/0.1	41/0.15	42/0.2	43/0.2
Date Sampled		24/11/2021	24/11/2021	24/11/2021	24/11/2021	24/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	109	106	104	108

Organophosphorus Pesticides in Soil						
Our Reference	UNITS	284368-11	284368-13	284368-15	284368-17	284368-19
Your Reference		46/0.2	48/0.2	49/0.2	57/0.2	83/0.2
Date Sampled		24/11/2021	24/11/2021	24/11/2021	24/11/2021	24/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	103	101	99	110	105

Organophosphorus Pesticides in Soil

Our Reference		284368-21	284368-23	284368-27	284368-29	284368-33
Your Reference	UNITS	96/0.2	99/0.2	113/0.2	119/0.2	134/0.2
Date Sampled		23/11/2021	23/11/2021	24/11/2021	23/11/2021	23/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	105	107	104	96

Organophosphorus Pesticides in Soil

Our Reference		284368-37	284368-40
Your Reference	UNITS	163/0.2	169/0.5
Date Sampled		23/11/2021	23/11/2021
Type of sample		Soil	Soil
Date extracted	-	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021
Dichlorvos	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	93	91

PCBs in Soil			
Our Reference		284368-19	284368-29
Your Reference	UNITS	83/0.2	119/0.2
Date Sampled		24/11/2021	23/11/2021
Type of sample		Soil	Soil
Date extracted	-	02/12/2021	02/12/2021
Date analysed	-	03/12/2021	03/12/2021
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	105	104

Acid Extractable metals in soil

Our Reference		284368-1	284368-3	284368-5	284368-7	284368-9
Your Reference	UNITS	6/0.1	40/0.1	41/0.15	42/0.2	43/0.2
Date Sampled		24/11/2021	24/11/2021	24/11/2021	24/11/2021	24/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
Arsenic	mg/kg	5	5	5	5	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	18	11	14	18
Copper	mg/kg	13	15	7	5	7
Lead	mg/kg	18	23	13	14	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	11	5	4	6
Zinc	mg/kg	34	32	10	10	13

Acid Extractable metals in soil

Our Reference		284368-11	284368-13	284368-15	284368-17	284368-19
Your Reference	UNITS	46/0.2	48/0.2	49/0.2	57/0.2	83/0.2
Date Sampled		24/11/2021	24/11/2021	24/11/2021	24/11/2021	24/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
Arsenic	mg/kg	8	6	6	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	18	17	14	15	11
Copper	mg/kg	7	9	11	10	19
Lead	mg/kg	19	16	16	20	11
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	6	8	6	5
Zinc	mg/kg	10	15	23	20	18

Acid Extractable metals in soil

Our Reference		284368-21	284368-23	284368-25	284368-27	284368-29
Your Reference	UNITS	96/0.2	99/0.2	112/0.2	113/0.2	119/0.2
Date Sampled		23/11/2021	23/11/2021	24/11/2021	24/11/2021	23/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
Arsenic	mg/kg	9	9	7	9	10
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	18	12	17	21
Copper	mg/kg	14	15	13	18	15
Lead	mg/kg	21	24	17	25	23
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	9	7	10	10
Zinc	mg/kg	26	29	28	34	23

Acid Extractable metals in soil

Our Reference		284368-31	284368-33	284368-35	284368-37	284368-39
Your Reference	UNITS	130/0.2	134/0.2	141/0.2	163/0.2	169/0.2
Date Sampled		23/11/2021	23/11/2021	23/11/2021	23/11/2021	23/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
Date analysed	-	03/12/2021	03/12/2021	03/12/2021	03/12/2021	03/12/2021
Arsenic	mg/kg	6	17	10	9	11
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	32	20	20	21
Copper	mg/kg	11	9	13	6	9
Lead	mg/kg	11	20	18	16	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	5	7	4	5
Zinc	mg/kg	14	8	22	8	12

Acid Extractable metals in soil		
Our Reference		284368-40
Your Reference	UNITS	169/0.5
Date Sampled		23/11/2021
Type of sample		Soil
Date prepared	-	03/12/2021
Date analysed	-	03/12/2021
Arsenic	mg/kg	5
Cadmium	mg/kg	<0.4
Chromium	mg/kg	15
Copper	mg/kg	15
Lead	mg/kg	11
Mercury	mg/kg	<0.1
Nickel	mg/kg	8
Zinc	mg/kg	16

Misc Soil - Inorg			
Our Reference		284368-19	284368-29
Your Reference	UNITS	83/0.2	119/0.2
Date Sampled		24/11/2021	23/11/2021
Type of sample		Soil	Soil
Date prepared	-	03/12/2021	03/12/2021
Date analysed	-	03/12/2021	03/12/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5

Moisture						
Our Reference	UNITS	284368-1	284368-3	284368-5	284368-7	284368-9
Your Reference		6/0.1	40/0.1	41/0.15	42/0.2	43/0.2
Date Sampled		24/11/2021	24/11/2021	24/11/2021	24/11/2021	24/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	2/12/2021	2/12/2021	2/12/2021	2/12/2021	2/12/2021
Date analysed	-	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Moisture	%	17	20	18	23	24

Moisture						
Our Reference	UNITS	284368-11	284368-13	284368-15	284368-17	284368-19
Your Reference		46/0.2	48/0.2	49/0.2	57/0.2	83/0.2
Date Sampled		24/11/2021	24/11/2021	24/11/2021	24/11/2021	24/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	2/12/2021	2/12/2021	2/12/2021	2/12/2021	2/12/2021
Date analysed	-	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Moisture	%	21	19	24	25	16

Moisture						
Our Reference	UNITS	284368-21	284368-23	284368-25	284368-27	284368-29
Your Reference		96/0.2	99/0.2	112/0.2	113/0.2	119/0.2
Date Sampled		23/11/2021	23/11/2021	24/11/2021	24/11/2021	23/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	2/12/2021	2/12/2021	2/12/2021	2/12/2021	2/12/2021
Date analysed	-	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Moisture	%	23	28	18	21	19

Moisture						
Our Reference	UNITS	284368-31	284368-33	284368-35	284368-37	284368-39
Your Reference		130/0.2	134/0.2	141/0.2	163/0.2	169/0.2
Date Sampled		23/11/2021	23/11/2021	23/11/2021	23/11/2021	23/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	2/12/2021	2/12/2021	2/12/2021	2/12/2021	2/12/2021
Date analysed	-	3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Moisture	%	21	17	28	19	20

Moisture		
Our Reference	UNITS	284368-40
Your Reference		169/0.5
Date Sampled		23/11/2021
Type of sample		Soil
Date prepared	-	2/12/2021
Date analysed	-	3/12/2021
Moisture	%	20

Asbestos ID - soils						
Our Reference	UNITS	284368-19	284368-29	284368-37	284368-39	284368-40
Your Reference		83/0.2	119/0.2	163/0.2	169/0.2	169/0.5
Date Sampled		24/11/2021	23/11/2021	23/11/2021	23/11/2021	23/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	07/12/2021	07/12/2021	07/12/2021	07/12/2021	07/12/2021
Sample mass tested	g	Approx. 55g	Approx. 40g	Approx. 75g	Approx. 70g	Approx. 60g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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

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-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-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	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.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

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

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	284368-29
Date extracted	-			02/12/2021	19	02/12/2021	02/12/2021		02/12/2021	02/12/2021
Date analysed	-			06/12/2021	19	06/12/2021	06/12/2021		06/12/2021	06/12/2021
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	19	<25	<25	0	78	85
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	19	<25	<25	0	78	85
Benzene	mg/kg	0.2	Org-023	<0.2	19	<0.2	<0.2	0	77	71
Toluene	mg/kg	0.5	Org-023	<0.5	19	<0.5	<0.5	0	72	83
Ethylbenzene	mg/kg	1	Org-023	<1	19	<1	<1	0	82	94
m+p-xylene	mg/kg	2	Org-023	<2	19	<2	<2	0	79	89
o-Xylene	mg/kg	1	Org-023	<1	19	<1	<1	0	73	84
Naphthalene	mg/kg	1	Org-023	<1	19	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	80	19	79	81	2	71	78

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	284368-29
Date extracted	-			02/12/2021	19	02/12/2021	02/12/2021		02/12/2021	02/12/2021
Date analysed	-			03/12/2021	19	03/12/2021	03/12/2021		03/12/2021	03/12/2021
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	19	<50	<50	0	90	92
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	19	<100	<100	0	83	87
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	19	<100	<100	0	91	105
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	19	<50	<50	0	90	92
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	19	<100	<100	0	83	87
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	19	<100	<100	0	91	105
Surrogate o-Terphenyl	%		Org-020	86	19	91	87	4	106	86

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	284368-29
Date extracted	-			02/12/2021	19	02/12/2021	02/12/2021		02/12/2021	02/12/2021
Date analysed	-			03/12/2021	19	03/12/2021	03/12/2021		03/12/2021	03/12/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	113	109
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	113	101
Fluorene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	124	109
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	128	114
Anthracene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	110	102
Pyrene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	109	105
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	91	81
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	19	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	19	<0.05	<0.05	0	112	110
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	96	19	95	92	3	96	83

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	[NT]
Date extracted	-			[NT]	[NT]	[NT]	[NT]	[NT]	02/12/2021	[NT]
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	03/12/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	114	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	111	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	118	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	108	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	110	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	111	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	89	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	108	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	96	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	284368-3
Date extracted	-			02/12/2021	1	02/12/2021	02/12/2021		02/12/2021	02/12/2021
Date analysed	-			03/12/2021	1	03/12/2021	03/12/2021		03/12/2021	03/12/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	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	128	111
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	103	101
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	111	109
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	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	109
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	116	110
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	115	116
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	102	106
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	104	100
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	109	1	108	105	3	106	107

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	284368-29
Date extracted	-			[NT]	19	02/12/2021	02/12/2021		02/12/2021	02/12/2021
Date analysed	-			[NT]	19	03/12/2021	03/12/2021		03/12/2021	03/12/2021
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	110	100
HCB	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	130	121
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	99	93
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	107	99
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	104	94
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	101	94
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	110	119
Endrin	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	117	105
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	102	88
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	98	86
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	19	105	101	4	105	93

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	40	02/12/2021	02/12/2021		[NT]	[NT]
Date analysed	-			[NT]	40	03/12/2021	03/12/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	40	91	96	5	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	284368-3
Date extracted	-			02/12/2021	1	02/12/2021	02/12/2021		02/12/2021	02/12/2021
Date analysed	-			03/12/2021	1	03/12/2021	03/12/2021		03/12/2021	03/12/2021
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	109	94
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]
Chlorpyrifos-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	104	106
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	89	85
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	74
Chlorpyrifos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	120	128
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	97	95
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	100	109
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	109	1	108	105	3	106	107

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	284368-29
Date extracted	-			[NT]	19	02/12/2021	02/12/2021		02/12/2021	02/12/2021
Date analysed	-			[NT]	19	03/12/2021	03/12/2021		03/12/2021	03/12/2021
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	111	109
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	118	91
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	83	75
Malathion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	130	115
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	96	108
Parathion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	111	84
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	102	88
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	19	105	101	4	105	93

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	40	02/12/2021	02/12/2021		[NT]	[NT]
Date analysed	-			[NT]	40	03/12/2021	03/12/2021		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	40	91	96	5	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	284368-29
Date extracted	-			02/12/2021	19	02/12/2021	02/12/2021		02/12/2021	02/12/2021
Date analysed	-			03/12/2021	19	03/12/2021	03/12/2021		03/12/2021	03/12/2021
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	19	<0.1	<0.1	0	120	80
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	109	19	105	101	4	106	93

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-13	[NT]
Date extracted	-			[NT]	[NT]	[NT]	[NT]	[NT]	02/12/2021	[NT]
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	03/12/2021	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	[NT]	[NT]	[NT]	[NT]	120	[NT]
Surrogate TCMX	%		Org-021	[NT]	[NT]	[NT]	[NT]	[NT]	105	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	284368-3
Date prepared	-			03/12/2021	1	03/12/2021	03/12/2021		03/12/2021	03/12/2021
Date analysed	-			03/12/2021	1	03/12/2021	03/12/2021		03/12/2021	03/12/2021
Arsenic	mg/kg	4	Metals-020	<4	1	5	5	0	104	79
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	97	76
Chromium	mg/kg	1	Metals-020	<1	1	15	15	0	100	84
Copper	mg/kg	1	Metals-020	<1	1	13	14	7	104	82
Lead	mg/kg	1	Metals-020	<1	1	18	18	0	99	79
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	106	90
Nickel	mg/kg	1	Metals-020	<1	1	10	10	0	102	80
Zinc	mg/kg	1	Metals-020	<1	1	34	36	6	101	78

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	284368-29
Date prepared	-			[NT]	19	03/12/2021	03/12/2021		03/12/2021	03/12/2021
Date analysed	-			[NT]	19	03/12/2021	03/12/2021		03/12/2021	03/12/2021
Arsenic	mg/kg	4	Metals-020	[NT]	19	5	5	0	100	#
Cadmium	mg/kg	0.4	Metals-020	[NT]	19	<0.4	<0.4	0	93	81
Chromium	mg/kg	1	Metals-020	[NT]	19	11	13	17	95	71
Copper	mg/kg	1	Metals-020	[NT]	19	19	23	19	100	94
Lead	mg/kg	1	Metals-020	[NT]	19	11	13	17	94	#
Mercury	mg/kg	0.1	Metals-021	[NT]	19	<0.1	<0.1	0	89	96
Nickel	mg/kg	1	Metals-020	[NT]	19	5	5	0	97	71
Zinc	mg/kg	1	Metals-020	[NT]	19	18	17	6	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]	40	03/12/2021	03/12/2021		[NT]	[NT]
Date analysed	-			[NT]	40	03/12/2021	03/12/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	40	5	4	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	40	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	40	15	14	7	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	40	15	14	7	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	40	11	9	20	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	40	8	8	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	40	16	13	21	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-12	[NT]
Date prepared	-			03/12/2021	[NT]	[NT]	[NT]	[NT]	03/12/2021	[NT]
Date analysed	-			03/12/2021	[NT]	[NT]	[NT]	[NT]	03/12/2021	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[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

Asbestos: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.

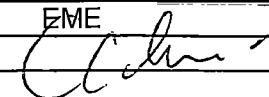
Note: Samples 284368-19, 29, 37, 39, 40 were sub-sampled from bags provided by the client.

8 metals in soil - # Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: SC
Project Mgr: Emily Eden	12 Ashley Street, Chatswood NSW 2067
Mob. Phone: N/A	Attn: Nancy Zhang
Email: emily.eden@douglaspartners.com.au; sebastian.camilleri@douglaspartners.com.au	Phone: (02) 9910 6200 Fax: (02) 9910 6201
Date Required: Standard turnaround	Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Date Sampled	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos (50 g)			
6/0.1	1	24/11/21	S	G / P			x							Refer to Quotation 20SY400
6/0.5	2	24/11/21	S	G / P						x				
40/0.1	3	24/11/21	S	G / P			x							
40/0.5	4	24/11/21	S	G / P						x				
41/0.15	5	24/11/21	S	G / P			x							
41/0.5	6	24/11/21	S	G / P						x				
42/0.2	7	24/11/21	S	G / P			x							
42/0.5	8	24/11/21	S	G / P						x				
43/0.2	9	24/11/21	S	G / P			x							
43/0.5	10	24/11/21	S	G / P						x				
46/0.2	11	24/11/21	S	G / P			x							
46/0.5	12	24/11/21	S	G / P						x				
48/0.2	13	24/11/21	S	G / P			x							


Envirolab Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200
 Job No: 284368
 Date Received: 02/12/21
 Time Received: 12:11
 Received By: CM
 Temp: Cool/Ambient
 Cooling: Ice/Repack
 Security: Intact/Broken

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 29/11/2021	Received by: Christine	02/12/21

1215.

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: SC	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au; sebastian.camilleri@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

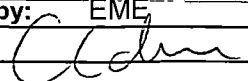
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes								Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos (50 g)		
48/0.5	14	24/11/21	S	G / P						x			
49/0.2	15	24/11/21	S	G / P			x						
49/0.5	16	24/11/21	S	G / P						x			
57/0.2	17	24/11/21	S	G / P			x						
57/0.5	18	24/11/21	S	G / P						x			
83/0.2	19	24/11/21	S	G / P	x								
83/0.5	20	24/11/21	S	G / P						x			
96/0.2	21	23/11/21	S	G / P			x						
96/0.5	22	23/11/21	S	G / P						x			
99/0.2	23	23/11/21	S	G / P			x						
99/0.5	24	23/11/21	S	G						x			
112/0.2	25	24/11/21	S	G		x							
112/0.5	26	24/11/21	S	G						x			

Lab Report No:		Send Results to: Douglas Partners Pty Ltd		Address: 18 Waler Crescent Smeaton Grange 2567		Phone: (02) 4647 0075		Fax: (02) 4646 1886	
Relinquished by: EME		Transported to laboratory by:							
Signed: 		Date & Time: 29/11/2021		Received by: Christine 21/12/21 12:10					

284368

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: SC	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au; sebastian.camilleri@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos (50 g)			
113/0.2	27	24/11/21	S	G			x							
113/0.5	28	24/11/21	S	G						x				
119/0.2	29	23/11/21	S	G	x									
119/0.5	30	23/11/21	S	G						x				
130/0.2	31	23/11/21	S	G		x								
130/0.5	32	23/11/21	S	G/P						x				
134/0.2	33	23/11/21	S	G/P			x							
134/0.5	34	23/11/21	S	G/P						x				
141/0.2	35	23/11/21	S	G/P		x								
141/0.5	36	23/11/21	S	G/P						x				
152/0.2	NK	23/11/21	S	G/P			x							
152/0.5	NK	23/11/21	S	G/P						x				
163/0.2	37	23/11/21	S	G/P			x				x			

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME		Transported to laboratory by:	
Signed: 	Date & Time: 29/11/2021	Received by: Christine 02/12/21 12:15	

#1 284368

Project Name: Austral	Sampler: SC	To: Envirolab Services
Project No: 94562.02	Mob. Phone: N/A	12 Ashley Street, Chatswood NSW 2067
Project Mgr: Emily Eden	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au; sebastian.camilleri@douglaspartners.com.au	Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround	Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos (50 g)			
163/0.5	38	23/11/21	S	G/P						x				
169/0.2	79	23/11/21	S	G/P		x					x			
169/0.5	40	23/11/21	S	G/P			x				x			
170/0.2	41	23/11/21	S	G/P						x				
170/0.5	42		S	G										
(extra - K)			S	G										
			S	G										
			S	G										
			W	G										
			W	G										

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 29/11/2021	Received by: christine	02/12/21 1245

#289368

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden

Sample Login Details

Your reference	94562.02, Austral
Envirolab Reference	284368
Date Sample Received	02/12/2021
Date Instructions Received	02/12/2021
Date Results Expected to be Reported	08/12/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	42 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	20
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:



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 ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
6/0.1				✓	✓		✓			
6/0.5										✓
40/0.1				✓	✓		✓			
40/0.5										✓
41/0.15				✓	✓		✓			
41/0.5										✓
42/0.2				✓	✓		✓			
42/0.5										✓
43/0.2				✓	✓		✓			
43/0.5										✓
46/0.2				✓	✓		✓			
46/0.5										✓
48/0.2				✓	✓		✓			
48/0.5										✓
49/0.2				✓	✓		✓			
49/0.5										✓
57/0.2				✓	✓		✓			
57/0.5										✓
83/0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
83/0.5										✓
96/0.2				✓	✓		✓			
96/0.5										✓
99/0.2				✓	✓		✓			
99/0.5										✓
112/0.2	✓	✓	✓				✓			
112/0.5										✓
113/0.2				✓	✓		✓			
113/0.5										✓
119/0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
119/0.5										✓
130/0.2	✓	✓	✓				✓			
130/0.5										✓



Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
134/0.2				✓	✓		✓			
134/0.5										✓
141/0.2	✓	✓	✓				✓			
141/0.5										✓
163/0.2				✓	✓		✓		✓	
163/0.5										✓
169/0.2	✓	✓	✓				✓		✓	
169/0.5				✓	✓		✓		✓	
170/0.2										✓
170/0.5										✓

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.

CERTIFICATE OF ANALYSIS 284824

Client Details

Client	Douglas Partners Pty Ltd
Attention	Emily Eden
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>94562.02, Austral</u>
Number of Samples	41 Soil
Date samples received	07/12/2021
Date completed instructions received	07/12/2021

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	15/12/2021
Date of Issue	15/12/2021
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 *	

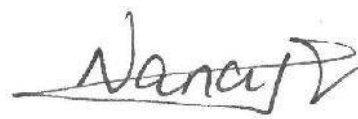
Asbestos Approved By

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
 Liam Timmins, Chemist
 Lucy Zhu, Asbestos Supervisor
 Manju Dewendrage, Prep Team Leader

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		284824-21
Your Reference	UNITS	BH128
Depth		0.1
Date Sampled		3/12/2021
Type of sample		Soil
Date extracted	-	08/12/2021
Date analysed	-	10/12/2021
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	%	91

svTRH (C10-C40) in Soil		
Our Reference		284824-21
Your Reference	UNITS	BH128
Depth		0.1
Date Sampled		3/12/2021
Type of sample		Soil
Date extracted	-	09/12/2021
Date analysed	-	10/12/2021
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	%	76

PAHs in Soil		
Our Reference		284824-21
Your Reference	UNITS	BH128
Depth		0.1
Date Sampled		3/12/2021
Type of sample		Soil
Date extracted	-	09/12/2021
Date analysed	-	10/12/2021
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 <i>p</i> -Terphenyl-d14	%	118

Organochlorine Pesticides in soil						
Our Reference		284824-1	284824-3	284824-5	284824-7	284824-9
Your Reference	UNITS	BH51	BH53	BH54	BH55	BH56
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	96	96	97	98	100

Organochlorine Pesticides in soil						
Our Reference		284824-11	284824-13	284824-15	284824-17	284824-19
Your Reference	UNITS	BH114	BH115	BH116	BH117	BH118
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	95	99	96	96	106

Organochlorine Pesticides in soil						
Our Reference		284824-21	284824-23	284824-25	284824-27	284824-29
Your Reference	UNITS	BH128	BH129	BH132	BH133	BH138
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	102	96	99	93	93

Organochlorine Pesticides in soil						
Our Reference		284824-31	284824-32	284824-34	284824-36	284824-38
Your Reference	UNITS	BH140	BH142	BH148	BH149	BH153
Depth		0.5	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	92	94	95	96

Organochlorine Pesticides in soil		
Our Reference		284824-40
Your Reference	UNITS	BH220
Depth		0.1
Date Sampled		3/12/2021
Type of sample		Soil
Date extracted	-	09/12/2021
Date analysed	-	10/12/2021
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	%	96

Organophosphorus Pesticides in Soil						
Our Reference		284824-1	284824-3	284824-5	284824-7	284824-9
Your Reference	UNITS	BH51	BH53	BH54	BH55	BH56
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	96	96	97	98	100

Organophosphorus Pesticides in Soil

Our Reference		284824-11	284824-13	284824-15	284824-17	284824-19
Your Reference	UNITS	BH114	BH115	BH116	BH117	BH118
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	95	99	96	96	106

Organophosphorus Pesticides in Soil

Our Reference		284824-21	284824-23	284824-25	284824-27	284824-29
Your Reference	UNITS	BH128	BH129	BH132	BH133	BH138
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	102	96	99	93	93

Organophosphorus Pesticides in Soil						
Our Reference		284824-31	284824-32	284824-34	284824-36	284824-38
Your Reference	UNITS	BH140	BH142	BH148	BH149	BH153
Depth		0.5	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	92	94	95	96

Organophosphorus Pesticides in Soil		
Our Reference		284824-40
Your Reference	UNITS	BH220
Depth		0.1
Date Sampled		3/12/2021
Type of sample		Soil
Date extracted	-	09/12/2021
Date analysed	-	10/12/2021
Dichlorvos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyrifos	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	%	96

PCBs in Soil		
Our Reference		284824-21
Your Reference	UNITS	BH128
Depth		0.1
Date Sampled		3/12/2021
Type of sample		Soil
Date extracted	-	09/12/2021
Date analysed	-	10/12/2021
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	%	102

Acid Extractable metals in soil

Our Reference		284824-1	284824-3	284824-5	284824-7	284824-9
Your Reference	UNITS	BH51	BH53	BH54	BH55	BH56
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Arsenic	mg/kg	7	<4	6	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	12	16	16	15
Copper	mg/kg	11	15	9	8	8
Lead	mg/kg	17	7	17	15	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	7	6	5	4
Zinc	mg/kg	15	17	15	12	14

Acid Extractable metals in soil

Our Reference		284824-11	284824-13	284824-15	284824-17	284824-19
Your Reference	UNITS	BH114	BH115	BH116	BH117	BH118
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Arsenic	mg/kg	9	6	7	9	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	15	14	19	16
Copper	mg/kg	14	14	24	16	16
Lead	mg/kg	17	18	18	19	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	8	7	9	6
Zinc	mg/kg	22	24	25	30	16

Acid Extractable metals in soil

Our Reference		284824-21	284824-23	284824-25	284824-27	284824-29
Your Reference	UNITS	BH128	BH129	BH132	BH133	BH138
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Arsenic	mg/kg	8	8	12	11	10
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	18	26	32	20
Copper	mg/kg	10	11	16	4	21
Lead	mg/kg	23	22	12	14	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	5	5	2	8
Zinc	mg/kg	16	13	19	5	28

Acid Extractable metals in soil

Our Reference		284824-31	284824-32	284824-34	284824-36	284824-38
Your Reference	UNITS	BH140	BH142	BH148	BH149	BH153
Depth		0.5	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Date analysed	-	09/12/2021	09/12/2021	09/12/2021	09/12/2021	09/12/2021
Arsenic	mg/kg	6	9	10	10	12
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	21	20	24	34
Copper	mg/kg	25	11	12	9	10
Lead	mg/kg	12	20	23	20	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	7	6	6	5
Zinc	mg/kg	31	18	17	17	12

Acid Extractable metals in soil		
Our Reference		284824-40
Your Reference	UNITS	BH220
Depth		0.1
Date Sampled		3/12/2021
Type of sample		Soil
Date prepared	-	09/12/2021
Date analysed	-	09/12/2021
Arsenic	mg/kg	8
Cadmium	mg/kg	<0.4
Chromium	mg/kg	18
Copper	mg/kg	10
Lead	mg/kg	19
Mercury	mg/kg	<0.1
Nickel	mg/kg	5
Zinc	mg/kg	17

Misc Soil - Inorg		
Our Reference		284824-21
Your Reference	UNITS	BH128
Depth		0.1
Date Sampled		3/12/2021
Type of sample		Soil
Date prepared	-	13/12/2021
Date analysed	-	13/12/2021
Total Phenolics (as Phenol)	mg/kg	<5

Moisture						
Our Reference	UNITS	284824-1	284824-3	284824-5	284824-7	284824-9
Your Reference		BH51	BH53	BH54	BH55	BH56
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	9/12/2021	9/12/2021	9/12/2021	9/12/2021	9/12/2021
Date analysed	-	9/12/2021	9/12/2021	9/12/2021	9/12/2021	9/12/2021
Moisture	%	18	16	18	18	24

Moisture						
Our Reference	UNITS	284824-11	284824-13	284824-15	284824-17	284824-19
Your Reference		BH114	BH115	BH116	BH117	BH118
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	9/12/2021	9/12/2021	9/12/2021	9/12/2021	9/12/2021
Date analysed	-	9/12/2021	9/12/2021	9/12/2021	9/12/2021	9/12/2021
Moisture	%	20	21	16	22	17

Moisture						
Our Reference	UNITS	284824-21	284824-23	284824-25	284824-27	284824-29
Your Reference		BH128	BH129	BH132	BH133	BH138
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	9/12/2021	9/12/2021	9/12/2021	9/12/2021	9/12/2021
Date analysed	-	9/12/2021	9/12/2021	9/12/2021	9/12/2021	9/12/2021
Moisture	%	22	19	27	17	21

Moisture						
Our Reference	UNITS	284824-31	284824-32	284824-34	284824-36	284824-38
Your Reference		BH140	BH142	BH148	BH149	BH153
Depth		0.5	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	9/12/2021	9/12/2021	9/12/2021	9/12/2021	9/12/2021
Date analysed	-	9/12/2021	9/12/2021	9/12/2021	9/12/2021	9/12/2021
Moisture	%	20	19	20	22	19

Moisture		
Our Reference		284824-40
Your Reference	UNITS	BH220
Depth		0.1
Date Sampled		3/12/2021
Type of sample		Soil
Date prepared	-	9/12/2021
Date analysed	-	9/12/2021
Moisture	%	22

Asbestos ID - soils						
Our Reference	UNITS	284824-1	284824-3	284824-5	284824-7	284824-9
Your Reference		BH51	BH53	BH54	BH55	BH56
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 40g	Approx. 40g	Approx. 35g	Approx. 35g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	284824-11	284824-13	284824-15	284824-17	284824-19
Your Reference		BH114	BH115	BH116	BH117	BH118
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 55g	Approx. 30g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	284824-21	284824-23	284824-25	284824-27	284824-29
Your Reference		BH128	BH129	BH132	BH133	BH138
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 85g	Approx. 30g	Approx. 50g	Approx. 85g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	284824-31	284824-32	284824-34	284824-36	284824-38
Your Reference		BH140	BH142	BH148	BH149	BH153
Depth		0.5	0.1	0.1	0.1	0.1
Date Sampled		3/12/2021	3/12/2021	3/12/2021	3/12/2021	3/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 45g	Approx. 55g	Approx. 35g	Approx. 50g	Approx. 50g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils		
Our Reference		284824-40
Your Reference	UNITS	BH220
Depth		0.1
Date Sampled		3/12/2021
Type of sample		Soil
Date analysed	-	15/12/2021
Sample mass tested	g	Approx. 50g
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected

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-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-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	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.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

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

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	284824-21
Date extracted	-			08/12/2021	21	08/12/2021	08/12/2021		08/12/2021	08/12/2021
Date analysed	-			10/12/2021	21	10/12/2021	10/12/2021		10/12/2021	10/12/2021
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	21	<25	<25	0	87	84
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	21	<25	<25	0	87	84
Benzene	mg/kg	0.2	Org-023	<0.2	21	<0.2	<0.2	0	77	74
Toluene	mg/kg	0.5	Org-023	<0.5	21	<0.5	<0.5	0	87	84
Ethylbenzene	mg/kg	1	Org-023	<1	21	<1	<1	0	93	90
m+p-xylene	mg/kg	2	Org-023	<2	21	<2	<2	0	89	86
o-Xylene	mg/kg	1	Org-023	<1	21	<1	<1	0	84	81
Naphthalene	mg/kg	1	Org-023	<1	21	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	94	21	91	90	1	96	88

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	284824-21
Date extracted	-			09/12/2021	21	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Date analysed	-			09/12/2021	21	10/12/2021	10/12/2021		09/12/2021	10/12/2021
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	21	<50	<50	0	76	76
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	21	<100	<100	0	70	70
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	21	<100	<100	0	91	86
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	21	<50	<50	0	76	76
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	21	<100	<100	0	70	70
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	21	<100	<100	0	91	86
Surrogate o-Terphenyl	%		Org-020	70	21	76	74	3	73	76

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284824-21
Date extracted	-			09/12/2021	21	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Date analysed	-			10/12/2021	21	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	116	113
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	111	105
Fluorene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	109	109
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	122	100
Anthracene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	116	106
Pyrene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	117	119
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	103	95
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	21	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	21	<0.05	<0.05	0	124	118
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	110	21	118	112	5	93	91

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284824-3
Date extracted	-			09/12/2021	1	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Date analysed	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	114	116
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	99	99
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	99	103
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	118	128
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	124	120
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	115	119
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	122
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	115	115
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	116	112
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	96	96
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	100	1	96	94	2	94	95

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	284824-21
Date extracted	-			[NT]	21	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Date analysed	-			[NT]	21	10/12/2021	10/12/2021		10/12/2021	10/12/2021
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	104	106
HCB	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	89	99
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	95	95
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	116	113
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	120	116
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	109	111
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	114	112
Endrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	125	113
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	104	110
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	88	90
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	21	102	100	2	93	89

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284824-3
Date extracted	-			09/12/2021	1	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Date analysed	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	97	103
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]
Chlorpyrifos-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	114	118
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	93	99
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	116	116
Chlorpyrifos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	118	120
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	82	86
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	92	92
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	100	1	96	94	2	94	95

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	284824-21
Date extracted	-			[NT]	21	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Date analysed	-			[NT]	21	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	74	100
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	106	110
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	81	83
Malathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	106	108
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	120	114
Parathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	82	76
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	84	90
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	21	102	100	2	93	89

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284824-21
Date extracted	-			09/12/2021	21	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Date analysed	-			10/12/2021	21	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	21	<0.1	<0.1	0	116	100
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	107	21	102	100	2	94	89

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284824-3
Date prepared	-			09/12/2021	1	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Date analysed	-			09/12/2021	1	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Arsenic	mg/kg	4	Metals-020	<4	1	7	6	15	100	92
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	97	80
Chromium	mg/kg	1	Metals-020	<1	1	16	17	6	103	99
Copper	mg/kg	1	Metals-020	<1	1	11	11	0	99	113
Lead	mg/kg	1	Metals-020	<1	1	17	18	6	103	91
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	105	107
Nickel	mg/kg	1	Metals-020	<1	1	6	6	0	95	86
Zinc	mg/kg	1	Metals-020	<1	1	15	15	0	97	92

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	284824-21
Date prepared	-			[NT]	21	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Date analysed	-			[NT]	21	09/12/2021	09/12/2021		09/12/2021	09/12/2021
Arsenic	mg/kg	4	Metals-020	[NT]	21	8	7	13	99	78
Cadmium	mg/kg	0.4	Metals-020	[NT]	21	<0.4	<0.4	0	95	72
Chromium	mg/kg	1	Metals-020	[NT]	21	19	17	11	102	76
Copper	mg/kg	1	Metals-020	[NT]	21	10	9	11	98	89
Lead	mg/kg	1	Metals-020	[NT]	21	23	21	9	102	76
Mercury	mg/kg	0.1	Metals-021	[NT]	21	<0.1	<0.1	0	112	105
Nickel	mg/kg	1	Metals-020	[NT]	21	7	6	15	94	72
Zinc	mg/kg	1	Metals-020	[NT]	21	16	13	21	96	#

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	40	09/12/2021	09/12/2021		[NT]	[NT]
Date analysed	-			[NT]	40	09/12/2021	09/12/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	40	8	7	13	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	40	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	40	18	15	18	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	40	10	9	11	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	40	19	16	17	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	40	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	40	5	4	22	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	40	17	14	19	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			13/12/2021	[NT]	[NT]	[NT]	[NT]	13/12/2021	[NT]
Date analysed	-			13/12/2021	[NT]	[NT]	[NT]	[NT]	13/12/2021	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	[NT]	[NT]	[NT]	[NT]	103	[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

8 metals in soil - # Percent recovery is not possible to report due to the inhomogeneous nature of the element in the sample. 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 284824-1, 3, 5, 7, 9, 11, 13, 17, 19, 29 were sub-sampled from jars provided by the client.

Asbestos: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.

Note: Samples 284824-15, 21, 23, 25, 27, 31, 32, 34, 36, 38, 40 were sub-sampled from bags provided by the client.

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Project No: 94562.02	12 Ashley Street, Chatswood NSW 2067
Project Mgr: Emily Eden	Attn: Nancy Zhang
Email: emily.eden@douglaspartners.com.au	Phone: (02) 9910 6200 Fax: (02) 9910 6201
Date Required: Standard turnaround	Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Date Sampled	Sample Type	Container Type	Analytes								Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g		
BH51/0.1	1	03.12.21	S	G			x				x		Refer to Quotation 20SY400
BH51/0.5	2	03.12.21	S	G						x			
BH53/0.1	3	03.12.21	S	G			x				x		
BH53/0.5	4	03.12.21	S	G						x			
BH54/0.1	5	03.12.21	S	G			x				x		
BH54/0.5	6	03.12.21	S	G						x			
BH55/0.1	7	03.12.21	S	G			x				x		
BH55/0.5	8	03.12.21	S	G						x			
BH56/0.1	9	03.12.21	S	G			x				x		
BH56/0.5	10	03.12.21	S	G						x			
BH114/0.1	11	03.12.21	S	G			x				x		
BH114/0.5	12	03.12.21	S	G						x			
BH115/0.1	13	03.12.21	S	G			x				x		

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 284824

Date Received: 7.12.21

Time Received: 18:00

Received By: [Signature]

Temp: Cool/Ambient

Cooling: Ice/Refract

Seal: Intact/Broken

Lab Report No:	
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange 2567
Relinquished by: AJ	Transported to laboratory by:
Signed: [Signature]	Received by: [Signature]
Date & Time: 7/12/2021	Time: 7.12.21 18:00

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: SC
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes										Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g				
BH115/0.5	14	03.12.21	S	G						x					
BH116/0.1	15	03.12.21	S	G & P			x				x				
BH116/0.5	16	03.12.21	S	G & P						x					
BH117/0.1	17	03.12.21	S	G			x				x				
BH117/0.5	18	03.12.21	S	G						x					
BH118/0.1	19	03.12.21	S	G			x				x				281824
BH118/0.5	20	03.12.21	S	G						x					
BH128/0.1	21	03.12.21	S	G & P	x										
BH128/0.5	22	03.12.21	S	G & P						x					
BH129/0.1	23	03.12.21	S	G & P			x				x				
BH129/0.5	24	03.12.21	S	P						x					
BH132/0.1	25	03.12.21	S	G & P			x				x				
BH132/0.5	26	03.12.21	S	G & P						x					

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent, Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: AJ	Transported to laboratory by:		
Signed: <i>AJ Jagdish</i>	Date & Time: 7/12/2021	Received by: <i>[Signature]</i> 7.12.21	

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: SC	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes								Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g		
BH133/0.1	27	03.12.21	S	G & P			x				x		
BH133/0.5	28	03.12.21	S	G & P						x			
BH138/0.1	29	02.12.21	S	G			x				x		
BH138/0.5	30	02.12.21	S	G & P						x			
BH140/0.5	31	02.12.21	S	G & P			x				x		
BH142/0.1	32	02.12.21	S	G & P			x				x		284829
BH142/0.5	33	02.12.21	S	G & P						x			
BH148/0.1	34	03.12.21	S	G & P			x				x		
BH148/0.5	35	03.12.21	S	G & P						x			
BH149/0.1	36	03.12.21	S	G & P			x				x		
BH149/0.5	37	03.12.21	S	G & P						x			
BH153/0.1	38	03.12.21	S	G & P			x				x		
BH153/0.5	39	03.12.21	S	G & P						x			

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent, Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: AJ		Transported to laboratory by:	
Signed: <i>A. Jagdish</i>	Date & Time: 7/12/2021	Received by: <i>[Signature]</i> 7-12-21	

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: SC	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes								Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD		Asbestos (500ml)	
BH220/0.1	YD	03.12.21	S	G & P			X				X		
BH220/0.5	YI	03.12.21	S	G & P						X			
													284824

Lab Report No:		Send Results to: Douglas Partners Pty Ltd		Address: 18 Waler Crescent Smeaton Grange		Phone: (02) 4647 0075		Fax: (02) 4646 1886	
Relinquished by: AJ				Transported to laboratory by:					
Signed: <i>A. Jagdish</i>				Date & Time: 07.12.21		Received by: <i>[Signature]</i> 7-12-21			

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Emily Eden

Sample Login Details

Your reference	94562.02, Austral
Envirolab Reference	284824
Date Sample Received	07/12/2021
Date Instructions Received	07/12/2021
Date Results Expected to be Reported	15/12/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	41 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	4
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:



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 ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
BH51-0.1				✓	✓		✓		✓	
BH51-0.5										✓
BH53-0.1				✓	✓		✓		✓	
BH53-0.5										✓
BH54-0.1				✓	✓		✓		✓	
BH54-0.5										✓
BH55-0.1				✓	✓		✓		✓	
BH55-0.5										✓
BH56-0.1				✓	✓		✓		✓	
BH56-0.5										✓
BH114-0.1				✓	✓		✓		✓	
BH114-0.5										✓
BH115-0.1				✓	✓		✓		✓	
BH115-0.5										✓
BH116-0.1				✓	✓		✓		✓	
BH116-0.5										✓
BH117-0.1				✓	✓		✓		✓	
BH117-0.5										✓
BH118-0.1				✓	✓		✓		✓	
BH118-0.5										✓
BH128-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	
BH128-0.5										✓
BH129-0.1				✓	✓		✓		✓	
BH129-0.5										✓
BH132-0.1				✓	✓		✓		✓	
BH132-0.5										✓
BH133-0.1				✓	✓		✓		✓	
BH133-0.5										✓
BH138-0.1				✓	✓		✓		✓	
BH138-0.5										✓
BH140-0.5				✓	✓		✓		✓	
BH142-0.1				✓	✓		✓		✓	



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

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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	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
BH142-0.5										✓
BH148-0.1				✓	✓		✓		✓	
BH148-0.5										✓
BH149-0.1				✓	✓		✓		✓	
BH149-0.5										✓
BH153-0.1				✓	✓		✓		✓	
BH143-0.5										✓
BH220-0.1				✓	✓		✓		✓	
BH220-0.5										✓

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.

CERTIFICATE OF ANALYSIS 284858

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	<u>94562.02, Austral</u>
Number of Samples	138 Soil
Date samples received	30/11/2021
Date completed instructions received	07/12/2021

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	16/12/2021
Date of Issue	16/12/2021
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 *	

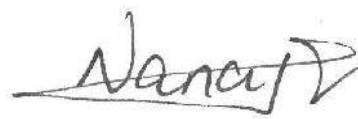
Asbestos Approved By

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
 Lucy Zhu, Asbestos Supervisor
 Steven Luong, Organics Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in soil		
Our Reference		284858-33
Your Reference	UNITS	20
Depth		0.1
Date Sampled		29/11/2021
Type of sample		Soil
Date extracted	-	10/12/2021
Date analysed	-	10/12/2021
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	<1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
Cyclohexane	mg/kg	<1
carbon tetrachloride	mg/kg	<1
Benzene	mg/kg	<0.2
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
Toluene	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1

VOCs in soil		
Our Reference		284858-33
Your Reference	UNITS	20
Depth		0.1
Date Sampled		29/11/2021
Type of sample		Soil
Ethylbenzene	mg/kg	<1
bromoform	mg/kg	<1
m+p-xylene	mg/kg	<2
styrene	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
o-Xylene	mg/kg	<1
1,2,3-trichloropropane	mg/kg	<1
isopropylbenzene	mg/kg	<1
bromobenzene	mg/kg	<1
n-propyl benzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3,5-trimethyl benzene	mg/kg	<1
tert-butyl benzene	mg/kg	<1
1,2,4-trimethyl benzene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
sec-butyl benzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
4-isopropyl toluene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
n-butyl benzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	98
Surrogate aaa-Trifluorotoluene	%	110
Surrogate Toluene-d ₈	%	99
Surrogate 4-Bromofluorobenzene	%	109

vTRH(C6-C10)/BTEXN in Soil

Our Reference		284858-1	284858-4	284858-7	284858-11	284858-15
Your Reference	UNITS	1	3	5	8	10
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	117	108	105	116

vTRH(C6-C10)/BTEXN in Soil

Our Reference		284858-19	284858-23	284858-27	284858-31	284858-33
Your Reference	UNITS	12	14	16	18	20
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	115	112	105	103	110

vTRH(C6-C10)/BTEXN in Soil

Our Reference		284858-39	284858-42	284858-43	284858-44	284858-46
Your Reference	UNITS	45	84	85	86	87
Depth		0.1	0.5	0.2	0.1	0.5
Date Sampled		29/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	118	113	119	124	114

vTRH(C6-C10)/BTEXN in Soil

Our Reference		284858-48	284858-51	284858-54	284858-57	284858-59
Your Reference	UNITS	88	90	92	93	94
Depth		1	1.5	0.1	1.5	0.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	111	106	122	125	116

vTRH(C6-C10)/BTEXN in Soil

Our Reference		284858-63	284858-66	284858-67	284858-70	284858-71
Your Reference	UNITS	98	121	122	123	124
Depth		0.5	1	0.1	1.5	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	120	105	115	116	123

vTRH(C6-C10)/BTEXN in Soil

Our Reference		284858-73	284858-76	284858-93
Your Reference	UNITS	125	127	160
Depth		0.1	0.1	0.5
Date Sampled		30/11/2021	30/11/2021	02/12/2021
Type of sample		Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021
TRH C ₆ - C ₉	mg/kg	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	112	113	124

svTRH (C10-C40) in Soil

Our Reference		284858-1	284858-4	284858-7	284858-11	284858-15
Your Reference	UNITS	1	3	5	8	10
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	71	70	74	68	71

svTRH (C10-C40) in Soil

Our Reference		284858-19	284858-23	284858-27	284858-31	284858-33
Your Reference	UNITS	12	14	16	18	20
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	72	74	73	74	70

svTRH (C10-C40) in Soil

Our Reference		284858-39	284858-42	284858-43	284858-44	284858-46
Your Reference	UNITS	45	84	85	86	87
Depth		0.1	0.5	0.2	0.1	0.5
Date Sampled		29/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	70	76	69	67	72

svTRH (C10-C40) in Soil

Our Reference		284858-48	284858-51	284858-54	284858-57	284858-59
Your Reference	UNITS	88	90	92	93	94
Depth		1	1.5	0.1	1.5	0.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	65	65	68	76	74

svTRH (C10-C40) in Soil

Our Reference		284858-63	284858-66	284858-67	284858-70	284858-71
Your Reference	UNITS	98	121	122	123	124
Depth		0.5	1	0.1	1.5	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	74	71	71	77	70

svTRH (C10-C40) in Soil

Our Reference		284858-73	284858-76	284858-93
Your Reference	UNITS	125	127	160
Depth		0.1	0.1	0.5
Date Sampled		30/11/2021	30/11/2021	02/12/2021
Type of sample		Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	11/12/2021	11/12/2021	11/12/2021
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
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50
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	%	72	77	68

PAHs in Soil						
Our Reference		284858-1	284858-4	284858-7	284858-11	284858-15
Your Reference	UNITS	1	3	5	8	10
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	89	82	93	90	84

PAHs in Soil						
Our Reference		284858-19	284858-23	284858-27	284858-31	284858-39
Your Reference	UNITS	12	14	16	18	45
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	90	84	89	76	103

PAHs in Soil						
Our Reference		284858-42	284858-43	284858-44	284858-46	284858-48
Your Reference	UNITS	84	85	86	87	88
Depth		0.5	0.2	0.1	0.5	1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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 <i>p</i> -Terphenyl-d14	%	98	95	95	94	95

PAHs in Soil						
Our Reference		284858-51	284858-54	284858-57	284858-59	284858-63
Your Reference	UNITS	90	92	93	94	98
Depth		1.5	0.1	1.5	0.5	0.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	110	96	113	111	101

PAHs in Soil						
Our Reference		284858-66	284858-67	284858-70	284858-71	284858-73
Your Reference	UNITS	121	122	123	124	125
Depth		1	0.1	1.5	0.1	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	103	97	92	96	85

PAHs in Soil			
Our Reference		284858-76	284858-93
Your Reference	UNITS	127	160
Depth		0.1	0.5
Date Sampled		30/11/2021	02/12/2021
Type of sample		Soil	Soil
Date extracted	-	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	97	102

Organochlorine Pesticides in soil						
Our Reference		284858-1	284858-2	284858-4	284858-6	284858-7
Your Reference	UNITS	1	2	3	4	5
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	80	81	86	82	82

Organochlorine Pesticides in soil						
Our Reference		284858-9	284858-11	284858-13	284858-15	284858-17
Your Reference	UNITS	7	8	9	10	11
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	79	87	88	82	81

Organochlorine Pesticides in soil						
Our Reference		284858-19	284858-21	284858-23	284858-25	284858-27
Your Reference	UNITS	12	13	14	15	16
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	85	82	84	75	81

Organochlorine Pesticides in soil						
Our Reference		284858-29	284858-31	284858-34	284858-36	284858-37
Your Reference	UNITS	17	18	23	24	44
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	76	76	92	87	90

Organochlorine Pesticides in soil						
Our Reference		284858-39	284858-40	284858-42	284858-43	284858-44
Your Reference	UNITS	45	47	84	85	86
Depth		0.1	0.1	0.5	0.2	0.1
Date Sampled		29/11/2021	29/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	89	93	88	89	88

Organochlorine Pesticides in soil						
Our Reference		284858-46	284858-48	284858-51	284858-54	284858-57
Your Reference	UNITS	87	88	90	92	93
Depth		0.5	1	1.5	0.1	1.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	88	87	95	95	101

Organochlorine Pesticides in soil						
Our Reference		284858-59	284858-60	284858-61	284858-63	284858-66
Your Reference	UNITS	94	95	97	98	121
Depth		0.5	0.1	0.1	0.5	1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	96	95	96	90	90

Organochlorine Pesticides in soil						
Our Reference		284858-67	284858-70	284858-80	284858-82	284858-84
Your Reference	UNITS	122	123	154	155	156
Depth		0.1	1.5	0.1	0.1	0.1
Date Sampled		30/11/2021	30/11/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	92	89	85	90	86

Organochlorine Pesticides in soil						
Our Reference		284858-86	284858-88	284858-90	284858-92	284858-94
Your Reference	UNITS	157	158	159	160	161
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	86	84	89	128	86

Organochlorine Pesticides in soil						
Our Reference		284858-96	284858-98	284858-100	284858-102	284858-104
Your Reference	UNITS	162	164	171	172	173
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	85	85	86	82	82

Organochlorine Pesticides in soil						
Our Reference		284858-106	284858-108	284858-110	284858-112	284858-114
Your Reference	UNITS	208	210	211	212	213
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	82	81	92	91	97

Organochlorine Pesticides in soil			
Our Reference		284858-116	284858-118
Your Reference	UNITS	214	215
Depth		0.1	0.1
Date Sampled		02/12/2021	02/12/2021
Type of sample		Soil	Soil
Date extracted	-	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021
alpha-BHC	mg/kg	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate TCMX	%	94	91

Organophosphorus Pesticides in Soil						
Our Reference		284858-1	284858-2	284858-4	284858-6	284858-7
Your Reference	UNITS	1	2	3	4	5
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	80	81	86	82	82

Organophosphorus Pesticides in Soil

Our Reference		284858-9	284858-11	284858-13	284858-15	284858-17
Your Reference	UNITS	7	8	9	10	11
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	79	87	88	82	81

Organophosphorus Pesticides in Soil

Our Reference		284858-19	284858-21	284858-23	284858-25	284858-27
Your Reference	UNITS	12	13	14	15	16
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	85	82	84	75	81

Organophosphorus Pesticides in Soil						
Our Reference		284858-29	284858-31	284858-34	284858-36	284858-37
Your Reference	UNITS	17	18	23	24	44
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	76	76	92	87	90

Organophosphorus Pesticides in Soil

Our Reference		284858-39	284858-40	284858-42	284858-43	284858-44
Your Reference	UNITS	45	47	84	85	86
Depth		0.1	0.1	0.5	0.2	0.1
Date Sampled		29/11/2021	29/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	89	93	88	89	88

Organophosphorus Pesticides in Soil

Our Reference		284858-46	284858-48	284858-51	284858-54	284858-57
Your Reference	UNITS	87	88	90	92	93
Depth		0.5	1	1.5	0.1	1.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	88	87	95	95	101

Organophosphorus Pesticides in Soil

Our Reference		284858-59	284858-60	284858-61	284858-63	284858-66
Your Reference	UNITS	94	95	97	98	121
Depth		0.5	0.1	0.1	0.5	1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	96	95	96	90	90

Organophosphorus Pesticides in Soil

Our Reference		284858-67	284858-70	284858-80	284858-82	284858-84
Your Reference	UNITS	122	123	154	155	156
Depth		0.1	1.5	0.1	0.1	0.1
Date Sampled		30/11/2021	30/11/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	92	89	85	90	86

Organophosphorus Pesticides in Soil

Our Reference		284858-86	284858-88	284858-90	284858-92	284858-94
Your Reference	UNITS	157	158	159	160	161
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	86	84	89	128	86

Organophosphorus Pesticides in Soil

Our Reference		284858-96	284858-98	284858-100	284858-102	284858-104
Your Reference	UNITS	162	164	171	172	173
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	85	85	86	82	82

Organophosphorus Pesticides in Soil						
Our Reference		284858-106	284858-108	284858-110	284858-112	284858-114
Your Reference	UNITS	208	210	211	212	213
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	82	81	92	91	97

Organophosphorus Pesticides in Soil			
Our Reference		284858-116	284858-118
Your Reference	UNITS	214	215
Depth		0.1	0.1
Date Sampled		02/12/2021	02/12/2021
Type of sample		Soil	Soil
Date extracted	-	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021
Dichlorvos	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	94	91

PCBs in Soil						
Our Reference	UNITS	284858-1	284858-4	284858-7	284858-11	284858-15
Your Reference		1	3	5	8	10
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	80	86	82	87	82

PCBs in Soil						
Our Reference	UNITS	284858-19	284858-23	284858-27	284858-31	284858-33
Your Reference		12	14	16	18	20
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	85	84	81	76	132

PCBs in Soil						
Our Reference		284858-39	284858-42	284858-43	284858-44	284858-46
Your Reference	UNITS	45	84	85	86	87
Depth		0.1	0.5	0.2	0.1	0.5
Date Sampled		29/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	89	88	89	88	88

PCBs in Soil						
Our Reference		284858-48	284858-51	284858-54	284858-57	284858-59
Your Reference	UNITS	88	90	92	93	94
Depth		1	1.5	0.1	1.5	0.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
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	%	87	95	95	101	96

PCBs in Soil					
Our Reference		284858-63	284858-66	284858-67	284858-70
Your Reference	UNITS	98	121	122	123
Depth		0.5	1	0.1	1.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	90	92	89

Acid Extractable metals in soil

Our Reference		284858-1	284858-2	284858-4	284858-6	284858-7
Your Reference	UNITS	1	2	3	4	5
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	6	<4	4	5	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	20	15	22	15	16
Copper	mg/kg	16	15	18	16	15
Lead	mg/kg	27	17	25	17	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	13	12	9	9
Zinc	mg/kg	45	41	48	39	35

Acid Extractable metals in soil

Our Reference		284858-9	284858-11	284858-13	284858-15	284858-17
Your Reference	UNITS	7	8	9	10	11
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	<4	4	5	5	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	16	17	16	15
Copper	mg/kg	12	13	15	17	18
Lead	mg/kg	18	19	23	23	23
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	9	10	8	11
Zinc	mg/kg	29	26	43	35	46

Acid Extractable metals in soil

Our Reference		284858-19	284858-21	284858-23	284858-25	284858-27
Your Reference	UNITS	12	13	14	15	16
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	5	10	5	4	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	21	19	18	22
Copper	mg/kg	19	15	15	13	11
Lead	mg/kg	24	25	25	21	26
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	8	10	8	8
Zinc	mg/kg	41	33	37	20	26

Acid Extractable metals in soil

Our Reference		284858-29	284858-31	284858-32	284858-33	284858-34
Your Reference	UNITS	17	18	19	20	23
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	6	6	5	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	21	23	21	20	12
Copper	mg/kg	22	15	16	14	11
Lead	mg/kg	28	29	26	30	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	13	11	11	10	6
Zinc	mg/kg	49	40	37	40	25

Acid Extractable metals in soil

Our Reference		284858-36	284858-37	284858-39	284858-40	284858-42
Your Reference	UNITS	24	44	45	47	84
Depth		0.1	0.1	0.1	0.1	0.5
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	6	5	4	6	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	17	10	14	14
Copper	mg/kg	13	7	10	7	18
Lead	mg/kg	19	15	15	17	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	6	7	5	7
Zinc	mg/kg	29	9	19	12	27

Acid Extractable metals in soil

Our Reference		284858-43	284858-44	284858-46	284858-48	284858-49
Your Reference	UNITS	85	86	87	88	89
Depth		0.2	0.1	0.5	1	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	10	16	6	8	11
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	18	12	10	20
Copper	mg/kg	10	28	24	18	14
Lead	mg/kg	18	17	12	11	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	8	6	8	8
Zinc	mg/kg	20	41	23	28	16

Acid Extractable metals in soil

Our Reference		284858-51	284858-52	284858-54	284858-57	284858-59
Your Reference	UNITS	90	91	92	93	94
Depth		1.5	0.05	0.1	1.5	0.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	9	7	10	<4	10
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	13	19	9	22
Copper	mg/kg	24	14	19	34	15
Lead	mg/kg	15	16	21	14	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	8	10	16	10
Zinc	mg/kg	34	22	30	61	19

Acid Extractable metals in soil

Our Reference		284858-60	284858-61	284858-63	284858-66	284858-67
Your Reference	UNITS	95	97	98	121	122
Depth		0.1	0.1	0.5	1	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	10	7	7	5	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	21	14	15	16	15
Copper	mg/kg	8	21	21	11	13
Lead	mg/kg	20	15	15	17	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	12	10	9	9
Zinc	mg/kg	16	31	32	27	27

Acid Extractable metals in soil

Our Reference		284858-70	284858-71	284858-73	284858-76	284858-78
Your Reference	UNITS	123	124	125	127	139
Depth		1.5	0.1	0.1	0.1	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	5	10	8	7	12
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	19	16	16	22
Copper	mg/kg	12	17	19	23	12
Lead	mg/kg	13	23	21	18	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	10	9	11	6
Zinc	mg/kg	14	31	30	32	28

Acid Extractable metals in soil

Our Reference		284858-80	284858-82	284858-84	284858-86	284858-88
Your Reference	UNITS	154	155	156	157	158
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	6	6	7	<4	11
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	15	14	16	10	26
Copper	mg/kg	8	7	9	8	2
Lead	mg/kg	17	20	17	12	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	5	5	6	3
Zinc	mg/kg	10	12	22	9	7

Acid Extractable metals in soil

Our Reference		284858-90	284858-92	284858-93	284858-94	284858-96
Your Reference	UNITS	159	160	160	161	162
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	6	10	4	11	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	22	14	26	13
Copper	mg/kg	4	5	8	6	9
Lead	mg/kg	13	15	7	16	13
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	4	3	6	5
Zinc	mg/kg	6	11	9	9	16

Acid Extractable metals in soil

Our Reference		284858-98	284858-100	284858-102	284858-104	284858-106
Your Reference	UNITS	164	171	172	173	208
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	9	5	6	11	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	11	12	23	15
Copper	mg/kg	10	14	10	10	13
Lead	mg/kg	19	16	18	20	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	7	6	6	10
Zinc	mg/kg	21	34	25	23	32

Acid Extractable metals in soil

Our Reference		284858-108	284858-110	284858-112	284858-114	284858-116
Your Reference	UNITS	210	211	212	213	214
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Arsenic	mg/kg	7	10	7	10	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	24	20	23	19
Copper	mg/kg	12	10	8	11	10
Lead	mg/kg	19	20	17	20	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	9	7	9	7
Zinc	mg/kg	24	21	19	22	20

Acid Extractable metals in soil

Our Reference		284858-118	284858-139
Your Reference	UNITS	215	123 - [TRIPLICATE]
Depth		0.1	1.5
Date Sampled		02/12/2021	30/11/2021
Type of sample		Soil	Soil
Date prepared	-	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021
Arsenic	mg/kg	6	6
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	16	19
Copper	mg/kg	9	16
Lead	mg/kg	15	16
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	9	7
Zinc	mg/kg	22	18

Misc Soil - Inorg

Our Reference		284858-1	284858-4	284858-7	284858-11	284858-15
Your Reference	UNITS	1	3	5	8	10
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		284858-19	284858-23	284858-27	284858-31	284858-39
Your Reference	UNITS	12	14	16	18	45
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		284858-42	284858-43	284858-44	284858-46	284858-48
Your Reference	UNITS	84	85	86	87	88
Depth		0.5	0.2	0.1	0.5	1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg

Our Reference		284858-51	284858-54	284858-57	284858-59	284858-63
Your Reference	UNITS	90	92	93	94	98
Depth		1.5	0.1	1.5	0.5	0.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg				
Our Reference		284858-66	284858-67	284858-70
Your Reference	UNITS	121	122	123
Depth		1	0.1	1.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	10/12/2021	10/12/2021	10/12/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Moisture						
Our Reference	UNITS	284858-1	284858-2	284858-4	284858-6	284858-7
Your Reference		1	2	3	4	5
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	25	20	24	22	23

Moisture						
Our Reference	UNITS	284858-9	284858-11	284858-13	284858-15	284858-17
Your Reference		7	8	9	10	11
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	22	21	24	23	19

Moisture						
Our Reference	UNITS	284858-19	284858-21	284858-23	284858-25	284858-27
Your Reference		12	13	14	15	16
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	26	22	21	15	22

Moisture						
Our Reference	UNITS	284858-29	284858-31	284858-32	284858-33	284858-34
Your Reference		17	18	19	20	23
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	25	25	23	20	21

Moisture						
Our Reference	UNITS	284858-36	284858-37	284858-39	284858-40	284858-42
Your Reference		24	44	45	47	84
Depth		0.1	0.1	0.1	0.1	0.5
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	19	17	23	21	18

Moisture						
Our Reference	UNITS	284858-43	284858-44	284858-46	284858-48	284858-49
Your Reference		85	86	87	88	89
Depth		0.2	0.1	0.5	1	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	21	18	18	15	16

Moisture						
Our Reference	UNITS	284858-51	284858-52	284858-54	284858-57	284858-59
Your Reference		90	91	92	93	94
Depth		1.5	0.05	0.1	1.5	0.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	18	22	24	12	13

Moisture						
Our Reference	UNITS	284858-60	284858-61	284858-63	284858-66	284858-67
Your Reference		95	97	98	121	122
Depth		0.1	0.1	0.5	1	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	11	18	18	14	17

Moisture						
Our Reference	UNITS	284858-70	284858-71	284858-73	284858-76	284858-78
Your Reference		123	124	125	127	139
Depth		1.5	0.1	0.1	0.1	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	17	22	18	20	22

Moisture						
Our Reference	UNITS	284858-80	284858-82	284858-84	284858-86	284858-88
Your Reference		154	155	156	157	158
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	18	20	24	23	14

Moisture						
Our Reference	UNITS	284858-90	284858-92	284858-93	284858-94	284858-96
Your Reference		159	160	160	161	162
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	15	17	17	17	18

Moisture						
Our Reference	UNITS	284858-98	284858-100	284858-102	284858-104	284858-106
Your Reference		164	171	172	173	208
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	21	33	25	20	23

Moisture						
Our Reference		284858-108	284858-110	284858-112	284858-114	284858-116
Your Reference	UNITS	210	211	212	213	214
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021
Date analysed	-	13/12/2021	13/12/2021	13/12/2021	13/12/2021	13/12/2021
Moisture	%	20	17	18	15	17

Moisture		
Our Reference		284858-118
Your Reference	UNITS	215
Depth		0.1
Date Sampled		02/12/2021
Type of sample		Soil
Date prepared	-	10/12/2021
Date analysed	-	13/12/2021
Moisture	%	17

Asbestos ID - soils						
Our Reference	UNITS	284858-1	284858-2	284858-4	284858-6	284858-7
Your Reference		1	2	3	4	5
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 25g	Approx. 60g	Approx. 25g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-9	284858-11	284858-13	284858-15	284858-17
Your Reference		7	8	9	10	11
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 30g	Approx. 30g	44.95g	Approx. 30g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	YES	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	284858-19	284858-21	284858-23	284858-25	284858-27
Your Reference		12	13	14	15	16
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 30g	Approx. 35g	Approx. 35g	Approx. 55g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-29	284858-31	284858-32	284858-33	284858-34
Your Reference		17	18	19	20	23
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 20g	Approx. 30g	Approx. 40g	Approx. 35g	Approx. 50g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-36	284858-37	284858-39	284858-40	284858-42
Your Reference		24	44	45	47	84
Depth		0.1	0.1	0.1	0.1	0.5
Date Sampled		29/11/2021	29/11/2021	29/11/2021	29/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 35g	Approx. 50g	Approx. 30g	Approx. 40g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-43	284858-44	284858-46	284858-48	284858-49
Your Reference		85	86	87	88	89
Depth		0.2	0.1	0.5	1	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 25g	Approx. 30g	Approx. 25g	Approx. 30g	Approx. 55g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-51	284858-52	284858-54	284858-57	284858-59
Your Reference		90	91	92	93	94
Depth		1.5	0.05	0.1	1.5	0.5
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 30g	Approx. 45g	Approx. 20g	Approx. 40g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Red coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-60	284858-61	284858-63	284858-66	284858-67
Your Reference		95	97	98	121	122
Depth		0.1	0.1	0.5	1	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	30/11/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 45g	Approx. 60g	Approx. 30g	Approx. 25g	Approx. 40g
Sample Description	-	Grey 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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-70	284858-71	284858-73	284858-76	284858-78
Your Reference		123	124	125	127	139
Depth		1.5	0.1	0.1	0.1	0.1
Date Sampled		30/11/2021	30/11/2021	30/11/2021	30/11/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 35g	Approx. 40g	Approx. 45g	Approx. 55g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-80	284858-82	284858-84	284858-86	284858-88
Your Reference		154	155	156	157	158
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 45g	Approx. 40g	Approx. 55g
Sample Description	-	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-90	284858-92	284858-93	284858-94	284858-96
Your Reference		159	160	160	161	162
Depth		0.1	0.1	0.5	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 30g	Approx. 40g	Approx. 25g	Approx. 55g	Approx. 45g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Beige 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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-98	284858-100	284858-102	284858-104	284858-106
Your Reference		164	171	172	173	208
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 55g	Approx. 25g	Approx. 60g	43.19g	Approx. 50g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	YES	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference	UNITS	284858-108	284858-110	284858-112	284858-114	284858-116
Your Reference		210	211	212	213	214
Depth		0.1	0.1	0.1	0.1	0.1
Date Sampled		02/12/2021	02/12/2021	02/12/2021	02/12/2021	02/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Sample mass tested	g	Approx. 50g	Approx. 50g	Approx. 45g	Approx. 35g	Approx. 70g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Red coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	284858-118
Your Reference		215
Depth		0.1
Date Sampled		02/12/2021
Type of sample		Soil
Date analysed	-	15/12/2021
Sample mass tested	g	Approx. 80g
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO
Trace Analysis	-	No asbestos detected

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-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-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	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.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

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

QUALITY CONTROL: VOCs in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284858-33
Date extracted	-			10/12/2021	[NT]	[NT]	[NT]	[NT]	10/12/2021	10/12/2021
Date analysed	-			10/12/2021	[NT]	[NT]	[NT]	[NT]	10/12/2021	10/12/2021
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	112	85
cis-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chloroform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	120	97
2,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	122	129
1,1,1-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	124	106
1,1-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	113	105
bromodichloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	103	90
trans-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	129	122
1,2-dibromoethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	128	115
1,1,1,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromoform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
styrene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284858-33
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
isopropylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tert-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
sec-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	119	102
Surrogate aaa-Trifluorotoluene	%		Org-023	119	[NT]	[NT]	[NT]	[NT]	133	120
Surrogate Toluene-d ₈	%		Org-023	99	[NT]	[NT]	[NT]	[NT]	122	101
Surrogate 4-Bromofluorobenzene	%		Org-023	109	[NT]	[NT]	[NT]	[NT]	101	106

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284858-4
Date extracted	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	1	<25	<25	0	121	109
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	1	<25	<25	0	121	109
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	110	90
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	126	97
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	121	116
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	123	122
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	112	110
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	119	1	83	117	34	130	119

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	284858-33
Date extracted	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	19	<25	<25	0	113	113
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	19	<25	<25	0	113	113
Benzene	mg/kg	0.2	Org-023	[NT]	19	<0.2	<0.2	0	93	94
Toluene	mg/kg	0.5	Org-023	[NT]	19	<0.5	<0.5	0	101	102
Ethylbenzene	mg/kg	1	Org-023	[NT]	19	<1	<1	0	120	120
m+p-xylene	mg/kg	2	Org-023	[NT]	19	<2	<2	0	125	125
o-Xylene	mg/kg	1	Org-023	[NT]	19	<1	<1	0	113	113
Naphthalene	mg/kg	1	Org-023	[NT]	19	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	19	115	113	2	124	120

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	284858-54
Date extracted	-			[NT]	51	10/12/2021	10/12/2021		[NT]	10/12/2021
Date analysed	-			[NT]	51	10/12/2021	10/12/2021		[NT]	10/12/2021
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	51	<25	<25	0	[NT]	118
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	51	<25	<25	0	[NT]	118
Benzene	mg/kg	0.2	Org-023	[NT]	51	<0.2	<0.2	0	[NT]	98
Toluene	mg/kg	0.5	Org-023	[NT]	51	<0.5	<0.5	0	[NT]	106
Ethylbenzene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	125
m+p-xylene	mg/kg	2	Org-023	[NT]	51	<2	<2	0	[NT]	130
o-Xylene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	118
Naphthalene	mg/kg	1	Org-023	[NT]	51	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	51	106	122	14	[NT]	126

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]	70	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	70	10/12/2021	10/12/2021		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	[NT]	70	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	[NT]	70	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	70	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	70	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	70	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	70	116	130	11	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284858-4
Date extracted	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	1	<50	<50	0	80	92
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	1	<100	<100	0	71	85
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	1	<100	<100	0	91	120
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	1	<50	<50	0	80	92
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	1	<100	<100	0	71	85
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	1	<100	<100	0	91	120
Surrogate o-Terphenyl	%		Org-020	67	1	71	72	1	73	82

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	284858-54
Date extracted	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	19	<50	<50	0	85	77
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	19	<100	<100	0	75	76
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	19	<100	<100	0	109	109
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	19	<50	<50	0	85	77
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	19	<100	<100	0	75	76
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	19	<100	<100	0	109	109
Surrogate o-Terphenyl	%		Org-020	[NT]	19	72	71	1	77	75

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	51	10/12/2021	10/12/2021		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	51	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	51	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	51	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	51	65	66	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]	70	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	70	10/12/2021	10/12/2021		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	[NT]	70	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	[NT]	70	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	[NT]	70	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	70	77	71	8	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284858-4
Date extracted	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	92
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	87	85
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	94
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	106
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	94	90
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	91
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	73	75
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	114	128
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	104	1	89	84	6	95	83

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	284858-54
Date extracted	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	103	97
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	93	95
Fluorene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	97	99
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	104	118
Anthracene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	98	108
Pyrene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	99	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	89	99
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	19	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	19	<0.05	<0.05	0	134	132
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	19	90	92	2	103	101

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	[NT]
Date extracted	-			[NT]	51	10/12/2021	10/12/2021		10/12/2021	[NT]
Date analysed	-			[NT]	51	10/12/2021	10/12/2021		10/12/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	95	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	93	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	97	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	108	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	102	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	103	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	69	[NT]
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	51	<0.05	<0.05	0	96	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	51	110	103	7	106	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	[NT]
Date extracted	-			[NT]	70	10/12/2021	10/12/2021		10/12/2021	[NT]
Date analysed	-			[NT]	70	10/12/2021	10/12/2021		10/12/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	86	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	95	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	101	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	132	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	98	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	101	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	79	[NT]
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	70	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	70	<0.05	<0.05	0	120	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	70	92	91	1	103	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284858-4
Date extracted	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	84	84
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	114	114
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	87	87
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	89	87
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	88
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	92	86
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	97
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	88
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	84	76
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	88	78
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	101	1	80	88	10	91	86

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	284858-54
Date extracted	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	92	94
HCB	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	71	78
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	89	93
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	89	95
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	92	94
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	92	98
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	100	104
Endrin	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	88	92
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	88	94
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	86	90
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	19	85	87	2	95	94

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	284858-110
Date extracted	-			[NT]	36	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	36	10/12/2021	10/12/2021		10/12/2021	10/12/2021
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	92	94
HCB	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	75	107
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	91	93
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	95	97
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	96	96
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	96	103
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	108	104
Endrin	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	94	88
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	94	92
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	92	94
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	36	87	85	2	95	95

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	[NT]
Date extracted	-			[NT]	51	10/12/2021	10/12/2021		10/12/2021	[NT]
Date analysed	-			[NT]	51	10/12/2021	10/12/2021		10/12/2021	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	94	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	89	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	93	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	95	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	96	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	98	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	100	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	92	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	90	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	94	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	51	95	91	4	100	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	70	10/12/2021	10/12/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	70	89	86	3	[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]	90	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	90	10/12/2021	10/12/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	90	89	80	11	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284858-4
Date extracted	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	76
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]
Chlorpyrifos-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	93	95
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	75	63
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	85
Chlorpyrifos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	92
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	70	66
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	76	72
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	101	1	80	88	10	91	86

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	284858-54
Date extracted	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	91	74
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	91	104
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	73	79
Malathion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	85	89
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	80	104
Parathion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	80	93
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	72	80
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	19	85	87	2	95	94

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	284858-110
Date extracted	-			[NT]	36	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	36	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	95	74
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	108	104
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	71	77
Malathion	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	79	97
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	84	110
Parathion	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	87	78
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	76	88
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	36	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	36	87	85	2	95	95

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	[NT]
Date extracted	-			[NT]	51	10/12/2021	10/12/2021		10/12/2021	[NT]
Date analysed	-			[NT]	51	10/12/2021	10/12/2021		10/12/2021	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	72	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	104	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	73	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	97	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	102	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	78	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	84	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	51	95	91	4	100	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	70	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	70	10/12/2021	10/12/2021		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	70	89	86	3	[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]	90	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	90	10/12/2021	10/12/2021		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	90	89	80	11	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284858-4
Date extracted	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
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	100	100
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	101	1	80	88	10	91	86

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	284858-54
Date extracted	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	100	100
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	19	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	19	85	87	2	95	94

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	[NT]
Date extracted	-			[NT]	51	10/12/2021	10/12/2021		10/12/2021	[NT]
Date analysed	-			[NT]	51	10/12/2021	10/12/2021		10/12/2021	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	100	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	51	95	91	4	95	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	[NT]
Date extracted	-			[NT]	70	10/12/2021	10/12/2021		10/12/2021	[NT]
Date analysed	-			[NT]	70	10/12/2021	10/12/2021		10/12/2021	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	81	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	70	89	86	3	100	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	284858-4
Date prepared	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Arsenic	mg/kg	4	Metals-020	<4	1	6	6	0	100	85
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	107	84
Chromium	mg/kg	1	Metals-020	<1	1	20	18	11	105	85
Copper	mg/kg	1	Metals-020	<1	1	16	15	6	98	90
Lead	mg/kg	1	Metals-020	<1	1	27	26	4	112	85
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	102	105
Nickel	mg/kg	1	Metals-020	<1	1	12	11	9	106	85
Zinc	mg/kg	1	Metals-020	<1	1	45	39	14	117	92

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	284858-33
Date prepared	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Arsenic	mg/kg	4	Metals-020	[NT]	19	5	5	0	93	92
Cadmium	mg/kg	0.4	Metals-020	[NT]	19	<0.4	<0.4	0	99	89
Chromium	mg/kg	1	Metals-020	[NT]	19	17	15	12	99	94
Copper	mg/kg	1	Metals-020	[NT]	19	19	19	0	96	100
Lead	mg/kg	1	Metals-020	[NT]	19	24	24	0	98	87
Mercury	mg/kg	0.1	Metals-021	[NT]	19	<0.1	<0.1	0	128	113
Nickel	mg/kg	1	Metals-020	[NT]	19	11	11	0	102	89
Zinc	mg/kg	1	Metals-020	[NT]	19	41	41	0	97	93

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	284858-54
Date prepared	-			[NT]	32	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	32	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Arsenic	mg/kg	4	Metals-020	[NT]	32	5	5	0	91	82
Cadmium	mg/kg	0.4	Metals-020	[NT]	32	<0.4	<0.4	0	98	78
Chromium	mg/kg	1	Metals-020	[NT]	32	21	20	5	99	84
Copper	mg/kg	1	Metals-020	[NT]	32	16	14	13	95	87
Lead	mg/kg	1	Metals-020	[NT]	32	26	25	4	99	75
Mercury	mg/kg	0.1	Metals-021	[NT]	32	<0.1	<0.1	0	124	112
Nickel	mg/kg	1	Metals-020	[NT]	32	11	11	0	103	82
Zinc	mg/kg	1	Metals-020	[NT]	32	37	37	0	98	70

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	284858-98
Date prepared	-			[NT]	36	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	36	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Arsenic	mg/kg	4	Metals-020	[NT]	36	6	6	0	90	84
Cadmium	mg/kg	0.4	Metals-020	[NT]	36	<0.4	<0.4	0	95	79
Chromium	mg/kg	1	Metals-020	[NT]	36	16	16	0	95	90
Copper	mg/kg	1	Metals-020	[NT]	36	13	16	21	93	92
Lead	mg/kg	1	Metals-020	[NT]	36	19	19	0	94	79
Mercury	mg/kg	0.1	Metals-021	[NT]	36	<0.1	<0.1	0	121	109
Nickel	mg/kg	1	Metals-020	[NT]	36	9	10	11	99	84
Zinc	mg/kg	1	Metals-020	[NT]	36	29	33	13	93	74

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	284858-110
Date prepared	-			[NT]	51	10/12/2021	10/12/2021		[NT]	10/12/2021
Date analysed	-			[NT]	51	10/12/2021	10/12/2021		[NT]	10/12/2021
Arsenic	mg/kg	4	Metals-020	[NT]	51	9	10	11	[NT]	#
Cadmium	mg/kg	0.4	Metals-020	[NT]	51	<0.4	<0.4	0	[NT]	75
Chromium	mg/kg	1	Metals-020	[NT]	51	15	18	18	[NT]	71
Copper	mg/kg	1	Metals-020	[NT]	51	24	21	13	[NT]	84
Lead	mg/kg	1	Metals-020	[NT]	51	15	15	0	[NT]	#
Mercury	mg/kg	0.1	Metals-021	[NT]	51	<0.1	<0.1	0	[NT]	105
Nickel	mg/kg	1	Metals-020	[NT]	51	11	10	10	[NT]	72
Zinc	mg/kg	1	Metals-020	[NT]	51	34	27	23	[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]	70	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	70	10/12/2021	10/12/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	70	5	6	18	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	70	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	70	14	16	13	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	70	12	18	40	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	70	13	20	42	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	70	5	7	33	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	70	14	21	40	[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]	90	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	90	10/12/2021	10/12/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	90	6	7	15	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	90	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	90	11	14	24	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	90	4	4	0	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	90	13	11	17	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	90	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	90	2	3	40	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	90	6	5	18	[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]	96	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	96	10/12/2021	10/12/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	96	6	5	18	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	96	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	96	13	10	26	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	96	9	8	12	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	96	13	12	8	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	96	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	96	5	5	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	96	16	15	6	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	284858-4
Date prepared	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			10/12/2021	1	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	101	93

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	284858-54
Date prepared	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Date analysed	-			[NT]	19	10/12/2021	10/12/2021		10/12/2021	10/12/2021
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	19	<5	<5	0	104	94

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	51	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	51	10/12/2021	10/12/2021		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	51	<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]	70	10/12/2021	10/12/2021		[NT]	[NT]
Date analysed	-			[NT]	70	10/12/2021	10/12/2021		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	70	<5	<5	0	[NT]	[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 284858-70 for Cu, Pb and Zn. Therefore a triplicate result has been issued as laboratory sample number 284858-139.

- # Percent recovery is not possible to report due to the inhomogeneous nature of the elements in the sample. However an acceptable recovery was obtained for the LCS.

Asbestos: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.

Note: Samples were sub-sampled from bags provided by the client.

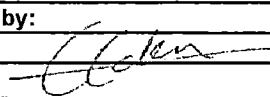
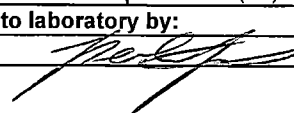
Sample 284858-13; Chrysotile asbestos identified embedded in a fragment of fibre cement weighing 0.0056g, however it is estimated less than the reporting limit for the method (i.e. < 0.1g/kg).

Sample 284858-104; Chrysotile asbestos identified embedded in a fragment of fibre cement weighing 0.0021g, however it is estimated less than the reporting limit for the method (i.e. < 0.1g/kg).

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: SC
Project Mgr: Emily Eden	Attn: Nancy Zhang
Email: emily.eden@douglaspartners.com.au	Phone: (02) 9910 6200 Fax: (02) 9910 6201
Date Required: Standard turnaround	Email: tnotaras@envirolabservices.com.au

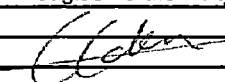
Sample ID	Lab ID	Date Sampled	Sample Type S - soil W - water	Container Type G - glass P - plastic	Analytes										Notes/preservation
					Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g				
1/0.1	1	29/11/21	S	G & P	x										Refer to Quotation 20SY400
1/0.2	NR	29/11/21	S	G & P							x				
2/0.1	2	29/11/21	S	G & P			x					x			
2/0.5	3	29/11/21	S	G & P							x				
3/0.1	4	29/11/21	S	G & P	x										
3/0.5	5	29/11/21	S	G & P							x				
4/0.1	6	29/11/21	S	G & P			x					x			
4/0.5	NR	29/11/21	S	G & P							x				
5/0.1	7	29/11/21	S	G & P	x										
5/0.5	8	29/11/21	S	G & P							x				
7/0.1	9	29/11/21	S	G & P			x					x			
7/0.5	10	29/11/21	S	G & P							x				
8/0.1	11	29/11/21	S	G & P	x										

Envirolab Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200
 Job No: 284858
 Date Received: 30/11 + 3/12
 Time Received: 1300
 Received By: AB
 Temp: Cool/Ambient
 Cooling: Ice/Cepack 15°C
 Security: Intact/Broken/None
 COC: 7/12

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by:	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:  ELS Syd	

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: SC
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

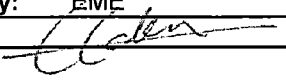
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g			
8/0.5	12	29/11/21	S	G & P						x				
9/0.1	13	29/11/21	S	G & P			x				x			
9/0.5	14	29/11/21	S	G & P						x				
10/0.1	15	29/11/21	S	G & P	x									
10/0.5	16	29/11/21	S	G & P						x				
11/0.1	17	29/11/21	S	G & P			x				x			
11/0.5	18	29/11/21	S	G & P						x				
12/0.1	19	29/11/21	S	G & P	x									
12/0.5	20	29/11/21	S	G & P						x				
13/0.1	21	29/11/21	S	G & P			x				x			
13/0.5	22	29/11/21	S	G & P						x				
14/0.1	23	29/11/21	S	G & P	x									
14/0.5	24	29/11/21	S	G & P						x				

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent, Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by:	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

284858
K4/AB

Project Name: - Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: SC	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

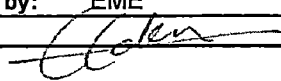
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g			
15/0.1	25	29/11/21	S	G & P			x				x			
15/0.5	26	29/11/21	S	G & P						x				
16/0.1	27	29/11/21	S	G & P	x									
16/0.5	28	29/11/21	S	G & P						x				
17/0.1	29	29/11/21	S	G & P			x				x			
17/0.5	30	29/11/21	S	G & P						x				
18/0.1	31	29/11/21	S	G & P	x									
18/0.5	NK	29/11/21	S	G & P						x				
19/0.1	32	29/11/21	S	G & P				x			x			
19/0.5	NK	29/11/21	S	G & P						x				
20/0.1	33	29/11/21	S	G & P				x			x			
20/0.5	NK	29/11/21	S	G & P						x				
23/0.1	34	29/11/21	S	G & P			x				x			

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent, Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

284858
KALAB

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: SC
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

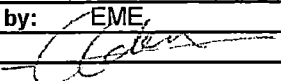
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g			
23/0.5	35	29/11/21	S	G & P						x				
24/0.1	36	29/11/21	S	G & P			x				x			
24/0.5	NR	29/11/21	S	G & P						x				
44/0.1	32	29/11/21	S	G & P			x				x			
44/0.5	38	29/11/21	S	G & P						x				
45/0.1	37	29/11/21	S	G & P	x									
45/0.5	NR	29/11/21	S	G & P						x				
47/0.1	40	29/11/21	S	G & P			x				x			
47/0.5	41	29/11/21	S	G & P						x				
84/0.1	NR	30/11/21	S	G & P						x				
84/0.5	42	30/11/21	S	G & P	x									
85/0.2	43	30/11/21	S	G & P	x									
85/0.5	NR	30/11/21	S	G & P						x				

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

284858
EC/AB

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: SC
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

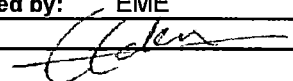
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g			
86/0.1	44	30/11/21	S	G & P	x									
86/0.5	NR	30/11/21	S	G & P						x				
87/0.1	45	30/11/21	S	G & P						x				
87/0.5	46	30/11/21	S	G & P	x									
88/0.1	47	30/11/21	S	G & P						x				
88/1	48	30/11/21	S	G & P	x									
89/0.1	49	30/11/21	S	G & P			x				x			
89/0.5	NR	30/11/21	S	G & P						x				
90/0.5	50	30/11/21	S	G & P						x				
90/1.5	51	30/11/21	S	G & P	x									
91/0.05	52	30/11/21	S	G & P			x				x			
91/0.5	53	30/11/21	S	G & P						x				
92/0.1	54	30/11/21	S	G & P	x									

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

284558
KG/AB

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: SC
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

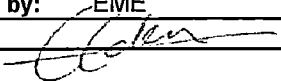
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g			
92/0.5	55	30/11/21	S	G & P						x				
93/0.5	56	30/11/21	S	G & P						x				
93/1.5	57	30/11/21	S	G & P	x									
94/0.1	58	30/11/21	S	G & P						x				
94/0.5	59	30/11/21	S	G & P	x									
95/0.1	60	30/11/21	S	G & P			x				x			
97/0.1	61	30/11/21	S	G & P			x				x			
97/0.5	62	30/11/21	S	G & P						x				
98/0.5	63	30/11/21	S	G & P	x									
120/0.1	64	30/11/21	S	G & P										
121/0.1	65	30/11/21	S	G & P						x				
121/1	66	30/11/21	S	G & P	x									
122/0.1	67	30/11/21	S	G & P	x									

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

284858
KL/PB

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: SC
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

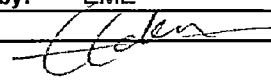
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes										Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g				
122/0.5	68	30/11/21	S	G & P								x			
123/0.2	69	30/11/21	S	G & P								x			
123/1.5	70	30/11/21	S	G & P	x										
124/0.1	71	30/11/21	S	G & P		x							x		
124/1	72	30/11/21	S	G & P								x			
125/0.1	73	30/11/21	S	G & P		x							x		
126/0.05	NK	30/11/21	S	G & P			x						x		
126/0.5	74	30/11/21	S	G & P								x			
126/1.5	75	30/11/21	S	G & P								x			
127/0.1	76	30/11/21	S	G & P		x							x		
127/0.5	77	30/11/21	S	G & P								x			
139/0.1	78	02/12/21	S	G & P	x										
139/0.5	79	02/12/21	S	G & P								x			

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

284858
KL/AB

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: SC
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

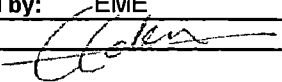
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes								Notes/preservation	
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g			
154/0.1	80	02/12/21	S	G & P			x					x		
154/0.5	81	02/12/21	S	G & P							x			
155/0.1	82	02/12/21	S	G & P			x					x		
155/0.5	83	02/12/21	S	G & P							x			
156/0.1	84	02/12/21	S	G & P			x					x		
156/0.5	85	02/12/21	S	G & P							x			
157/0.1	86	02/12/21	S	G & P			x					x		
157/0.5	87	02/12/21	S	G & P							x			
158/0.1	88	02/12/21	S	G & P			x					x		
158/0.5	89	02/12/21	S	G & P							x			
159/0.1	90	02/12/21	S	G & P			x					x		
159/0.5	91	02/12/21	S	G & P							x			
160/0.1	92	02/12/21	S	G & P			x					x		

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

254858
K9/AB

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	12 Ashley Street, Chatswood NSW 2067
Project Mgr: Emily Eden	Sampler: SC
Email: emily.eden@douglaspartners.com.au	Mob. Phone: N/A
Date Required: Standard turnaround	Attn: Nancy Zhang
	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

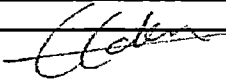
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes								Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g		
160/0.5	93	02/12/21	S	G & P					x				
161/0.1	94	02/12/21	S	G & P			x				x		
161/0.5	95	02/12/21	S	G & P						x			
162/0.1	96	02/12/21	S	G & P			x				x		
162/0.5	97	02/12/21	S	G & P						x			
164/0.1	98	02/12/21	S	G & P			x				x		
164/0.5	99	02/12/21	S	G & P						x			
171/0.1	100	02/12/21	S	G & P			x				x		
171/0.5	101	02/12/21	S	G & P						x			
172/0.1	102	02/12/21	S	G & P			x				x		
172/0.5	103	02/12/21	S	G & P						x			
173/0.1	104	02/12/21	S	G & P			x				x		
173/0.5	105	02/12/21	S	G & P						x			

Lab-Report No.:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

284858
K4/AB

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: SC
Project Mgr: Emily Eden	Mob. Phone: N/A
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

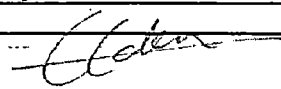
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes								Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g		
208/0.1	106	02/12/21	S	G & P			x				x		
208/0.5	107	02/12/21	S	G & P						x			
210/0.1	108	02/12/21	S	G & P			x				x		
210/0.5	109	02/12/21	S	G & P						x			
211/0.1	110	02/12/21	S	G & P			x				x		
211/0.5	111	02/12/21	S	G & P						x			
212/0.1	112	02/12/21	S	G & P			x				x		
212/0.5	113	02/12/21	S	G & P						x			
213/0.1	114	02/12/21	S	G & P			x				x		
213/0.5	115	02/12/21	S	G & P						x			
214/0.1	116	02/12/21	S	G & P			x				x		
214/0.5	117	02/12/21	S	G & P						x			
215/0.1	118	02/12/21	S	G & P			x				x		

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

289858
KL/AB

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	12 Ashley Street, Chatswood NSW 2067
Project Mgr: Emily Eden	Attn: Nancy Zhang
Sampler: SC	Phone: (02) 9910 6200 Fax: (02) 9910 6201
Mob. Phone: N/A	Email: tnotaras@envirolabservices.com.au
Email: emily.eden@douglaspartners.com.au	
Date Required: Standard turnaround	

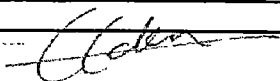
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes								Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Asbestos 50 g		
215/0.5	119	02/12/21	S	G & P						x			
110.5	120												
37A/0.1	121												
37A/0.5	122												
84/1.5	123												
84/2.0	124												
86/1.0	125												
86/1.5	126												
87/1.8	127												
88/2.0	128												
88/2.5	129												
90/2.0	130												
93/1.8	131												

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

284 858
12/12/21

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	12 Ashley Street, Chatswood NSW 2067
Project Mgr: Emily Eden	Attn: Nancy Zhang
Email: emily.eden@douglaspartners.com.au	Phone: (02) 9910 6200 Fax: (02) 9910 6201
Date Required: Standard turnaround	Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes						Asbestos 50 g			Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD				
~~215/0.5~~	~~129~~	~~02/12/21~~	~~G~~	~~G & P~~						x				
126/0.1	132													
140/0.1	133													
4/0.1 B	134													
139/0.5 B	135													
91/0.5 B	136													
2/0.5 B	137													
unlabelled	138													

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed: 	Date & Time: 03.12.21	Received by:	

284 858
129/133

284858 comments

Rec'd 30/11/21 1300

+ 3/12/21

KA/AB.

COC: 7/12
1630.

- Sample 41, BH47/0.5 (bag is hard to read, assumed to be missing #41 bag) - pics taken.
- Sample 3, rec'd 3x jars, 2x bags. All sample looks similar. ~~Red~~ More red soil labelled as #3, darker soil labelled as #137(B) → 1 jar + 1 bag - pics taken.
 2x jars, 1x bag.
- 2x jars rec'd for BH4/0.1 (#6), BH139/0.5 (#79) and BH91/0.5 (#53). ^{Soil} ~~Jars~~ appeared different. Extra jars added to end and labelled as 'B'. 6A → 134B. 79A → 135B. 53A → 136B. - pics taken.
- Samples 9 and 39 received extra jar labelled 'dup'.
- NR 1/0.2, 4/0.5, 18/0.5, 19/0.5, 20/0.5, 24/0.5, 45/0.5, 84/0.1, 85/0.5, 86/0.5, 89/0.5, 126/0.05,
- Only bag rec'd for 8, 32, 49, 52, 78, 101, 134.
- Samples rec'd 30/11/21 + 3/12/21 → COC rec'd 7/12/21.
- No date written on extras.
- extras rec'd (#120-133)
- No extras dried.
- lab dry asb on #9.
- 1 jar rec'd completely unlabelled. Given ELS ID → 138. - pics taken.
- AB sent all pics + inconsistencies to SR email.
- #23, 24, 30 specified that bags were provided. Only jar received.

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden

Sample Login Details

Your reference	94562.02, Austral
Envirolab Reference	284858
Date Sample Received	30/11/2021
Date Instructions Received	07/12/2021
Date Results Expected to be Reported	16/12/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	138 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	15
Cooling Method	Ice
Sampling Date Provided	YES

Comments

MISSING SAMPLES AND EXTRA SAMPLES - PLEASE REFER TO ENMAILED COC.
 EXTRA SAMPLES PLACED ON HOLD

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
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

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	VOCs in soil	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
1-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
2-0.1					✓	✓		✓		✓	
2-0.5											✓
3-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
3-0.5											✓
4-0.1					✓	✓		✓		✓	
5-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
5-0.5											✓
7-0.1					✓	✓		✓		✓	
7-0.5											✓
8-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
8-0.5											✓
9-0.1					✓	✓		✓		✓	
9-0.5											✓
10-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
10-0.5											✓
11-0.1					✓	✓		✓		✓	
11-0.5											✓
12-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
12-0.5											✓
13-0.1					✓	✓		✓		✓	
13-0.5											✓
14-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
14-0.5											✓
15-0.1					✓	✓		✓		✓	
15-0.5											✓
16-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
16-0.5											✓
17-0.1					✓	✓		✓		✓	
17-0.5											✓
18-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
19-0.1	✓	✓	✓				✓	✓		✓	



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ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

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Sample ID	VOCs in soil	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
20-0.1	✓	✓	✓				✓	✓		✓	
23-0.1					✓	✓		✓		✓	
23-0.5											✓
24-0.1					✓	✓		✓		✓	
44-0.1					✓	✓		✓		✓	
44-0.5											✓
45-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
47-0.1					✓	✓		✓		✓	
47-0.5											✓
84-0.5		✓	✓	✓	✓	✓	✓	✓	✓	✓	
85-0.2		✓	✓	✓	✓	✓	✓	✓	✓	✓	
86-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
87-0.1											✓
87-0.5		✓	✓	✓	✓	✓	✓	✓	✓	✓	
88-0.1											✓
88-1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
89-0.1					✓	✓		✓		✓	
90-0.5											✓
90-1.5		✓	✓	✓	✓	✓	✓	✓	✓	✓	
91-0.05					✓	✓		✓		✓	
91-0.5											✓
92-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
92-0.5											✓
93-0.5											✓
93-1.5		✓	✓	✓	✓	✓	✓	✓	✓	✓	
94-0.1											✓
94-0.5		✓	✓	✓	✓	✓	✓	✓	✓	✓	
95-0.1					✓	✓		✓		✓	
97-0.1					✓	✓		✓		✓	
97-0.5											✓
98-0.5		✓	✓	✓	✓	✓	✓	✓	✓	✓	
120-0.1											✓



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

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Sample ID	VOCs in soil	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
121-0.1											✓
121-1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
122-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
122-0.5											✓
123-0.2											✓
123-1.5		✓	✓	✓	✓	✓	✓	✓	✓	✓	
124-0.1		✓	✓	✓				✓		✓	
124-1											✓
125-0.1		✓	✓	✓				✓		✓	
126-0.5											✓
126-1.5											✓
127-0.1		✓	✓	✓				✓		✓	
127-0.5											✓
139-0.1		✓	✓	✓	✓	✓	✓	✓	✓	✓	
139-0.5											✓
154-0.1					✓	✓		✓		✓	
154-05											✓
155-0.1					✓	✓		✓		✓	
155-0.5											✓
156-0.1					✓	✓		✓		✓	
156-0.5											✓
157-0.1					✓	✓		✓		✓	
157-0.5											✓
158-0.1					✓	✓		✓		✓	
158-0.5											✓
159-0.1					✓	✓		✓		✓	
159-0.5											✓
160-0.1					✓	✓		✓		✓	
160-0.5		✓	✓	✓				✓		✓	
161-0.1					✓	✓		✓		✓	
161-0.5											✓
162-0.1					✓	✓		✓		✓	



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 ID	VOCs in soil	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
162-0.5											✓
164-0.1					✓	✓		✓		✓	
164-0.5											✓
171-0.1					✓	✓		✓		✓	
171-0.5											✓
172-0.1					✓	✓		✓		✓	
172-0.5											✓
173-0.1					✓	✓		✓		✓	
173-0.5											✓
208-0.1					✓	✓		✓		✓	
208-0.5											✓
210-0.1					✓	✓		✓		✓	
210-0.5											✓
211-0.1					✓	✓		✓		✓	
211-0.5											✓
212-0.1					✓	✓		✓		✓	
212-0.5											✓
213-0.1					✓	✓		✓		✓	
213-0.5											✓
214-0.1					✓	✓		✓		✓	
214-0.5											✓
215-0.1					✓	✓		✓		✓	
215-0.5											✓
1-0.5											✓
37A-0.1											✓
37A-0.5											✓
84-1.5											✓
84-2.0											✓
83-1.0											✓
86-1.5											✓
87-1.8											✓
88-2.0											✓



Sample ID	VOCs in soil	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	On Hold
88-2.5											✓
90-2.0											✓
93-1.8											✓
126-0.1											✓
140-0.1											✓
4-0.1 B											✓
139-0.5 B											✓
91-0.5 B											✓
2-0.5 B											✓
unlabelled											✓

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.

CERTIFICATE OF ANALYSIS 285671

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	<u>94562.02, Austral</u>
Number of Samples	42 Soil
Date samples received	17/12/2021
Date completed instructions received	20/12/2021

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	24/12/2021
Date of Issue	23/12/2021
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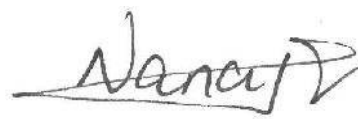
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vTRH(C6-C10)/BTEXN in Soil

Our Reference		285671-3	285671-5	285671-7	285671-9	285671-11
Your Reference	UNITS	59/0-0.2	60/0-0.2	61/0-0.1	62/0-0.2	63/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
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	%	74	91	85	79	64

vTRH(C6-C10)/BTEXN in Soil

Our Reference		285671-13	285671-16	285671-18	285671-20
Your Reference	UNITS	64/0-0.2	65/0-0.2	66/0-0.2	67/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	72	86	81	78

svTRH (C10-C40) in Soil

Our Reference		285671-3	285671-5	285671-7	285671-9	285671-11
Your Reference	UNITS	59/0-0.2	60/0-0.2	61/0-0.1	62/0-0.2	63/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
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	190	110	120	180	<100
Total +ve TRH (C10-C36)	mg/kg	190	110	120	180	<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	190	120	130	210	120
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	190	120	130	210	120
Surrogate o-Terphenyl	%	86	86	82	88	84

svTRH (C10-C40) in Soil

Our Reference		285671-13	285671-16	285671-18	285671-20
Your Reference	UNITS	64/0-0.2	65/0-0.2	66/0-0.2	67/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	120	<100	100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	120	<50	100	<50
Surrogate o-Terphenyl	%	82	81	85	81

PAHs in Soil						
Our Reference		285671-3	285671-5	285671-7	285671-9	285671-11
Your Reference	UNITS	59/0-0.2	60/0-0.2	61/0-0.1	62/0-0.2	63/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
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	0.2	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.2	<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	0.1	<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	1.2	<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 <i>p</i> -Terphenyl-d14	%	98	99	94	109	102

PAHs in Soil					
Our Reference		285671-13	285671-16	285671-18	285671-20
Your Reference	UNITS	64/0-0.2	65/0-0.2	66/0-0.2	67/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<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
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	97	102	108	107

Organochlorine Pesticides in soil						
Our Reference		285671-1	285671-3	285671-7	285671-11	285671-16
Your Reference	UNITS	52/0-0.2	59/0-0.2	61/0-0.1	63/0-0.2	65/0-0.2
Date Sampled		14/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
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	%	86	96	91	94	92

Organochlorine Pesticides in soil		
Our Reference		285671-20
Your Reference	UNITS	67/0-0.2
Date Sampled		15/12/2021
Type of sample		Soil
Date extracted	-	21/12/2021
Date analysed	-	22/12/2021
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	%	95

Organophosphorus Pesticides in Soil

Our Reference		285671-1	285671-3	285671-7	285671-11	285671-16
Your Reference	UNITS	52/0-0.2	59/0-0.2	61/0-0.1	63/0-0.2	65/0-0.2
Date Sampled		14/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	86	96	91	94	92

Organophosphorus Pesticides in Soil

Our Reference		285671-20
Your Reference	UNITS	67/0-0.2
Date Sampled		15/12/2021
Type of sample		Soil
Date extracted	-	21/12/2021
Date analysed	-	22/12/2021
Dichlorvos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyrifos	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	%	95

PCBs in Soil						
Our Reference		285671-3	285671-7	285671-11	285671-16	285671-20
Your Reference	UNITS	59/0-0.2	61/0-0.1	63/0-0.2	65/0-0.2	67/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
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	%	96	91	94	92	95

Misc Soil - Inorg						
Our Reference		285671-3	285671-7	285671-11	285671-16	285671-20
Your Reference	UNITS	59/0-0.2	61/0-0.1	63/0-0.2	65/0-0.2	67/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Acid Extractable metals in soil

Our Reference		285671-1	285671-3	285671-5	285671-7	285671-9
Your Reference	UNITS	52/0-0.2	59/0-0.2	60/0-0.2	61/0-0.1	62/0-0.2
Date Sampled		14/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Arsenic	mg/kg	8	6	6	10	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	14	15	19	19
Copper	mg/kg	11	16	12	15	19
Lead	mg/kg	23	21	22	26	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	9	8	10	8
Zinc	mg/kg	19	31	25	23	26

Acid Extractable metals in soil

Our Reference		285671-11	285671-13	285671-16	285671-18	285671-20
Your Reference	UNITS	63/0-0.2	64/0-0.2	65/0-0.2	66/0-0.2	67/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Arsenic	mg/kg	4	7	8	5	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	14	16	15	12
Copper	mg/kg	17	20	22	23	8
Lead	mg/kg	21	21	22	20	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	12	13	14	4
Zinc	mg/kg	40	41	42	50	9

Moisture						
Our Reference	UNITS	285671-1	285671-3	285671-5	285671-7	285671-9
Your Reference		52/0-0.2	59/0-0.2	60/0-0.2	61/0-0.1	62/0-0.2
Date Sampled		14/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Moisture	%	16	29	25	16	18

Moisture						
Our Reference	UNITS	285671-11	285671-13	285671-16	285671-18	285671-20
Your Reference		63/0-0.2	64/0-0.2	65/0-0.2	66/0-0.2	67/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Moisture	%	33	10	11	23	14

Asbestos ID - soils						
Our Reference	UNITS	285671-1	285671-3	285671-5	285671-7	285671-9
Your Reference		52/0-0.2	59/0-0.2	60/0-0.2	61/0-0.1	62/0-0.2
Date Sampled		14/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Sample mass tested	g	Approx. 40g	Approx. 15g	Approx. 25g	Approx. 35g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	285671-11	285671-13	285671-16	285671-18	285671-20
Your Reference		63/0-0.2	64/0-0.2	65/0-0.2	66/0-0.2	67/0-0.2
Date Sampled		15/12/2021	15/12/2021	15/12/2021	15/12/2021	15/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Sample mass tested	g	Approx. 25g	Approx. 35g	Approx. 35g	Approx. 25g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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

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-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-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	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.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

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

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	285671-7
Date extracted	-			21/12/2021	3	21/12/2021	21/12/2021		21/12/2021	21/12/2021
Date analysed	-			22/12/2021	3	22/12/2021	22/12/2021		22/12/2021	22/12/2021
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	3	<25	<25	0	97	112
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	3	<25	<25	0	97	112
Benzene	mg/kg	0.2	Org-023	<0.2	3	<0.2	<0.2	0	88	90
Toluene	mg/kg	0.5	Org-023	<0.5	3	<0.5	<0.5	0	109	77
Ethylbenzene	mg/kg	1	Org-023	<1	3	<1	<1	0	101	139
m+p-xylene	mg/kg	2	Org-023	<2	3	<2	<2	0	93	127
o-Xylene	mg/kg	1	Org-023	<1	3	<1	<1	0	87	120
Naphthalene	mg/kg	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	78	3	74	94	24	112	79

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	285671-7
Date extracted	-			21/12/2021	3	21/12/2021	21/12/2021		21/12/2021	21/12/2021
Date analysed	-			22/12/2021	3	22/12/2021	22/12/2021		22/12/2021	22/12/2021
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	3	<50	<50	0	95	102
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	3	<100	<100	0	96	106
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	3	190	240	23	70	#
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	3	<50	<50	0	95	102
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	3	190	270	35	96	106
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	3	<100	<100	0	70	#
Surrogate o-Terphenyl	%		Org-020	84	3	86	93	8	90	94

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	285671-7
Date extracted	-			21/12/2021	3	21/12/2021	21/12/2021		21/12/2021	21/12/2021
Date analysed	-			22/12/2021	3	22/12/2021	22/12/2021		22/12/2021	22/12/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	103	90
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	99	91
Fluorene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	103	93
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	110	98
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	104	94
Pyrene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	107	93
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	73	69
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	106	112
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	106	3	98	111	12	105	97

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	285671-7
Date extracted	-			21/12/2021	3	21/12/2021	21/12/2021		21/12/2021	21/12/2021
Date analysed	-			22/12/2021	3	22/12/2021	22/12/2021		22/12/2021	22/12/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	98	90
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	96	92
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	99	91
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	103	95
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	96	92
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	103	94
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	104	100
Endrin	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	96	100
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	94	90
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	102	96
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	102	3	96	106	10	94	87

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	285671-7
Date extracted	-			21/12/2021	3	21/12/2021	21/12/2021		21/12/2021	21/12/2021
Date analysed	-			22/12/2021	3	22/12/2021	22/12/2021		22/12/2021	22/12/2021
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	106	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]
Chlorpyrifos-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	102	97
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	73	75
Malathion	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	105	106
Chlorpyrifos	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	106	98
Parathion	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	76	80
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	108
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	102	3	96	106	10	94	87

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	285671-7
Date extracted	-			21/12/2021	3	21/12/2021	21/12/2021		21/12/2021	21/12/2021
Date analysed	-			22/12/2021	3	22/12/2021	22/12/2021		22/12/2021	22/12/2021
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	102	80
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	102	3	96	106	10	94	87

QUALITY CONTROL: Misc Soil - Inorg						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	285671-7
Date prepared	-			21/12/2021	3	21/12/2021	21/12/2021		21/12/2021	21/12/2021
Date analysed	-			21/12/2021	3	21/12/2021	21/12/2021		21/12/2021	21/12/2021
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	3	<5	<5	0	103	101

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	285671-7
Date prepared	-			21/12/2021	3	21/12/2021	21/12/2021		21/12/2021	21/12/2021
Date analysed	-			21/12/2021	3	21/12/2021	21/12/2021		21/12/2021	21/12/2021
Arsenic	mg/kg	4	Metals-020	<4	3	6	5	18	104	95
Cadmium	mg/kg	0.4	Metals-020	<0.4	3	<0.4	<0.4	0	105	85
Chromium	mg/kg	1	Metals-020	<1	3	14	13	7	108	97
Copper	mg/kg	1	Metals-020	<1	3	16	16	0	102	105
Lead	mg/kg	1	Metals-020	<1	3	21	22	5	108	85
Mercury	mg/kg	0.1	Metals-021	<0.1	3	<0.1	<0.1	0	92	74
Nickel	mg/kg	1	Metals-020	<1	3	9	10	11	108	91
Zinc	mg/kg	1	Metals-020	<1	3	31	33	6	106	86

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

TRH Soil C10-C40 NEPM - # Percent recovery for the surrogate/matrix spike is not possible to report as the high concentration of analytes in sample #7 have caused interference.

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.

Project No: 94562.02		Suburb: AUSTRAL		To: Envirolab	
Project Name: AUSTRAL, Part Lot 184 Gurner Ave, DS		Order Number			
Project Manager: Emily Eden		Sampler: Jimmy Huynh		Attn:	
Emails: emily.eden@douglaspartners.com.au				Phone:	
Date Required: Same day ☐ 24 hours ☐ 48 hours ☐ 72 hours ☐ Standard ☒				Email:	
Prior Storage: ☐ Esky ☒ Fridge ☒ Shelved		Do samples contain 'potential' HBM? Yes ☒ No ☐ (If YES, then handle, transport and store in accordance with FPM HAZID)			

Sample ID	Lab ID	Date Sampled	Sample Type	Container Type	Analytes										Notes/preservation
			S - soil W - water	G - glass P - plastic	Heavy Metals	OC/OPP PCB	TRH and BTEX	PAH	Total Phenols	Asbestos 500 ml					
5210-0.2	1	14/12/21	S	G	X	X	X	X	X						
5210.2-0.4	2	14/12/21	S	G	X	X	/	/	/						
5910-0.2	3	15/12/21	S	G	X	/	/	/	/						
5916.2-0.4	4				X	/	/	/	/						
6010-0.2	5				X	/	/	/	/						
6010.3-0.4	6				X	/	/	/	/						
6110-0.1	7				X	/	/	/	/						
6110.2-0.3	8				X	/	/	/	/						
6210-0.2	9				X	/	/	/	/						
6210.2-0.4	10				X	/	/	/	/						
6310-0.2	11				X	/	/	/	/						
6310.2-0.4	12				X	/	/	/	/						
6410-0.2	13				X	/	/	/	/						
6410.2-0.4	14				X	/	/	/	/						
6410.4-0.6	15	15/12/21	S	G	/	/	/	/	/						

PQL (S) mg/kg

ANZECC PQLs req'd for all water analytes ☐

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Total number of samples in container: Relinquished by: Transported to laboratory by:

Send Results to: Douglas Partners Pty Ltd Address: Phone: Fax:

Signed: Received by: Date & Time: 17/12/2021

Project No: 94562.02			Suburb: AUSTRAL			To: Envirolab		
Project Name: AUSTRAL, Part Lot 184 Gurner Ave, DS			Order Number					
Project Manager: Emily Eden			Sampler: Jimmy Huynh			Attn:		
Emails: emily.eden@douglaspartners.com.au			Phone:					
Date Required: Same day ☐ 24 hours ☐ 48 hours ☐ 72 hours ☒ Standard ☒			Email:					
Prior Storage: ☐ Esky ☐ Fridge ☐ Shelved			Do samples contain 'potential' HBM? Yes ☐ No ☐ (If YES, then handle, transport and store in accordance with FPM HAZID)					

Sample ID	Lab ID	Sampling Date	Sample Type S - soil W - water	Container Type G - glass P - plastic	Analytes										Notes/preservation	
					Heavy Metals	OCP/OPP PCB	TRH and BTEX	PAH	Total Phenols	Asbestos 500 ml						
65/0-0.2	16	15/12/21	S	G	-	-	-	-	-	-						
65/0.2-0.4	17	15/12/21	S	G	-	-	-	-	-	-						
66/0-0.2	18	↓	↓	↓	-	-	-	-	-	-						
66/0.3-0.4	19		↓	↓	-	-	-	-	-	-						
67/0-0.1	20		↓	↓	-	-	-	-	-	-						
67/0.2-0.4	21		15/12/21	S	G	-	-	-	-	-	-					
52/0-0.2	22		15/12/21	S	P							-				
52/0.2-0.4	23	↓	↓	P							-					
59/0-0.2	24		↓								-					
59/0.3-0.4	25		↓								-					
60/0-0.2	26		↓								-					
60/0.3-0.4	27		↓								-					
61/0-0.1	28	↓	↓	↓							-					
61/0.2-0.3	29		↓								-					
62/0-0.2	30	15/12/21	S	P							-					
PQL (S) mg/kg															ANZECC PQLs req'd for all water analytes ☐	
PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit Metals to Analyse: 8HM unless specified here:															Lab Report/Reference No:	
Total number of samples in container:			Relinquished by:			Transported to laboratory by:										
Send Results to: Douglas Partners Pty Ltd			Address:			Phone:			Fax:							
Signed:			Received by: <i>RL</i>			Date & Time: 17/12/2021										

Project No: 94562.02				Suburb: AUSTRAL				To: Envirolab			
Project Name: AUSTRAL, Part Lot 184 Gurner Ave, DS				Order Number							
Project Manager: Emily Eden				Sampler: Jimmy Huynh				Attn:			
Emails: emily.eden@douglaspartners.com.au								Phone:			
Date Required: Same day ☐ 24 hours ☐ 48 hours ☐ 72 hours ☐ Standard ☒								Email:			
Prior Storage: ☒ Esky ☒ Fridge ☐ Shelved				Do samples contain 'potential' HBM? Yes ☒ No ☐ (If YES, then handle, transport and store in accordance with FPM HAZID)							

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes										Notes/preservation
			S - soil W - water	G - glass P - plastic	Heavy Metals	OCP/OPP PCB	TRH and BTEX	PAH	Total Phenols	Asbestos 500 ml					
63/0-0.2	31	15/12/21	S	P								X			
63/0.2-0.4	32	↓	↓	↓								X			
64/0-0.2	33										X				
64/0.2-0.4	34										X				
64/0.4-0.6	35										X				
65/0-0.1	36										X				
65/0.2-0.4	37	↓	↓	↓								X			
66/0-0.1	38										X				
66/0.2-0.4	39										X				
67/0-0.2	40	↓	↓	↓								X			
67/0.2-0.4	41	15/12/21	S	P								X			
62/0.2-0.4	42	same as 41													

PQL (S) mg/kg																ANZECC PQLs req'd for all water analytes ☐
PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit																
Metals to Analyse: 8HM unless specified here:																
Total number of samples in container:				Relinquished by:				Transported to laboratory by:								
Send Results to: Douglas Partners Pty Ltd				Address:				Phone:				Fax:				

17/12/2021 12:00

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden

Sample Login Details

Your reference	94562.02, Austral
Envirolab Reference	285671
Date Sample Received	17/12/2021
Date Instructions Received	20/12/2021
Date Results Expected to be Reported	24/12/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	42 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	14
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:



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 ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Asbestos ID - soils	On Hold
52/0-0.2				✓	✓			✓	✓	
52/0.2-0.4										✓
59/0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
59/0.3-0.4										✓
60/0-0.2	✓	✓	✓					✓	✓	
60/0.3-0.4										✓
61/0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓	
61/0.2-0.3										✓
62/0-0.2	✓	✓	✓					✓	✓	
62/0.2-0.4										✓
63/0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
63/0.2-0.4										✓
64/0-0.2	✓	✓	✓					✓	✓	
64/0.2-0.4										✓
64/0.4-0.6										✓
65/0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
65/0.2-0.4										✓
66/0-0.2	✓	✓	✓					✓	✓	
66/0.3-0.4										✓
67/0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	
67/0.2-0.4										✓
52/0-0.2										✓
52/0.2-0.4										✓
69/0-0.2										✓
69/0.3-0.4										✓
60/0-0.2										✓
60/0.3-0.4										✓
61/0-0.1										✓
61/0.2-0.3										✓
62/0-0.2										✓
63/0-0.2										✓
63/0.2-0.4										✓



Envirolab Services Pty Ltd

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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	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Asbestos ID - soils	On Hold
64/0-0.2										✓
64/0.2-0.4										✓
64/0.4-0.6										✓
65/0-0.1										✓
65/0.2-0.4										✓
66/0-0.1										✓
66/0.3-0.4										✓
67/0-0.2										✓
67/0.2-0.4										✓
62/0.2-0.4										✓

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.

CERTIFICATE OF ANALYSIS 286092

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	94562.02, Austral
Number of Samples	90 Soil, 2 Water
Date samples received	23/12/2021
Date completed instructions received	23/12/2021

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	07/01/2022
Date of Issue	05/01/2022
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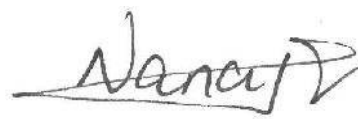
Asbestos Approved By

Analysed by Asbestos Approved Analyst: Ridwan Wijaya
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Dragana Tomas, Senior Chemist
 Kyle Gavril, Chemist
 Liam Timmins, Chemist
 Lucy Zhu, Asbestos Supervisor
 Manju Dewendrage, Prep Team Leader
 Priya Samarawickrama, Senior Chemist
 Thomas Lovatt, Chemist

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil

Our Reference		286092-25	286092-45	286092-47	286092-49	286092-55
Your Reference	UNITS	199/0-0.1	TS	230/0-0.1	231/0-0.1	235/0-0.1
Date Sampled		22/12/2021	22/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	29/12/2021	29/12/2021	29/12/2021	29/12/2021	29/12/2021
TRH C ₆ - C ₉	mg/kg	<25	[NA]	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	[NA]	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	[NA]	<25	<25	<25
Benzene	mg/kg	<0.2	108%	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	107%	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	107%	<1	<1	<1
m+p-xylene	mg/kg	<2	107%	<2	<2	<2
o-Xylene	mg/kg	<1	107%	<1	<1	<1
Naphthalene	mg/kg	<1	[NT]	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	[NT]	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	81	105	76	80	92

vTRH(C6-C10)/BTEXN in Soil

Our Reference		286092-61	286092-77	286092-86	286092-87	286092-88
Your Reference	UNITS	238/0-0.1	246/0-0.2	BD2	BD3	TS
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	29/12/2021
Date analysed	-	29/12/2021	29/12/2021	29/12/2021	29/12/2021	30/12/2021
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	[NA]
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	[NA]
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	99%
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	99%
Ethylbenzene	mg/kg	<1	<1	<1	<1	98%
m+p-xylene	mg/kg	<2	<2	<2	<2	99%
o-Xylene	mg/kg	<1	<1	<1	<1	97%
Naphthalene	mg/kg	<1	<1	<1	<1	[NT]
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	[NT]
Surrogate aaa-Trifluorotoluene	%	77	87	90	70	100

svTRH (C10-C40) in Soil

Our Reference		286092-25	286092-47	286092-49	286092-55	286092-61
Your Reference	UNITS	199/0-0.1	230/0-0.1	231/0-0.1	235/0-0.1	238/0-0.1
Date Sampled		22/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
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	%	71	67	70	70	75

svTRH (C10-C40) in Soil

Our Reference		286092-77	286092-86	286092-87
Your Reference	UNITS	246/0-0.2	BD2	BD3
Date Sampled		21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	23/12/2021	23/12/2021	23/12/2021
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
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50
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	%	77	73	74

PAHs in Soil						
Our Reference		286092-25	286092-47	286092-49	286092-55	286092-61
Your Reference	UNITS	199/0-0.1	230/0-0.1	231/0-0.1	235/0-0.1	238/0-0.1
Date Sampled		22/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
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	112	119	121	115

PAHs in Soil				
Our Reference		286092-77	286092-86	286092-87
Your Reference	UNITS	246/0-0.2	BD2	BD3
Date Sampled		21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021
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 <i>p</i> -Terphenyl-d14	%	109	112	115

Organochlorine Pesticides in soil						
Our Reference		286092-3	286092-7	286092-11	286092-15	286092-19
Your Reference	UNITS	187/0-0.1	189/0-0.1	191/0-0.1	193/0-0.1	195/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
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	%	101	101	96	107	103

Organochlorine Pesticides in soil						
Our Reference		286092-23	286092-25	286092-27	286092-31	286092-35
Your Reference	UNITS	197/0-0.1	199/0-0.1	200/0-0.1	202/0-0.1	216/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
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	%	102	104	101	94	97

Organochlorine Pesticides in soil						
Our Reference		286092-39	286092-43	286092-53	286092-59	286092-65
Your Reference	UNITS	218/0-0.1	BD1	234/0-0.1	237/0-0.1	240/0-0.1
Date Sampled		22/12/2021	22/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
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	%	92	98	99	104	97

Organochlorine Pesticides in soil						
Our Reference		286092-67	286092-71	286092-75	286092-77	286092-79
Your Reference	UNITS	241/0-0.1	243/0-0.1	245/0-0.1	246/0-0.2	247/0-0.1
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
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	%	88	99	95	98	98

Organochlorine Pesticides in soil		
Our Reference		286092-83
Your Reference	UNITS	249/0-0.1
Date Sampled		21/12/2021
Type of sample		Soil
Date extracted	-	23/12/2021
Date analysed	-	24/12/2021
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	%	98

Organophosphorus Pesticides in Soil						
Our Reference		286092-3	286092-7	286092-11	286092-15	286092-19
Your Reference	UNITS	187/0-0.1	189/0-0.1	191/0-0.1	193/0-0.1	195/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	101	101	96	107	103

Organophosphorus Pesticides in Soil						
Our Reference		286092-23	286092-25	286092-27	286092-31	286092-35
Your Reference	UNITS	197/0-0.1	199/0-0.1	200/0-0.1	202/0-0.1	216/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	102	104	101	94	97

Organophosphorus Pesticides in Soil

Our Reference		286092-39	286092-43	286092-53	286092-59	286092-65
Your Reference	UNITS	218/0-0.1	BD1	234/0-0.1	237/0-0.1	240/0-0.1
Date Sampled		22/12/2021	22/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	92	98	99	104	97

Organophosphorus Pesticides in Soil

Our Reference		286092-67	286092-71	286092-75	286092-77	286092-79
Your Reference	UNITS	241/0-0.1	243/0-0.1	245/0-0.1	246/0-0.2	247/0-0.1
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
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
Chlorpyrifos-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
Chlorpyrifos	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	%	88	99	95	98	98

Organophosphorus Pesticides in Soil		
Our Reference		286092-83
Your Reference	UNITS	249/0-0.1
Date Sampled		21/12/2021
Type of sample		Soil
Date extracted	-	23/12/2021
Date analysed	-	24/12/2021
Dichlorvos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Chlorpyrifos	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	%	98

PCBs in Soil			
Our Reference		286092-25	286092-77
Your Reference	UNITS	199/0-0.1	246/0-0.2
Date Sampled		22/12/2021	21/12/2021
Type of sample		Soil	Soil
Date extracted	-	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate TCMX	%	104	98

Misc Soil - Inorg			
Our Reference		286092-25	286092-77
Your Reference	UNITS	199/0-0.1	246/0-0.2
Date Sampled		22/12/2021	21/12/2021
Type of sample		Soil	Soil
Date prepared	-	24/12/2021	24/12/2021
Date analysed	-	24/12/2021	24/12/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5

Acid Extractable metals in soil

Our Reference		286092-1	286092-3	286092-5	286092-7	286092-9
Your Reference	UNITS	182/0-0.1	187/0-0.1	188/0-0.1	189/0-0.1	190/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Arsenic	mg/kg	4	7	8	7	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	19	21	14	22
Copper	mg/kg	11	12	9	9	11
Lead	mg/kg	14	19	20	13	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	10	5	3	5
Zinc	mg/kg	26	28	13	9	15

Acid Extractable metals in soil

Our Reference		286092-11	286092-13	286092-15	286092-17	286092-19
Your Reference	UNITS	191/0-0.1	192/0-0.1	193/0-0.1	194/0-0.1	195/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Arsenic	mg/kg	8	6	5	7	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	23	17	13	18	18
Copper	mg/kg	14	10	14	13	10
Lead	mg/kg	21	19	17	18	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	6	10	9	7
Zinc	mg/kg	24	14	22	29	17

Acid Extractable metals in soil

Our Reference		286092-21	286092-23	286092-25	286092-27	286092-29
Your Reference	UNITS	196/0-0.1	197/0-0.1	199/0-0.1	200/0-0.1	201/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Arsenic	mg/kg	8	8	4	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	21	22	14	17	13
Copper	mg/kg	11	17	15	13	13
Lead	mg/kg	19	18	14	15	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	10	5	8	7
Zinc	mg/kg	21	27	24	28	56

Acid Extractable metals in soil

Our Reference		286092-31	286092-33	286092-35	286092-37	286092-39
Your Reference	UNITS	202/0-0.1	205/0-0.1	216/0-0.1	217/0-0.1	218/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Arsenic	mg/kg	6	9	9	8	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	17	25	16	18	26
Copper	mg/kg	12	14	18	9	13
Lead	mg/kg	18	20	16	17	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	9	9	7	9
Zinc	mg/kg	25	26	31	22	25

Acid Extractable metals in soil

Our Reference		286092-41	286092-43	286092-47	286092-49	286092-51
Your Reference	UNITS	219/0-0.1	BD1	230/0-0.1	231/0-0.1	232/0-0.1
Date Sampled		22/12/2021	22/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Arsenic	mg/kg	9	10	8	9	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	20	22	19	18	20
Copper	mg/kg	11	13	12	12	12
Lead	mg/kg	19	22	22	21	20
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	9	5	8	8
Zinc	mg/kg	29	29	14	16	20

Acid Extractable metals in soil

Our Reference		286092-53	286092-55	286092-57	286092-59	286092-61
Your Reference	UNITS	234/0-0.1	235/0-0.1	236/0-0.1	237/0-0.1	238/0-0.1
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Arsenic	mg/kg	10	8	10	7	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	22	17	24	16	12
Copper	mg/kg	11	16	11	13	15
Lead	mg/kg	19	19	18	20	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	10	7	7	8
Zinc	mg/kg	20	30	22	20	33

Acid Extractable metals in soil

Our Reference		286092-63	286092-65	286092-67	286092-69	286092-71
Your Reference	UNITS	239/0-0.1	240/0-0.1	241/0-0.1	242/0-0.1	243/0-0.1
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Arsenic	mg/kg	9	6	7	9	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	13	19	13	19
Copper	mg/kg	15	18	16	29	19
Lead	mg/kg	19	21	28	30	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	7	7	11	8
Zinc	mg/kg	65	50	51	29	30

Acid Extractable metals in soil

Our Reference		286092-73	286092-75	286092-77	286092-79	286092-81
Your Reference	UNITS	244/0-0.1	245/0-0.1	246/0-0.2	247/0-0.1	248/0.1-0.2
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Arsenic	mg/kg	7	7	6	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	18	17	20	19	14
Copper	mg/kg	15	17	17	14	14
Lead	mg/kg	24	22	21	18	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	8	10	7	6
Zinc	mg/kg	30	34	30	26	29

Acid Extractable metals in soil						
Our Reference	UNITS	286092-83	286092-85	286092-86	286092-87	286092-93
Your Reference		249/0-0.1	BD1	BD2	BD3	187/0-0.1 - [TRIPLICATE]
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Arsenic	mg/kg	7	7	8	8	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	16	16	20	20
Copper	mg/kg	20	17	16	9	11
Lead	mg/kg	24	24	24	19	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	11	11	6	8
Zinc	mg/kg	40	28	32	12	22

Moisture						
Our Reference	UNITS	286092-1	286092-3	286092-5	286092-7	286092-9
Your Reference		182/0-0.1	187/0-0.1	188/0-0.1	189/0-0.1	190/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Moisture	%	16	16	14	16	14

Moisture						
Our Reference	UNITS	286092-11	286092-13	286092-15	286092-17	286092-19
Your Reference		191/0-0.1	192/0-0.1	193/0-0.1	194/0-0.1	195/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Moisture	%	19	14	19	17	13

Moisture						
Our Reference	UNITS	286092-21	286092-23	286092-25	286092-27	286092-29
Your Reference		196/0-0.1	197/0-0.1	199/0-0.1	200/0-0.1	201/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Moisture	%	20	16	17	17	16

Moisture						
Our Reference	UNITS	286092-31	286092-33	286092-35	286092-37	286092-39
Your Reference		202/0-0.1	205/0-0.1	216/0-0.1	217/0-0.1	218/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Moisture	%	19	17	15	13	18

Moisture						
Our Reference	UNITS	286092-41	286092-43	286092-47	286092-49	286092-51
Your Reference		219/0-0.1	BD1	230/0-0.1	231/0-0.1	232/0-0.1
Date Sampled		22/12/2021	22/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Moisture	%	16	16	21	22	16

Moisture						
Our Reference	UNITS	286092-53	286092-55	286092-57	286092-59	286092-61
Your Reference		234/0-0.1	235/0-0.1	236/0-0.1	237/0-0.1	238/0-0.1
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Moisture	%	19	28	21	19	36

Moisture						
Our Reference	UNITS	286092-63	286092-65	286092-67	286092-69	286092-71
Your Reference		239/0-0.1	240/0-0.1	241/0-0.1	242/0-0.1	243/0-0.1
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Moisture	%	27	22	19	16	16

Moisture						
Our Reference	UNITS	286092-73	286092-75	286092-77	286092-79	286092-81
Your Reference		244/0-0.1	245/0-0.1	246/0-0.2	247/0-0.1	248/0.1-0.2
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Moisture	%	19	16	18	16	17

Moisture					
Our Reference	UNITS	286092-83	286092-85	286092-86	286092-87
Your Reference		249/0-0.1	BD1	BD2	BD3
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	23/12/2021	23/12/2021	23/12/2021	23/12/2021
Date analysed	-	24/12/2021	24/12/2021	24/12/2021	24/12/2021
Moisture	%	14	20	25	22

Asbestos ID - soils						
Our Reference	UNITS	286092-1	286092-5	286092-9	286092-13	286092-17
Your Reference		182/0-0.1	188/0-0.1	190/0-0.1	192/0-0.1	194/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	04/01/2022	04/01/2022	04/01/2022	04/01/2022	04/01/2022
Sample mass tested	g	Approx. 45g	Approx. 45g	Approx. 50g	Approx. 50g	Approx. 50g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	286092-25	286092-29	286092-33	286092-37	286092-41
Your Reference		199/0-0.1	201/0-0.1	205/0-0.1	217/0-0.1	219/0-0.1
Date Sampled		22/12/2021	22/12/2021	22/12/2021	22/12/2021	22/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	04/01/2022	04/01/2022	04/01/2022	04/01/2022	04/01/2022
Sample mass tested	g	Approx. 30g	Approx. 45g	Approx. 45g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	286092-47	286092-49	286092-51	286092-55	286092-57
Your Reference		230/0-0.1	231/0-0.1	232/0-0.1	235/0-0.1	236/0-0.1
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	04/01/2022	04/01/2022	04/01/2022	04/01/2022	04/01/2022
Sample mass tested	g	Approx. 40g	Approx. 40g	Approx. 50g	Approx. 35g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	286092-61	286092-63	286092-69	286092-73	286092-77
Your Reference		238/0-0.1	239/0-0.1	242/0-0.1	244/0-0.1	246/0-0.2
Date Sampled		21/12/2021	21/12/2021	21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	04/01/2022	04/01/2022	04/01/2022	04/01/2022	04/01/2022
Sample mass tested	g	Approx. 25g	Approx. 35g	Approx. 35g	Approx. 35g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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		286092-81	286092-86	286092-87
Your Reference	UNITS	248/0.1-0.2	BD2	BD3
Date Sampled		21/12/2021	21/12/2021	21/12/2021
Type of sample		Soil	Soil	Soil
Date analysed	-	04/01/2022	04/01/2022	04/01/2022
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 35g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected

vTRH(C6-C10)/BTEXN in Water			
Our Reference		286092-46	286092-89
Your Reference	UNITS	TB	TB
Date Sampled		22/12/2021	21/12/2021
Type of sample		Water	Water
Date extracted	-	04/01/2022	04/01/2022
Date analysed	-	05/01/2022	05/01/2022
TRH C ₆ - C ₉	µg/L	<10	<10
TRH C ₆ - C ₁₀	µg/L	<10	<10
TRH C ₆ - C ₁₀ less BTEX (F1)	µg/L	<10	<10
Benzene	µg/L	<1	<1
Toluene	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
o-xylene	µg/L	<1	<1
Naphthalene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	109	110
Surrogate toluene-d8	%	98	98
Surrogate 4-BFB	%	105	104

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-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-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	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.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

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

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	286092-77
Date extracted	-			23/12/2021	25	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			29/12/2021	25	29/12/2021	29/12/2021		29/12/2021	29/12/2021
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	25	<25	<25	0	84	92
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	25	<25	<25	0	84	92
Benzene	mg/kg	0.2	Org-023	<0.2	25	<0.2	<0.2	0	76	86
Toluene	mg/kg	0.5	Org-023	<0.5	25	<0.5	<0.5	0	91	96
Ethylbenzene	mg/kg	1	Org-023	<1	25	<1	<1	0	92	100
m+p-xylene	mg/kg	2	Org-023	<2	25	<2	<2	0	80	88
o-Xylene	mg/kg	1	Org-023	<1	25	<1	<1	0	77	87
Naphthalene	mg/kg	1	Org-023	<1	25	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	94	25	81	81	0	69	77

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	286092-77
Date extracted	-			23/12/2021	25	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			23/12/2021	25	23/12/2021	23/12/2021		23/12/2021	23/12/2021
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	25	<50	<50	0	90	102
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	25	<100	<100	0	85	106
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	25	<100	<100	0	91	123
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	25	<50	<50	0	90	102
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	25	<100	<100	0	85	106
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	25	<100	<100	0	91	123
Surrogate o-Terphenyl	%		Org-020	74	25	71	72	1	78	77

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	286092-77
Date extracted	-			23/12/2021	25	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			24/12/2021	25	24/12/2021	24/12/2021		24/12/2021	24/12/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	102	97
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	111	101
Fluorene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	107	110
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	109	106
Anthracene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	113	108
Pyrene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	126	113
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	88	73
Benzo(b,j,k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	25	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	25	<0.05	<0.05	0	126	112
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	120	25	108	138	24	122	102

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			[NT]	[NT]	[NT]	[NT]	[NT]	23/12/2021	[NT]
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	24/12/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	97	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	103	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	113	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	132	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	127	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	133	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	73	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	120	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	[NT]	[NT]	[NT]	[NT]	126	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	286092-7
Date extracted	-			23/12/2021	3	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			24/12/2021	3	24/12/2021	24/12/2021		24/12/2021	24/12/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	100	108
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	101	106
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	80	105
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	102	111
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	90	104
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	106	111
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	108	112
Endrin	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	89	121
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	109	106
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	117	108
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	104	3	101	97	4	102	102

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	286092-77
Date extracted	-			[NT]	25	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			[NT]	25	24/12/2021	24/12/2021		24/12/2021	24/12/2021
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	102	104
HCB	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	92	99
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	107	85
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	132	107
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	116	102
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	121	103
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	122	108
Endrin	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	115	98
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	120	96
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	102	80
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	25	104	118	13	98	98

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	43	23/12/2021	23/12/2021		[NT]	[NT]
Date analysed	-			[NT]	43	24/12/2021	24/12/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
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	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	43	98	101	3	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	286092-7
Date extracted	-			23/12/2021	3	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			24/12/2021	3	24/12/2021	24/12/2021		24/12/2021	24/12/2021
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	73	78
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]
Chlorpyrifos-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	93	110
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	75	73
Malathion	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	72	120
Chlorpyrifos	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	93	118
Parathion	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	77	82
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	72	88
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	104	3	101	97	4	102	102

QUALITY CONTROL: Organophosphorus Pesticides in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	286092-77
Date extracted	-			[NT]	25	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			[NT]	25	24/12/2021	24/12/2021		24/12/2021	24/12/2021
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	89	89
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	120	102
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	73	73
Malathion	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	106	122
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	122	108
Parathion	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	91	76
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	92	86
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	25	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	25	104	118	13	98	98

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	43	23/12/2021	23/12/2021		[NT]	[NT]
Date analysed	-			[NT]	43	24/12/2021	24/12/2021		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
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]
Chlorpyrifos-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	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
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	[NT]	[NT]
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	98	101	3	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	286092-77
Date extracted	-			23/12/2021	25	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			24/12/2021	25	24/12/2021	24/12/2021		24/12/2021	24/12/2021
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	25	<0.1	<0.1	0	96	80
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	25	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	104	25	104	118	13	102	98

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	[NT]
Date extracted	-			[NT]	[NT]	[NT]	[NT]	[NT]	23/12/2021	[NT]
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	24/12/2021	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	[NT]	[NT]	[NT]	[NT]	108	[NT]
Surrogate TCMX	%		Org-021	[NT]	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date prepared	-			24/12/2021	[NT]	[NT]	[NT]	[NT]	24/12/2021	[NT]
Date analysed	-			24/12/2021	[NT]	[NT]	[NT]	[NT]	24/12/2021	[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-6	286092-7
Date prepared	-			23/12/2021	3	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			24/12/2021	3	24/12/2021	24/12/2021		24/12/2021	24/12/2021
Arsenic	mg/kg	4	Metals-020	<4	3	7	7	0	105	77
Cadmium	mg/kg	0.4	Metals-020	<0.4	3	<0.4	<0.4	0	105	76
Chromium	mg/kg	1	Metals-020	<1	3	19	18	5	110	87
Copper	mg/kg	1	Metals-020	<1	3	12	11	9	104	99
Lead	mg/kg	1	Metals-020	<1	3	19	18	5	107	84
Mercury	mg/kg	0.1	Metals-021	<0.1	3	<0.1	<0.1	0	89	78
Nickel	mg/kg	1	Metals-020	<1	3	10	7	35	106	86
Zinc	mg/kg	1	Metals-020	<1	3	28	18	43	109	84

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	286092-47
Date prepared	-			[NT]	25	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			[NT]	25	24/12/2021	24/12/2021		24/12/2021	24/12/2021
Arsenic	mg/kg	4	Metals-020	[NT]	25	4	6	40	100	86
Cadmium	mg/kg	0.4	Metals-020	[NT]	25	<0.4	<0.4	0	100	75
Chromium	mg/kg	1	Metals-020	[NT]	25	14	16	13	105	92
Copper	mg/kg	1	Metals-020	[NT]	25	15	15	0	101	99
Lead	mg/kg	1	Metals-020	[NT]	25	14	18	25	102	73
Mercury	mg/kg	0.1	Metals-021	[NT]	25	<0.1	<0.1	0	102	98
Nickel	mg/kg	1	Metals-020	[NT]	25	5	6	18	101	81
Zinc	mg/kg	1	Metals-020	[NT]	25	24	30	22	102	73

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	286092-77
Date prepared	-			[NT]	37	23/12/2021	23/12/2021		23/12/2021	23/12/2021
Date analysed	-			[NT]	37	24/12/2021	24/12/2021		24/12/2021	24/12/2021
Arsenic	mg/kg	4	Metals-020	[NT]	37	8	7	13	98	87
Cadmium	mg/kg	0.4	Metals-020	[NT]	37	<0.4	<0.4	0	99	84
Chromium	mg/kg	1	Metals-020	[NT]	37	18	14	25	105	87
Copper	mg/kg	1	Metals-020	[NT]	37	9	9	0	99	101
Lead	mg/kg	1	Metals-020	[NT]	37	17	12	34	100	83
Mercury	mg/kg	0.1	Metals-021	[NT]	37	<0.1	<0.1	0	99	90
Nickel	mg/kg	1	Metals-020	[NT]	37	7	6	15	100	87
Zinc	mg/kg	1	Metals-020	[NT]	37	22	19	15	100	83

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	43	23/12/2021	23/12/2021		[NT]	[NT]
Date analysed	-			[NT]	43	24/12/2021	24/12/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	43	10	10	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	43	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	43	22	24	9	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	43	13	12	8	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	43	22	21	5	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	43	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	43	9	8	12	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	43	29	26	11	[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]	63	23/12/2021	23/12/2021		[NT]	[NT]
Date analysed	-			[NT]	63	24/12/2021	24/12/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	63	9	9	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	63	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	63	14	16	13	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	63	15	14	7	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	63	19	19	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	63	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	63	8	8	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	63	65	50	26	[NT]	[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	-			04/01/2022	[NT]	[NT]	[NT]	[NT]	04/01/2022	[NT]
Date analysed	-			05/01/2022	[NT]	[NT]	[NT]	[NT]	05/01/2022	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	98	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-023	<10	[NT]	[NT]	[NT]	[NT]	98	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	94	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	95	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Naphthalene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	113	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate toluene-d8	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate 4-BFB	%		Org-023	104	[NT]	[NT]	[NT]	[NT]	99	[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 286092-3 for Zn. Therefore a triplicate result has been issued as laboratory sample number 286092-93.

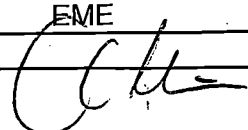
Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.

Note: Samples were sub-sampled from jars provided by the client.

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: AJ	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

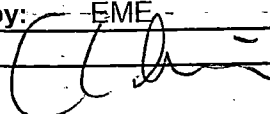
Sample ID	Lab ID	Date Sampled	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Metals	Asbestos (50 g)		
182/0-0.1	1	22.12.21	S	G / P							X	X		Refer to-Quotation 20SY400
182/0.3-0.4	2	22.12.21	S	G / P						X				
187/0-0.1	3	22.12.21	S	G / P			X							
187/0.3-0.4	4	22.12.21	S	G / P						X				
188/0-0.1	5	22.12.21	S	G / P							X	X		
188/0.3-0.4	6	22.12.21	S	G / P						X				
189/0-0.1	7	22.12.21	S	G / P			X							
189/0.2-0.3	8	22.12.21	S	G / P						X				
190/0-0.1	9	22.12.21	S	G / P							X	X		
190/0.3-0.4	10	22.12.21	S	G / P						X				
191/0-0.1	11	22.12.21	S	G / P			X							
191/0.2-0.3	12	22.12.21	S	G / P						X				
192/0-0.1	13	22.12.21	S	G / P							X	X		

Envirolab Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200
 Job No: 286073
 Date Received: 23/12/21
 Time Received: 1245
 Received by: JID
 Temp: Cool/Ambient 12°C
 Cooling: Ice/Isopack
 Security: Intact/Broken/None

Send Results to: Douglas Partners Pty Ltd		Address: 18 Waler Crescent Smeaton Grange 2567		Phone: (02) 4647 0075		Fax: (02) 4646 1886	
Relinquished by: EME				Transported to laboratory by:			
Signed: 		Date & Time: 22/12/2021		Received by: Jason Day ELS SMO 23/12/21 1245.			

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: AJ	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

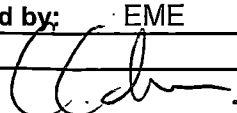
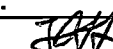
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Metals	Asbestos (50 g)		
192/0.4-0.5	14	22.12.21	S	G / P						x				
193/0-0.1	15	22.12.21	S	G / P			x							
193/0.3-0.4	16	22.12.21	S	G / P						x				
194/0-0.1	17	22.12.21	S	G / P							x	x		
194/0.3-0.4	18	22.12.21	S	G / P						x				
195/0-0.1	19	22.12.21	S	G / P			x							
195/0.3-0.4	20	22.12.21	S	G / P						x				
196/0-0.1	21	22.12.21	S	G / P							x	x		
196/0.2-0.3	22	22.12.21	S	G / P						x				
197/0-0.1	23	22.12.21	S	G / P			x							
197/0.3-0.4	24	22.12.21	S	G / P						x				
199/0-0.1	25	22.12.21	S	G / P	x									
199/0.2-0.3	26	22.12.21	S	G / P						x				

Lab Report No: 286092		Address: Unit 5, 50 Topham Road, Smeaton Grange 2567		Phone: (02) 4647 0075	Fax: (02) 4646 1886
Send Results to: Douglas Partners Pty Ltd			Transported to laboratory by:		
Relinquished by: EME			Received by: SDH 23/12/21 1245		
Signed: 		Date & Time: 22/12/2021		Received by: SDH 23/12/21 1245	

286092

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: AJ	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

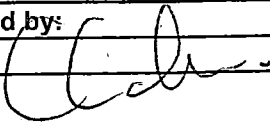
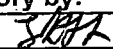
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Metals	Asbestos (50 g)		
200/0-0.1	27	22.12.21	S	G / P			x							
200/0.2-0.3	28	22.12.21	S	G / P						x				
201/0-0.1	29	22.12.21	S	G / P							x	x		
201/0.3-0.4	30	22.12.21	S	G / P						x				
202/0-0.1	31	22.12.21	S	G / P			x							
202/0.2-0.3	32	22.12.21	S	G / P						x				
205/0-0.1	33	22.12.21	S	G / P							x	x		
205/0.2-0.3	34	22.12.21	S	G / P						x				
216/0-0.1	35	22.12.21	S	G / P			x							
216/0.4-0.5	36	22.12.21	S	G / P						x				
217/0-0.1	37	22.12.21	S	G / P							x	x		
217/0.3-0.4	38	22.12.21	S	G / P						x				
218/0-0.1	39	22.12.21	S	G / P			x							

Lab Report No: 286092			
Send Results to: Douglas Partners Pty Ltd	Address: Unit 5, 50 Topham Road, Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME		Transported to laboratory by:	
Signed: 	Date & Time: 22/12/2021	Received by: 	23/12/21 1245

286092

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: AJ	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

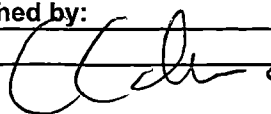
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Metals	Asbestos (50 g)		
218/0.3-0.4	40	22.12.21	S	G / P						x				
219/0-0.1	41	22.12.21	S	G / P							x	x		
219/0.4-0.5	42	22.12.21	S	G / P						x				
BD1	43	22.12.21	S	G			x							
BD1	44	22.12.21	S	G						x				
TS	45	22.12.21	S	G							x	x		
TB	46	22.12.21	W	G						x				
230/0-0.1	47	21.12.21	S	G / P					x					
230/0.4-0.5	48	21.12.21	S	G / P						x				
231/0-0.1	49	21.12.21	S	G / P					x					
231/0.3-0.4	50	21.12.21	S	G / P						x				
232/0-0.1	51	21.12.21	S	G / P							x	x		
232/0.4-0.5	52	21.12.21	S	G / P						x				

Lab Report No: 286092		Address: 18 Waler Crescent Smeaton Grange		Phone: (02) 4647 0075	Fax: (02) 4646 1886
Send Results to: Douglas Partners Pty Ltd		Transported to laboratory by:			
Relinquished by: 		Received by:  23/12/21 1245			
Signed:		Date & Time: 22.12.21			

286092

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: AJ
Project Mgr: Emily Eden	12 Ashley Street, Chatswood NSW 2067
Email: emily.eden@douglaspartners.com.au	Attn: Nancy Zhang
Date Required: Standard turnaround	Phone: (02) 9910 6200 Fax: (02) 9910 6201
	Email: tnotaras@envirolabservices.com.au

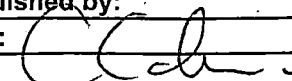
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Metals	Asbestos (50 g)		
234-0-0.1	53	21.12.21	S	G / P			x							
234-0.3-0.4	54	21.12.21	S	G / P						x				
235/0-0.1	55	21.12.21	S	G / P					x					
235-0.4-0.5	56	21.12.21	S	G / P						x				
236/0-0.1	57	21.12.21	S	G / P							x	x		
236/0.3-0.4	58	21.12.21	S	G / P						x				
237/0-0.1	59	21.12.21	S	G / P			x							
237/0.3-0.4	60	21.12.21	S	G / P						x				
238/0-0.1	61	21.12.21	S	G / P					x					
238/0.4-0.5	62	21.12.21	S	G / P						x				
239/0-0.1	63	21.12.21	S	G / P							x	x		
239/0.4-0.5	64	21.12.21	S	G / P						x				
240/0-0.1	65	21.12.21	S	G / P			x							

Lab Report No: 286092			
Send Results to: Douglas Partners Pty Ltd	Address:	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by:	Transported to laboratory by:		
Signed: 	Date & Time: 22.12.21	Received by: 	23/12/21 1245

286092

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: AJ	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

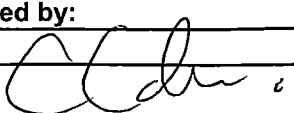
Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Metals	Asbestos (50 g)		
240/0.2-0.3	66	21.12.21	S	G / P						x				
241/0-0.1	67	21.12.21	S	G / P			x							
241/0.1-0.6	68	21.12.21	S	G / P						x				
242/0-0.1	69	21.12.21	S	G / P							x	x		
242/0.3-0.4	70	21.12.21	S	G / P						x				
243/0-0.1	71	21.12.21	S	G / P			x							
234/0.2-0.3	72	21.12.21	S	G / P						x				
244/0-0.1	73	21.12.21	S	G / P							x	x		
244/0.3-0.4	74	21.12.21	S	G / P						x				
245/0-0.1	75	21.12.21	S	G / P			x							
245/0.2-0.3	76	21.12.21	S	G / P						x				
246/0-0.2	77	21.12.21	S	G / P	x									
246-0.3-0.4	78	21.12.21	S	G / P						x				

Lab Report No: 286092		Address: Unit 5, 50 Topham Road, Smeaton Grange 2567		Phone: (02) 4647 0075	Fax: (02) 4646 1886
Send Results to: Douglas Partners Pty Ltd			Transported to laboratory by:		
Relinquished by:			Received by: JH 23/12/21 1245		
Signed: 		Date & Time:			

286092

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: AJ	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	Metals	Asbestos (50 g)	Volatiles	
247/0-0.1	79	21.12.21	S	G / P			x							
247/0.2-0.3	80	21.12.21	S	G / P						x				
248/0.1-0.2	81	21.12.21	S	G / P							x	x		
248/0.3-0.4	82	21.12.21	S	G / P						x				
249/0-0.1	83	21.12.21	S	G / P			x							
249/0.3-0.4	84	21.12.21	S	G / P						x				
BD1	85	21.12.21	S	G							x			
BD2	86	21.12.21	S	G					x					
BD3	87	21.12.21	S	G					x					
TS	88	21.12.21	S	G							x		x	
TB	89	21.12.21	W	G									x	
184/0-0.2	90	21/12	S	G										
185/0-0.2	91	21/12	S	G										

Lab Report No: 286092			
Send Results to: Douglas Partners Pty Ltd	Address: Unit 5, 50 Topham Road, Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by:		Transported to laboratory by:	
Signed: 	Date & Time:	Received by: 	23/12/21 1245

286092

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden

Sample Login Details

Your reference	94562.02, Austral
Envirolab Reference	286092
Date Sample Received	23/12/2021
Date Instructions Received	23/12/2021
Date Results Expected to be Reported	07/01/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	90 Soil, 2 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	12
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Extra samples received:
 184/0-0.2
 185/0-0.2
 186/0-0.2

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

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	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Asbestos ID - soils	VTRH(C6-C10)/BTEXN in Water	On Hold
182/0-0.1								✓	✓		
182/0.3-0.4											✓
187/0-0.1				✓	✓			✓			
187/0.3-0.4											✓
188/0-0.1								✓	✓		
188/0.3-0.4											✓
189/0-0.1				✓	✓			✓			
189/0.2-0.3											✓
190/0-0.1								✓	✓		
190/0.3-0.4											✓
191/0-0.1				✓	✓			✓			
191/0.2-0.3											✓
192/0-0.1								✓	✓		
192/0.4-0.5											✓
193/0-0.1				✓	✓			✓			
193/0.3-0.4											✓
194/0-0.1								✓	✓		
194/0.3-0.4											✓
195/0-0.1				✓	✓			✓			
195/0.3-0.4											✓
196/0-0.1								✓			
196/0.2-0.3											✓
197/0-0.1				✓	✓			✓			
197/0.3-0.4											✓
199/0-0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓		
199/0.2-0.3											✓
200/0-0.1				✓	✓			✓			
200/0.2-0.3											✓
201/0-0.1								✓	✓		
201/0.3-0.4											✓
202/0-0.1				✓	✓			✓			
202/0.2-0.3											✓



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 ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Asbestos ID - soils	VTRH(C6-C10)/BTEXN in Water	On Hold
205/0-0.1								✓	✓		
205/0.2-0.3											✓
216/0-0.1				✓	✓			✓			
216/0.4-0.5											✓
217/0-0.1								✓	✓		
217/0.3-0.4											✓
218/0-0.1				✓	✓			✓			
218/0.3-0.4											✓
219/0-0.1								✓	✓		
219/0.4-0.5											✓
BD1				✓	✓			✓			
BD2											✓
TS	✓										
TB										✓	
230/0-0.1	✓	✓	✓					✓	✓		
230/0.4-0.5											✓
231/0-0.1	✓	✓	✓					✓	✓		
231/0.3-0.4											✓
232/0-0.1								✓	✓		
232/0.4-0.5											✓
234/0-0.1				✓	✓			✓			
234/0.3-0.4											✓
235/0-0.1	✓	✓	✓					✓	✓		
235/0.4-0.5											✓
236/0-0.1								✓	✓		
236/0.3-0.4											✓
237/0-0.1				✓	✓			✓			
237/0.3-0.4											✓
238/0-0.1	✓	✓	✓					✓	✓		
238/0.4-0.5											✓
239/0-0.1								✓	✓		
239/0.4-0.5											✓

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides in Soil	PCBs in Soil	Misc Soil - Inorg	Acid Extractable metals in soil	Asbestos ID - soils	VTRH(C6-C10)/BTEXN in Water	On Hold
240/0-0.1				✓	✓			✓			
240/0.2-0.3											✓
241/0-0.1				✓	✓			✓			
241/0.1-0.6											✓
242/0-0.1								✓	✓		
242/0.3-0.4											✓
243/0-0.1				✓	✓			✓			
234/0.2-0.3											✓
244/0-0.1								✓	✓		
244/0.3-0.4											✓
245/0-0.1				✓	✓			✓			
245/0.2-0.3											✓
246/0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓		
246/0.3-0.4											✓
247/0-0.1				✓	✓			✓			
247/0.2-0.3											✓
248/0.1-0.2								✓	✓		
248/0.3-0.4											✓
249/0-0.1				✓	✓			✓			
249/0.3-0.4											✓
BD1								✓			
BD2	✓	✓	✓					✓	✓		
BD3	✓	✓	✓					✓	✓		
TS	✓										
TB										✓	
184/0-0.2											✓
185/0-0.2											✓
186/0-0.2											✓

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.

CERTIFICATE OF ANALYSIS 287490

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden
Address	18 Waler Crescent, Smeaton Grange, NSW, 2567

Sample Details

Your Reference	<u>94562.02, Austral</u>
Number of Samples	14 Soil
Date samples received	27/01/2022
Date completed instructions received	27/01/2022

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	03/02/2022
Date of Issue	03/02/2022
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 *	

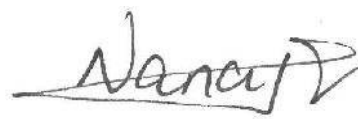
Asbestos Approved By

Analysed by Asbestos Approved Analyst: Panika Wongchanda
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Dragana Tomas, Senior Chemist
 Josh Williams, LC Supervisor
 Loren Bardwell, Development Chemist
 Lucy Zhu, Asbestos Supervisor
 Steven Luong, Organics Supervisor
 Thomas Beenie, Lab Technician

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in soil		
Our Reference		287490-12
Your Reference	UNITS	166
Date Sampled		20/01/2022
Type of sample		Soil
Date extracted	-	31/01/2022
Date analysed	-	31/01/2022
Dichlorodifluoromethane	mg/kg	<1
Chloromethane	mg/kg	<1
Vinyl Chloride	mg/kg	<1
Bromomethane	mg/kg	<1
Chloroethane	mg/kg	<1
Trichlorofluoromethane	mg/kg	<1
1,1-Dichloroethene	mg/kg	<1
trans-1,2-dichloroethene	mg/kg	<1
1,1-dichloroethane	mg/kg	<1
cis-1,2-dichloroethene	mg/kg	<1
bromochloromethane	mg/kg	<1
chloroform	mg/kg	<1
2,2-dichloropropane	mg/kg	<1
1,2-dichloroethane	mg/kg	<1
1,1,1-trichloroethane	mg/kg	<1
1,1-dichloropropene	mg/kg	<1
Cyclohexane	mg/kg	<1
carbon tetrachloride	mg/kg	<1
Benzene	mg/kg	<0.2
dibromomethane	mg/kg	<1
1,2-dichloropropane	mg/kg	<1
trichloroethene	mg/kg	<1
bromodichloromethane	mg/kg	<1
trans-1,3-dichloropropene	mg/kg	<1
cis-1,3-dichloropropene	mg/kg	<1
1,1,2-trichloroethane	mg/kg	<1
Toluene	mg/kg	<0.5
1,3-dichloropropane	mg/kg	<1
dibromochloromethane	mg/kg	<1
1,2-dibromoethane	mg/kg	<1
tetrachloroethene	mg/kg	<1
1,1,1,2-tetrachloroethane	mg/kg	<1
chlorobenzene	mg/kg	<1
Ethylbenzene	mg/kg	<1

VOCs in soil		
Our Reference		287490-12
Your Reference	UNITS	166
Date Sampled		20/01/2022
Type of sample		Soil
bromoform	mg/kg	<1
m+p-xylene	mg/kg	<2
styrene	mg/kg	<1
1,1,2,2-tetrachloroethane	mg/kg	<1
o-Xylene	mg/kg	<1
1,2,3-trichloropropane	mg/kg	<1
isopropylbenzene	mg/kg	<1
bromobenzene	mg/kg	<1
n-propyl benzene	mg/kg	<1
2-chlorotoluene	mg/kg	<1
4-chlorotoluene	mg/kg	<1
1,3,5-trimethyl benzene	mg/kg	<1
tert-butyl benzene	mg/kg	<1
1,2,4-trimethyl benzene	mg/kg	<1
1,3-dichlorobenzene	mg/kg	<1
sec-butyl benzene	mg/kg	<1
1,4-dichlorobenzene	mg/kg	<1
4-isopropyl toluene	mg/kg	<1
1,2-dichlorobenzene	mg/kg	<1
n-butyl benzene	mg/kg	<1
1,2-dibromo-3-chloropropane	mg/kg	<1
1,2,4-trichlorobenzene	mg/kg	<1
hexachlorobutadiene	mg/kg	<1
1,2,3-trichlorobenzene	mg/kg	<1
Surrogate Dibromofluorometha	%	101
Surrogate aaa-Trifluorotoluene	%	71
Surrogate Toluene-d ₈	%	106
Surrogate 4-Bromofluorobenzene	%	99

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		287490-10	287490-12	287490-14
Your Reference	UNITS	233	166	50
Date Sampled		20/01/2022	20/01/2022	21/01/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	31/01/2022	31/01/2022	31/01/2022
Date analysed	-	31/01/2022	31/01/2022	31/01/2022
TRH C ₆ - C ₉	mg/kg	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	74	71	77

svTRH (C10-C40) in Soil				
Our Reference		287490-10	287490-12	287490-14
Your Reference	UNITS	233	166	50
Date Sampled		20/01/2022	20/01/2022	21/01/2022
Type of sample		Soil	Soil	Soil
Date extracted	-	31/01/2022	31/01/2022	31/01/2022
Date analysed	-	01/02/2022	01/02/2022	01/02/2022
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
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50
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	%	97	96	96

PAHs in Soil			
Our Reference		287490-10	287490-14
Your Reference	UNITS	233	50
Date Sampled		20/01/2022	21/01/2022
Type of sample		Soil	Soil
Date extracted	-	31/01/2022	31/01/2022
Date analysed	-	01/02/2022	01/02/2022
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	91	97

PCBs in Soil		
Our Reference		287490-12
Your Reference	UNITS	166
Date Sampled		20/01/2022
Type of sample		Soil
Date extracted	-	31/01/2022
Date analysed	-	01/02/2022
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	%	80

Acid Extractable metals in soil

Our Reference		287490-1	287490-2	287490-3	287490-4	287490-5
Your Reference	UNITS	68	69	70	71	72
Date Sampled		21/01/2022	21/01/2022	21/01/2022	21/01/2022	21/01/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Date analysed	-	01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Arsenic	mg/kg	<4	<4	<4	4	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	8	9	10	12
Copper	mg/kg	7	8	15	16	7
Lead	mg/kg	17	12	13	16	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	4	8	7	4
Zinc	mg/kg	15	14	37	42	15

Acid Extractable metals in soil

Our Reference		287490-6	287490-7	287490-8	287490-9	287490-10
Your Reference	UNITS	73	74	75	209	233
Date Sampled		21/01/2022	21/01/2022	21/01/2022	21/01/2022	20/01/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Date analysed	-	01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Arsenic	mg/kg	5	5	4	5	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	10	10	14	14
Copper	mg/kg	9	14	14	13	11
Lead	mg/kg	19	18	18	13	17
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	6	6	7	6
Zinc	mg/kg	53	40	41	22	34

Acid Extractable metals in soil

Our Reference		287490-11	287490-12	287490-13	287490-14	287490-15
Your Reference	UNITS	165	166	168	50	165 - [TRIPLICATE]
Date Sampled		20/01/2022	20/01/2022	20/01/2022	21/01/2022	20/01/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Date analysed	-	01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Arsenic	mg/kg	6	4	<4	5	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	14	10	13	13
Copper	mg/kg	11	4	9	9	14
Lead	mg/kg	17	12	15	15	22
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	2	3	5	7
Zinc	mg/kg	23	27	24	17	35

Moisture						
Our Reference		287490-1	287490-2	287490-3	287490-4	287490-5
Your Reference	UNITS	68	69	70	71	72
Date Sampled		21/01/2022	21/01/2022	21/01/2022	21/01/2022	21/01/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
Date analysed	-	01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Moisture	%	16	9.2	12	34	25

Moisture						
Our Reference		287490-6	287490-7	287490-8	287490-9	287490-10
Your Reference	UNITS	73	74	75	209	233
Date Sampled		21/01/2022	21/01/2022	21/01/2022	21/01/2022	20/01/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	31/01/2022	31/01/2022	31/01/2022	31/01/2022	31/01/2022
Date analysed	-	01/02/2022	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Moisture	%	23	26	25	13	24

Moisture					
Our Reference		287490-11	287490-12	287490-13	287490-14
Your Reference	UNITS	165	166	168	50
Date Sampled		20/01/2022	20/01/2022	20/01/2022	21/01/2022
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	31/01/2022	31/01/2022	31/01/2022	31/01/2022
Date analysed	-	01/02/2022	01/02/2022	01/02/2022	01/02/2022
Moisture	%	18	17	32	13

Asbestos ID - soils						
Our Reference	UNITS	287490-1	287490-2	287490-3	287490-4	287490-5
Your Reference		68	69	70	71	72
Date Sampled		21/01/2022	21/01/2022	21/01/2022	21/01/2022	21/01/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	03/02/2022	03/02/2022	03/02/2022	03/02/2022	03/02/2022
Sample mass tested	g	Approx. 40g	Approx. 45g	Approx. 45g	Approx. 35g	Approx. 40g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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	UNITS	287490-6	287490-7	287490-8	287490-9	287490-10
Your Reference		73	74	75	209	233
Date Sampled		21/01/2022	21/01/2022	21/01/2022	21/01/2022	20/01/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	03/02/2022	03/02/2022	03/02/2022	03/02/2022	03/02/2022
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 40g	Approx. 45g	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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg 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		287490-11	287490-13	287490-14
Your Reference	UNITS	165	168	50
Date Sampled		20/01/2022	20/01/2022	21/01/2022
Type of sample		Soil	Soil	Soil
Date analysed	-	03/02/2022	03/02/2022	03/02/2022
Sample mass tested	g	Approx. 40g	Approx. 35g	Approx. 40g
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 Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected

PFAS in Soils Extended		
Our Reference		287490-14
Your Reference	UNITS	50
Date Sampled		21/01/2022
Type of sample		Soil
Date prepared	-	31/01/2022
Date analysed	-	31/01/2022
Perfluorobutanesulfonic acid	µg/kg	<0.1
Perfluoropentanesulfonic acid	µg/kg	<0.1
Perfluorohexanesulfonic acid - PFHxS	µg/kg	<0.1
Perfluoroheptanesulfonic acid	µg/kg	<0.1
Perfluorooctanesulfonic acid PFOS	µg/kg	0.3
Perfluorodecanesulfonic acid	µg/kg	<0.2
Perfluorobutanoic acid	µg/kg	0.2
Perfluoropentanoic acid	µg/kg	<0.2
Perfluorohexanoic acid	µg/kg	<0.1
Perfluoroheptanoic acid	µg/kg	<0.1
Perfluorooctanoic acid PFOA	µg/kg	<0.1
Perfluorononanoic acid	µg/kg	<0.1
Perfluorodecanoic acid	µg/kg	<0.5
Perfluoroundecanoic acid	µg/kg	<0.5
Perfluorododecanoic acid	µg/kg	<0.5
Perfluorotridecanoic acid	µg/kg	<0.5
Perfluorotetradecanoic acid	µg/kg	<5
4:2 FTS	µg/kg	<0.1
6:2 FTS	µg/kg	<0.1
8:2 FTS	µg/kg	<0.2
10:2 FTS	µg/kg	<0.2
Perfluorooctane sulfonamide	µg/kg	<1
N-Methyl perfluorooctane sulfonamide	µg/kg	<1
N-Ethyl perfluorooctanesulfonamide	µg/kg	<1
N-Me perfluorooctanesulfonamid oethanol	µg/kg	<1
N-Et perfluorooctanesulfonamid oethanol	µg/kg	<5
MePerfluorooctanesulf- amid oacetic acid	µg/kg	<0.2
EtPerfluorooctanesulf amid oacetic acid	µg/kg	<0.2
Surrogate ¹³ C ₈ PFOS	%	111
Surrogate ¹³ C ₂ PFOA	%	101
Extracted ISTD ¹³ C ₃ PFBS	%	107
Extracted ISTD ¹⁸ O ₂ PFHxS	%	106
Extracted ISTD ¹³ C ₄ PFOS	%	104
Extracted ISTD ¹³ C ₄ PFBA	%	105

PFAS in Soils Extended		
Our Reference		287490-14
Your Reference	UNITS	50
Date Sampled		21/01/2022
Type of sample		Soil
Extracted ISTD ¹³ C ₃ PFPeA	%	113
Extracted ISTD ¹³ C ₂ PFHxA	%	119
Extracted ISTD ¹³ C ₄ PFHpA	%	116
Extracted ISTD ¹³ C ₄ PFOA	%	127
Extracted ISTD ¹³ C ₅ PFNA	%	126
Extracted ISTD ¹³ C ₂ PFDA	%	121
Extracted ISTD ¹³ C ₂ PFUnDA	%	112
Extracted ISTD ¹³ C ₂ PFDoDA	%	113
Extracted ISTD ¹³ C ₂ PFTeDA	%	94
Extracted ISTD ¹³ C ₂ 4:2FTS	%	99
Extracted ISTD ¹³ C ₂ 6:2FTS	%	100
Extracted ISTD ¹³ C ₂ 8:2FTS	%	132
Extracted ISTD ¹³ C ₈ FOSA	%	91
Extracted ISTD d ₃ N MeFOSA	%	110
Extracted ISTD d ₅ N EtFOSA	%	120
Extracted ISTD d ₇ N MeFOSE	%	92
Extracted ISTD d ₉ N EtFOSE	%	94
Extracted ISTD d ₃ N MeFOSAA	%	89
Extracted ISTD d ₅ N EtFOSAA	%	90
Total Positive PFHxS & PFOS	µg/kg	0.3
Total Positive PFOS & PFOA	µg/kg	0.3
Total Positive PFAS	µg/kg	0.5

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-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	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-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.

Method ID	Methodology Summary
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.
Org-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VOCs in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			31/01/2022	[NT]	[NT]	[NT]	[NT]	31/01/2022	[NT]
Date analysed	-			31/01/2022	[NT]	[NT]	[NT]	[NT]	31/01/2022	[NT]
Dichlorodifluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Vinyl Chloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Trichlorofluoromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-Dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trans-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
cis-1,2-dichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chloroform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
2,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	89	[NT]
1,1,1-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
1,1-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Cyclohexane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
carbon tetrachloride	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromomethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
trichloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	73	[NT]
bromodichloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	80	[NT]
trans-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
cis-1,3-dichloropropene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2-trichloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
dibromochloromethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	108	[NT]
1,2-dibromoethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tetrachloroethene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
1,1,1,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
chlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromoform	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
styrene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,1,2,2-tetrachloroethane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

QUALITY CONTROL: VOCs in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
o-Xylene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
isopropylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
bromobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-propyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
2-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-chlorotoluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3,5-trimethyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
tert-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trimethyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,3-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
sec-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,4-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
4-isopropyl toluene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
n-butyl benzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2-dibromo-3-chloropropane	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,4-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
hexachlorobutadiene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
1,2,3-trichlorobenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluorometha	%		Org-023	106	[NT]	[NT]	[NT]	[NT]	105	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	94	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate Toluene-d ₈	%		Org-023	105	[NT]	[NT]	[NT]	[NT]	105	[NT]
Surrogate 4-Bromofluorobenzene	%		Org-023	101	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-2	[NT]
Date extracted	-			31/01/2022	[NT]	[NT]	[NT]	[NT]	31/01/2022	[NT]
Date analysed	-			31/01/2022	[NT]	[NT]	[NT]	[NT]	31/01/2022	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	87	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-023	<25	[NT]	[NT]	[NT]	[NT]	87	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	[NT]	[NT]	[NT]	[NT]	86	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	[NT]	[NT]	[NT]	[NT]	82	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	91	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	87	[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	94	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			31/01/2022	[NT]	[NT]	[NT]	[NT]	31/01/2022	[NT]
Date analysed	-			31/01/2022	[NT]	[NT]	[NT]	[NT]	31/01/2022	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	95	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	105	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	127	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-020	<50	[NT]	[NT]	[NT]	[NT]	95	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	105	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-020	<100	[NT]	[NT]	[NT]	[NT]	127	[NT]
Surrogate o-Terphenyl	%		Org-020	98	[NT]	[NT]	[NT]	[NT]	89	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			31/01/2022	[NT]	[NT]	[NT]	[NT]	31/01/2022	[NT]
Date analysed	-			01/02/2022	[NT]	[NT]	[NT]	[NT]	01/02/2022	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
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]	87	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
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]	92	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	[NT]	[NT]	[NT]	[NT]	95	[NT]
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]	71	[NT]
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]	114	[NT]
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	95	[NT]	[NT]	[NT]	[NT]	89	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	[NT]
Date extracted	-			31/01/2022	[NT]	[NT]	[NT]	[NT]	31/01/2022	[NT]
Date analysed	-			01/02/2022	[NT]	[NT]	[NT]	[NT]	01/02/2022	[NT]
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]	107	[NT]
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]	80	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	287490-2
Date prepared	-			01/02/2022	1	01/02/2022	01/02/2022		01/02/2022	01/02/2022
Date analysed	-			01/02/2022	1	01/02/2022	01/02/2022		01/02/2022	01/02/2022
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	100	83
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	95	76
Chromium	mg/kg	1	Metals-020	<1	1	9	10	11	95	80
Copper	mg/kg	1	Metals-020	<1	1	7	7	0	92	85
Lead	mg/kg	1	Metals-020	<1	1	17	17	0	97	81
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	113	99
Nickel	mg/kg	1	Metals-020	<1	1	3	4	29	95	77
Zinc	mg/kg	1	Metals-020	<1	1	15	15	0	104	76

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	11	01/02/2022	01/02/2022		[NT]	[NT]
Date analysed	-			[NT]	11	01/02/2022	01/02/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	11	6	7	15	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	11	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	11	13	13	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	11	11	13	17	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	11	17	20	16	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	11	6	6	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	11	23	35	41	[NT]	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			31/01/2022	[NT]	[NT]	[NT]	[NT]	31/01/2022	[NT]
Date analysed	-			31/01/2022	[NT]	[NT]	[NT]	[NT]	31/01/2022	[NT]
Perfluorobutanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Perfluoropentanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Perfluoroheptanesulfonic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluorooctanesulfonic acid PFOS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorodecanesulfonic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	108	[NT]
Perfluorobutanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	100	[NT]
Perfluoropentanoic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorohexanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluoroheptanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]
Perfluorooctanoic acid PFOA	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorononanoic acid	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Perfluorodecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	101	[NT]
Perfluoroundecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	107	[NT]
Perfluorododecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	98	[NT]
Perfluorotridecanoic acid	µg/kg	0.5	Org-029	<0.5	[NT]	[NT]	[NT]	[NT]	91	[NT]
Perfluorotetradecanoic acid	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	105	[NT]
4:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
6:2 FTS	µg/kg	0.1	Org-029	<0.1	[NT]	[NT]	[NT]	[NT]	99	[NT]
8:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	96	[NT]
10:2 FTS	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	83	[NT]
Perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
N-Methyl perfluorooctane sulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	109	[NT]
N-Ethyl perfluorooctanesulfonamide	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
N-Me perfluorooctanesulfonamidethanol	µg/kg	1	Org-029	<1	[NT]	[NT]	[NT]	[NT]	105	[NT]
N-Et perfluorooctanesulfonamidethanol	µg/kg	5	Org-029	<5	[NT]	[NT]	[NT]	[NT]	113	[NT]
MePerfluorooctanesulfonamidacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	102	[NT]
EtPerfluorooctanesulfonamidacetic acid	µg/kg	0.2	Org-029	<0.2	[NT]	[NT]	[NT]	[NT]	95	[NT]
Surrogate ¹³ C ₈ PFOS	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate ¹³ C ₂ PFOA	%		Org-029	101	[NT]	[NT]	[NT]	[NT]	95	[NT]

QUALITY CONTROL: PFAS in Soils Extended					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD ¹³ C ₃ PFBS	%		Org-029	108	[NT]	[NT]	[NT]	[NT]	111	[NT]
Extracted ISTD ¹⁸ O ₂ PFHxS	%		Org-029	111	[NT]	[NT]	[NT]	[NT]	113	[NT]
Extracted ISTD ¹³ C ₄ PFOS	%		Org-029	109	[NT]	[NT]	[NT]	[NT]	107	[NT]
Extracted ISTD ¹³ C ₄ PFBA	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	116	[NT]
Extracted ISTD ¹³ C ₃ PFPeA	%		Org-029	117	[NT]	[NT]	[NT]	[NT]	115	[NT]
Extracted ISTD ¹³ C ₂ PFHxA	%		Org-029	113	[NT]	[NT]	[NT]	[NT]	115	[NT]
Extracted ISTD ¹³ C ₄ PFHpA	%		Org-029	124	[NT]	[NT]	[NT]	[NT]	122	[NT]
Extracted ISTD ¹³ C ₄ PFOA	%		Org-029	122	[NT]	[NT]	[NT]	[NT]	128	[NT]
Extracted ISTD ¹³ C ₅ PFNA	%		Org-029	126	[NT]	[NT]	[NT]	[NT]	125	[NT]
Extracted ISTD ¹³ C ₂ PFDA	%		Org-029	119	[NT]	[NT]	[NT]	[NT]	118	[NT]
Extracted ISTD ¹³ C ₂ PFUnDA	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	88	[NT]
Extracted ISTD ¹³ C ₂ PFDoDA	%		Org-029	91	[NT]	[NT]	[NT]	[NT]	97	[NT]
Extracted ISTD ¹³ C ₂ PFTeDA	%		Org-029	88	[NT]	[NT]	[NT]	[NT]	86	[NT]
Extracted ISTD ¹³ C ₂ 4:2FTS	%		Org-029	127	[NT]	[NT]	[NT]	[NT]	132	[NT]
Extracted ISTD ¹³ C ₂ 6:2FTS	%		Org-029	136	[NT]	[NT]	[NT]	[NT]	138	[NT]
Extracted ISTD ¹³ C ₂ 8:2FTS	%		Org-029	89	[NT]	[NT]	[NT]	[NT]	86	[NT]
Extracted ISTD ¹³ C ₈ FOSA	%		Org-029	129	[NT]	[NT]	[NT]	[NT]	126	[NT]
Extracted ISTD d ₃ N MeFOSA	%		Org-029	114	[NT]	[NT]	[NT]	[NT]	114	[NT]
Extracted ISTD d ₅ N EtFOSA	%		Org-029	120	[NT]	[NT]	[NT]	[NT]	121	[NT]
Extracted ISTD d ₇ N MeFOSE	%		Org-029	95	[NT]	[NT]	[NT]	[NT]	95	[NT]

QUALITY CONTROL: PFAS in Soils Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Extracted ISTD d ₉ N EtFOSE	%		Org-029	94	[NT]	[NT]	[NT]	[NT]	95	[NT]
Extracted ISTD d ₃ N MeFOSAA	%		Org-029	84	[NT]	[NT]	[NT]	[NT]	84	[NT]
Extracted ISTD d ₅ N EtFOSAA	%		Org-029	125	[NT]	[NT]	[NT]	[NT]	129	[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 287490-11 for Zn. Therefore a triplicate result has been issued as laboratory sample number 287490-15.

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.

Project Name: Austral	To: Envirolab Services
Project No: 94562.02	Sampler: JH
Project Mgr: Emily Eden	Attn: Nancy Zhang
Email: emily.eden@douglaspartners.com.au	Phone: (02) 9910 6200 Fax: (02) 9910 6201
Date Required: Standard turnaround	Email: tnotaras@envirolabservices.com.au

Sample ID	Lab ID	Date Sampled	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	metals, asbestos	PFAS suite - standard LOR		
68	1	21/01/22	S	G							X			
69	2	21/01/22	S	G							X			
70	3	21/01/22	S	G							X			
71	4	21/01/22	S	G							X			
72	5	21/01/22	S	G							X			
73	6	21/01/22	S	G							X			
74	7	21/01/22	S	G							X			
75	8	21/01/22	S	G							X			
209	9	21/01/22	S	G							X			
233	10	20/01/22	S	G					X					
165	11	20/01/22	S	G							X			
166	12	20/01/22	S	G				X						
168	13	20/01/22	S	G							X			

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
 Job No: 287490
 Date Received: 27/1/22
 Time Received: 1700
 Received By: [Signature]
 Temp: Cool/Ambient
 Cooling: Ice/Repack
 Security: Intact/Broken/None

Lab Report No:			
Send Results to: Douglas Partners Pty Ltd	Address: 18 Waler Crescent Smeaton Grange 2567	Phone: (02) 4647 0075	Fax: (02) 4646 1886
Relinquished by: EME	Transported to laboratory by:		
Signed:	Date & Time: 27/01/2022	Received by: [Signature] 27/1/22 1700	

Project Name: Austral		To: Envirolab Services	
Project No: 94562.02	Sampler: JH	12 Ashley Street, Chatswood NSW 2067	
Project Mgr: Emily Eden	Mob. Phone: N/A	Attn: Nancy Zhang	
Email: emily.eden@douglaspartners.com.au		Phone: (02) 9910 6200	Fax: (02) 9910 6201
Date Required: Standard turnaround		Email: tnotaras@envirolabservices.com.au	

Sample ID	Lab ID	Sampling Date	Sample Type	Container Type	Analytes									Notes/preservation
			S - soil W - water	G - glass P - plastic	Suite 1	Suite 2	Suite 3	Suite 4	Suite 5	HOLD	metals, asbestos	PFAS suite - standard LOR		
50	14	21/01/22	S	G					x			x		PFAS Jar provided

Lab Report No:		Send Results to: Douglas Partners Pty Ltd		Address: Unit 5, 50 Topham Road, Smeaton Grange 2567		Phone: (02) 4647 0075		Fax: (02) 4646 1886	
Relinquished by: EME		Date & Time: 27/01/2022		Transported to laboratory by:					
Signed:				Received by:					

287490

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd Smeaton Grange
Attention	Emily Eden

Sample Login Details

Your reference	94562.02, Austral
Envirolab Reference	287490
Date Sample Received	27/01/2022
Date Instructions Received	27/01/2022
Date Results Expected to be Reported	03/02/2022

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	14 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18
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:



Sample ID	VOCs in soil	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils	PFAS in Soils Extended
68						✓	✓	
69						✓	✓	
70						✓	✓	
71						✓	✓	
72						✓	✓	
73						✓	✓	
74						✓	✓	
75						✓	✓	
209						✓	✓	
233		✓	✓	✓		✓	✓	
165						✓	✓	
166	✓	✓	✓		✓	✓		
168						✓	✓	
50		✓	✓	✓		✓	✓	✓

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.

Appendix H

ProUCL Outputs

	A	B	C	D	E	F	G	H	I	J	K	L	
1	UCL Statistics for Uncensored Full Data Sets												
2	Background Test Locations - Nickel												
3	User Selected Options												
4	Date/Time of Computation			ProUCL 5.12/02/2022 10:06:18 AM									
5	From File			WorkSheet.xls									
6	Full Precision			OFF									
7	Confidence Coefficient			95%									
8	Number of Bootstrap Operations			2000									
9													
10													
11	C1												
12													
13	General Statistics												
14	Total Number of Observations				37		Number of Distinct Observations				11		
15							Number of Missing Observations				0		
16	Minimum				3		Mean				7.541		
17	Maximum				13		Median				7		
18	SD				2.49		Std. Error of Mean				0.409		
19	Coefficient of Variation				0.33		Skewness				0.388		
20													
21	Normal GOF Test												
22	Shapiro Wilk Test Statistic				0.958		Shapiro Wilk GOF Test						
23	5% Shapiro Wilk Critical Value				0.936		Data appear Normal at 5% Significance Level						
24	Lilliefors Test Statistic				0.153		Lilliefors GOF Test						
25	5% Lilliefors Critical Value				0.144		Data Not Normal at 5% Significance Level						
26	Data appear Approximate Normal at 5% Significance Level												
27													
28	Assuming Normal Distribution												
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				8.232		95% Adjusted-CLT UCL (Chen-1995)					8.242	
31							95% Modified-t UCL (Johnson-1978)					8.236	
32													
33	Gamma GOF Test												
34	A-D Test Statistic				0.383		Anderson-Darling Gamma GOF Test						
35	5% A-D Critical Value				0.749		Detected data appear Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic				0.112		Kolmogorov-Smirnov Gamma GOF Test						
37	5% K-S Critical Value				0.145		Detected data appear Gamma Distributed at 5% Significance Level						
38	Detected data appear Gamma Distributed at 5% Significance Level												
39													
40	Gamma Statistics												
41	k hat (MLE)				9.139		k star (bias corrected MLE)					8.416	
42	Theta hat (MLE)				0.825		Theta star (bias corrected MLE)					0.896	
43	nu hat (MLE)				676.3		nu star (bias corrected)					622.8	
44	MLE Mean (bias corrected)				7.541		MLE Sd (bias corrected)					2.599	
45							Approximate Chi Square Value (0.05)					565.9	
46	Adjusted Level of Significance				0.0431		Adjusted Chi Square Value					563.6	
47													
48	Assuming Gamma Distribution												
49	95% Approximate Gamma UCL (use when n>=50))				8.299		95% Adjusted Gamma UCL (use when n<50)					8.333	
50													
51	Lognormal GOF Test												
52	Shapiro Wilk Test Statistic				0.965		Shapiro Wilk Lognormal GOF Test						
53	5% Shapiro Wilk Critical Value				0.936		Data appear Lognormal at 5% Significance Level						

	A	B	C	D	E	F	G	H	I	J	K	L	
54	Lilliefors Test Statistic					0.119	Lilliefors Lognormal GOF Test						
55	5% Lilliefors Critical Value					0.144	Data appear Lognormal at 5% Significance Level						
56	Data appear Lognormal at 5% Significance Level												
57													
58	Lognormal Statistics												
59	Minimum of Logged Data					1.099	Mean of logged Data					1.965	
60	Maximum of Logged Data					2.565	SD of logged Data					0.346	
61													
62	Assuming Lognormal Distribution												
63	95% H-UCL					8.404	90% Chebyshev (MVUE) UCL					8.878	
64	95% Chebyshev (MVUE) UCL					9.475	97.5% Chebyshev (MVUE) UCL					10.3	
65	99% Chebyshev (MVUE) UCL					11.93							
66													
67	Nonparametric Distribution Free UCL Statistics												
68	Data appear to follow a Discernible Distribution at 5% Significance Level												
69													
70	Nonparametric Distribution Free UCLs												
71	95% CLT UCL					8.214	95% Jackknife UCL					8.232	
72	95% Standard Bootstrap UCL					8.201	95% Bootstrap-t UCL					8.27	
73	95% Hall's Bootstrap UCL					8.264	95% Percentile Bootstrap UCL					8.216	
74	95% BCA Bootstrap UCL					8.297							
75	90% Chebyshev(Mean, Sd) UCL					8.769	95% Chebyshev(Mean, Sd) UCL					9.325	
76	97.5% Chebyshev(Mean, Sd) UCL					10.1	99% Chebyshev(Mean, Sd) UCL					11.61	
77													
78	Suggested UCL to Use												
79	95% Student's-t UCL					8.232							
80													
81	When a data set follows an approximate (e.g., normal) distribution passing one of the GOF test												
82	When applicable, it is suggested to use a UCL based upon a distribution (e.g., gamma) passing both GOF tests in ProUCL												
83													
84	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
85	Recommendations are based upon data size, data distribution, and skewness.												
86	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).												
87	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.												
88													

	A	B	C	D	E	F	G	H	I	J	K	L	
1	UCL Statistics for Uncensored Full Data Sets												
2	PAEC 2 -												
3	User Selected Options												
4	Date/Time of Computation			ProUCL 5.12/02/2022 10:08:33 AM									
5	From File			WorkSheet_a.xls									
6	Full Precision			OFF									
7	Confidence Coefficient			95%									
8	Number of Bootstrap Operations			2000									
9													
10													
11	C1												
12													
13	General Statistics												
14	Total Number of Observations				14		Number of Distinct Observations				7		
15							Number of Missing Observations				0		
16	Minimum				4		Mean				7.714		
17	Maximum				11		Median				8		
18	SD				2.164		Std. Error of Mean				0.578		
19	Coefficient of Variation				0.28		Skewness				-0.261		
20													
21	Normal GOF Test												
22	Shapiro Wilk Test Statistic				0.936		Shapiro Wilk GOF Test						
23	5% Shapiro Wilk Critical Value				0.874		Data appear Normal at 5% Significance Level						
24	Lilliefors Test Statistic				0.224		Lilliefors GOF Test						
25	5% Lilliefors Critical Value				0.226		Data appear Normal at 5% Significance Level						
26	Data appear Normal at 5% Significance Level												
27													
28	Assuming Normal Distribution												
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				8.738		95% Adjusted-CLT UCL (Chen-1995)					8.622	
31							95% Modified-t UCL (Johnson-1978)					8.732	
32													
33	Gamma GOF Test												
34	A-D Test Statistic				0.539		Anderson-Darling Gamma GOF Test						
35	5% A-D Critical Value				0.734		Detected data appear Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic				0.242		Kolmogorov-Smirnov Gamma GOF Test						
37	5% K-S Critical Value				0.229		Data Not Gamma Distributed at 5% Significance Level						
38	Detected data follow Appr. Gamma Distribution at 5% Significance Level												
39													
40	Gamma Statistics												
41	k hat (MLE)				12.31		k star (bias corrected MLE)				9.719		
42	Theta hat (MLE)				0.627		Theta star (bias corrected MLE)				0.794		
43	nu hat (MLE)				344.6		nu star (bias corrected)				272.1		
44	MLE Mean (bias corrected)				7.714		MLE Sd (bias corrected)				2.475		
45							Approximate Chi Square Value (0.05)				234.9		
46	Adjusted Level of Significance				0.0312		Adjusted Chi Square Value				230.3		
47													
48	Assuming Gamma Distribution												
49	95% Approximate Gamma UCL (use when n>=50))				8.936		95% Adjusted Gamma UCL (use when n<50)				9.114		
50													
51	Lognormal GOF Test												
52	Shapiro Wilk Test Statistic				0.913		Shapiro Wilk Lognormal GOF Test						
53	5% Shapiro Wilk Critical Value				0.874		Data appear Lognormal at 5% Significance Level						

	A	B	C	D	E	F	G	H	I	J	K	L	
54	Lilliefors Test Statistic					0.237	Lilliefors Lognormal GOF Test						
55	5% Lilliefors Critical Value					0.226	Data Not Lognormal at 5% Significance Level						
56	Data appear Approximate Lognormal at 5% Significance Level												
57													
58	Lognormal Statistics												
59	Minimum of Logged Data					1.386	Mean of logged Data					2.002	
60	Maximum of Logged Data					2.398	SD of logged Data					0.308	
61													
62	Assuming Lognormal Distribution												
63	95% H-UCL					9.129	90% Chebyshev (MVUE) UCL					9.665	
64	95% Chebyshev (MVUE) UCL					10.54	97.5% Chebyshev (MVUE) UCL					11.75	
65	99% Chebyshev (MVUE) UCL					14.14							
66													
67	Nonparametric Distribution Free UCL Statistics												
68	Data appear to follow a Discernible Distribution at 5% Significance Level												
69													
70	Nonparametric Distribution Free UCLs												
71	95% CLT UCL					8.665	95% Jackknife UCL					8.738	
72	95% Standard Bootstrap UCL					8.625	95% Bootstrap-t UCL					8.691	
73	95% Hall's Bootstrap UCL					8.611	95% Percentile Bootstrap UCL					8.571	
74	95% BCA Bootstrap UCL					8.5							
75	90% Chebyshev(Mean, Sd) UCL					9.449	95% Chebyshev(Mean, Sd) UCL					10.23	
76	97.5% Chebyshev(Mean, Sd) UCL					11.33	99% Chebyshev(Mean, Sd) UCL					13.47	
77													
78	Suggested UCL to Use												
79	95% Student's-t UCL					8.738							
80													
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
82	Recommendations are based upon data size, data distribution, and skewness.												
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).												
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.												
85													
86	Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be												
87	reliable. Chen's and Johnson's methods provide adjustments for positively skewed data sets.												
88													

	A	B	C	D	E	F	G	H	I	J	K	L	
1	UCL Statistics for Uncensored Full Data Sets												
2	PAEC 3 - Nickel												
3	User Selected Options												
4	Date/Time of Computation			ProUCL 5.12/02/2022 10:10:17 AM									
5	From File			WorkSheet.xls									
6	Full Precision			OFF									
7	Confidence Coefficient			95%									
8	Number of Bootstrap Operations			2000									
9													
10													
11	C1												
12													
13	General Statistics												
14	Total Number of Observations				18		Number of Distinct Observations				7		
15							Number of Missing Observations				0		
16	Minimum				5		Mean				8.5		
17	Maximum				20		Median				8		
18	SD				3.4		Std. Error of Mean				0.801		
19	Coefficient of Variation				0.4		Skewness				2.556		
20													
21	Normal GOF Test												
22	Shapiro Wilk Test Statistic				0.709		Shapiro Wilk GOF Test						
23	5% Shapiro Wilk Critical Value				0.897		Data Not Normal at 5% Significance Level						
24	Lilliefors Test Statistic				0.336		Lilliefors GOF Test						
25	5% Lilliefors Critical Value				0.202		Data Not Normal at 5% Significance Level						
26	Data Not Normal at 5% Significance Level												
27													
28	Assuming Normal Distribution												
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				9.894		95% Adjusted-CLT UCL (Chen-1995)					10.33	
31							95% Modified-t UCL (Johnson-1978)					9.974	
32													
33	Gamma GOF Test												
34	A-D Test Statistic				1.227		Anderson-Darling Gamma GOF Test						
35	5% A-D Critical Value				0.74		Data Not Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic				0.307		Kolmogorov-Smirnov Gamma GOF Test						
37	5% K-S Critical Value				0.204		Data Not Gamma Distributed at 5% Significance Level						
38	Data Not Gamma Distributed at 5% Significance Level												
39													
40	Gamma Statistics												
41	k hat (MLE)				9.377		k star (bias corrected MLE)					7.851	
42	Theta hat (MLE)				0.906		Theta star (bias corrected MLE)					1.083	
43	nu hat (MLE)				337.6		nu star (bias corrected)					282.7	
44	MLE Mean (bias corrected)				8.5		MLE Sd (bias corrected)					3.033	
45							Approximate Chi Square Value (0.05)					244.7	
46	Adjusted Level of Significance				0.0357		Adjusted Chi Square Value					241.3	
47													
48	Assuming Gamma Distribution												
49	95% Approximate Gamma UCL (use when n>=50))				9.818		95% Adjusted Gamma UCL (use when n<50)					9.956	
50													
51	Lognormal GOF Test												
52	Shapiro Wilk Test Statistic				0.865		Shapiro Wilk Lognormal GOF Test						
53	5% Shapiro Wilk Critical Value				0.897		Data Not Lognormal at 5% Significance Level						

	A	B	C	D	E	F	G	H	I	J	K	L	
1	UCL Statistics for Uncensored Full Data Sets												
2	PAEC 12 - Nickel												
3	User Selected Options												
4	Date/Time of Computation			ProUCL 5.12/02/2022 10:17:54 AM									
5	From File			WorkSheet.xls									
6	Full Precision			OFF									
7	Confidence Coefficient			95%									
8	Number of Bootstrap Operations			2000									
9													
10													
11	C1												
12													
13	General Statistics												
14	Total Number of Observations				17		Number of Distinct Observations				7		
15							Number of Missing Observations				0		
16	Minimum				6		Mean				8.765		
17	Maximum				13		Median				9		
18	SD				2.047		Std. Error of Mean				0.497		
19	Coefficient of Variation				0.234		Skewness				0.31		
20													
21	Normal GOF Test												
22	Shapiro Wilk Test Statistic				0.946		Shapiro Wilk GOF Test						
23	5% Shapiro Wilk Critical Value				0.892		Data appear Normal at 5% Significance Level						
24	Lilliefors Test Statistic				0.116		Lilliefors GOF Test						
25	5% Lilliefors Critical Value				0.207		Data appear Normal at 5% Significance Level						
26	Data appear Normal at 5% Significance Level												
27													
28	Assuming Normal Distribution												
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				9.632		95% Adjusted-CLT UCL (Chen-1995)					9.621	
31							95% Modified-t UCL (Johnson-1978)					9.638	
32													
33	Gamma GOF Test												
34	A-D Test Statistic				0.348		Anderson-Darling Gamma GOF Test						
35	5% A-D Critical Value				0.738		Detected data appear Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic				0.109		Kolmogorov-Smirnov Gamma GOF Test						
37	5% K-S Critical Value				0.209		Detected data appear Gamma Distributed at 5% Significance Level						
38	Detected data appear Gamma Distributed at 5% Significance Level												
39													
40	Gamma Statistics												
41	k hat (MLE)				19.42		k star (bias corrected MLE)				16.03		
42	Theta hat (MLE)				0.451		Theta star (bias corrected MLE)				0.547		
43	nu hat (MLE)				660.1		nu star (bias corrected)				545		
44	MLE Mean (bias corrected)				8.765		MLE Sd (bias corrected)				2.189		
45							Approximate Chi Square Value (0.05)				491.8		
46	Adjusted Level of Significance				0.0346		Adjusted Chi Square Value				486.5		
47													
48	Assuming Gamma Distribution												
49	95% Approximate Gamma UCL (use when n>=50))				9.712		95% Adjusted Gamma UCL (use when n<50)				9.817		
50													
51	Lognormal GOF Test												
52	Shapiro Wilk Test Statistic				0.945		Shapiro Wilk Lognormal GOF Test						
53	5% Shapiro Wilk Critical Value				0.892		Data appear Lognormal at 5% Significance Level						

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Uncensored Full Data Sets											
2	PAEC 15 - Nickel											
3	User Selected Options											
4	Date/Time of Computation			ProUCL 5.12/02/2022 10:16:31 AM								
5	From File			WorkSheet.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	C1											
12												
13	General Statistics											
14	Total Number of Observations				13		Number of Distinct Observations				7	
15							Number of Missing Observations				0	
16	Minimum				6		Mean				9.538	
17	Maximum				16		Median				10	
18	SD				2.696		Std. Error of Mean				0.748	
19	Coefficient of Variation				0.283		Skewness				0.885	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.904		Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value				0.866		Data appear Normal at 5% Significance Level					
24	Lilliefors Test Statistic				0.201		Lilliefors GOF Test					
25	5% Lilliefors Critical Value				0.234		Data appear Normal at 5% Significance Level					
26	Data appear Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				10.87		95% Adjusted-CLT UCL (Chen-1995)				10.96	
31							95% Modified-t UCL (Johnson-1978)				10.9	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				0.479		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.734		Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.221		Kolmogorov-Smirnov Gamma GOF Test					
37	5% K-S Critical Value				0.236		Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				14.21		k star (bias corrected MLE)				10.98	
42	Theta hat (MLE)				0.671		Theta star (bias corrected MLE)				0.868	
43	nu hat (MLE)				369.5		nu star (bias corrected)				285.6	
44	MLE Mean (bias corrected)				9.538		MLE Sd (bias corrected)				2.878	
45							Approximate Chi Square Value (0.05)				247.5	
46	Adjusted Level of Significance				0.0301		Adjusted Chi Square Value				242.4	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50))				11.01		95% Adjusted Gamma UCL (use when n<50)				11.24	
50												
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.933		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.866		Data appear Lognormal at 5% Significance Level					

	A	B	C	D	E	F	G	H	I	J	K	L	
54	Lilliefors Test Statistic					0.233	Lilliefors Lognormal GOF Test						
55	5% Lilliefors Critical Value					0.234	Data appear Lognormal at 5% Significance Level						
56	Data appear Lognormal at 5% Significance Level												
57													
58	Lognormal Statistics												
59	Minimum of Logged Data					1.792	Mean of logged Data					2.22	
60	Maximum of Logged Data					2.773	SD of logged Data					0.277	
61													
62	Assuming Lognormal Distribution												
63	95% H-UCL					11.13	90% Chebyshev (MVUE) UCL					11.76	
64	95% Chebyshev (MVUE) UCL					12.76	97.5% Chebyshev (MVUE) UCL					14.16	
65	99% Chebyshev (MVUE) UCL					16.9							
66													
67	Nonparametric Distribution Free UCL Statistics												
68	Data appear to follow a Discernible Distribution at 5% Significance Level												
69													
70	Nonparametric Distribution Free UCLs												
71	95% CLT UCL					10.77	95% Jackknife UCL					10.87	
72	95% Standard Bootstrap UCL					10.7	95% Bootstrap-t UCL					11.14	
73	95% Hall's Bootstrap UCL					11.56	95% Percentile Bootstrap UCL					10.77	
74	95% BCA Bootstrap UCL					10.77							
75	90% Chebyshev(Mean, Sd) UCL					11.78	95% Chebyshev(Mean, Sd) UCL					12.8	
76	97.5% Chebyshev(Mean, Sd) UCL					14.21	99% Chebyshev(Mean, Sd) UCL					16.98	
77													
78	Suggested UCL to Use												
79	95% Student's-t UCL					10.87							
80													
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
82	Recommendations are based upon data size, data distribution, and skewness.												
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).												
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.												
85													

	A	B	C	D	E	F	G	H	I	J	K	L	
1	UCL Statistics for Uncensored Full Data Sets												
2	PAEC 35 - Nickel												
3	User Selected Options												
4	Date/Time of Computation			ProUCL 5.14/02/2022 9:23:25 AM									
5	From File			WorkSheet.xls									
6	Full Precision			OFF									
7	Confidence Coefficient			95%									
8	Number of Bootstrap Operations			2000									
9													
10													
11	C1												
12													
13	General Statistics												
14	Total Number of Observations				12		Number of Distinct Observations				8		
15							Number of Missing Observations				0		
16	Minimum				3		Mean				8.583		
17	Maximum				14		Median				8.5		
18	SD				3.554		Std. Error of Mean				1.026		
19	Coefficient of Variation				0.414		Skewness				-0.186		
20													
21	Normal GOF Test												
22	Shapiro Wilk Test Statistic				0.94		Shapiro Wilk GOF Test						
23	5% Shapiro Wilk Critical Value				0.859		Data appear Normal at 5% Significance Level						
24	Lilliefors Test Statistic				0.185		Lilliefors GOF Test						
25	5% Lilliefors Critical Value				0.243		Data appear Normal at 5% Significance Level						
26	Data appear Normal at 5% Significance Level												
27													
28	Assuming Normal Distribution												
29	95% Normal UCL					95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				10.43		95% Adjusted-CLT UCL (Chen-1995)					10.21	
31							95% Modified-t UCL (Johnson-1978)					10.42	
32													
33	Gamma GOF Test												
34	A-D Test Statistic				0.558		Anderson-Darling Gamma GOF Test						
35	5% A-D Critical Value				0.732		Detected data appear Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic				0.246		Kolmogorov-Smirnov Gamma GOF Test						
37	5% K-S Critical Value				0.246		Data Not Gamma Distributed at 5% Significance Level						
38	Detected data follow Appr. Gamma Distribution at 5% Significance Level												
39													
40	Gamma Statistics												
41	k hat (MLE)				5.173		k star (bias corrected MLE)				3.936		
42	Theta hat (MLE)				1.659		Theta star (bias corrected MLE)				2.181		
43	nu hat (MLE)				124.2		nu star (bias corrected)				94.45		
44	MLE Mean (bias corrected)				8.583		MLE Sd (bias corrected)				4.327		
45							Approximate Chi Square Value (0.05)				73.04		
46	Adjusted Level of Significance				0.029		Adjusted Chi Square Value				70.17		
47													
48	Assuming Gamma Distribution												
49	95% Approximate Gamma UCL (use when n>=50))				11.1		95% Adjusted Gamma UCL (use when n<50)				11.55		
50													
51	Lognormal GOF Test												
52	Shapiro Wilk Test Statistic				0.88		Shapiro Wilk Lognormal GOF Test						
53	5% Shapiro Wilk Critical Value				0.859		Data appear Lognormal at 5% Significance Level						

	A	B	C	D	E	F	G	H	I	J	K	L
54	Lilliefors Test Statistic					0.273	Lilliefors Lognormal GOF Test					
55	5% Lilliefors Critical Value					0.243	Data Not Lognormal at 5% Significance Level					
56	Data appear Approximate Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data					1.099	Mean of logged Data					2.05
60	Maximum of Logged Data					2.639	SD of logged Data					0.499
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL					12.14	90% Chebyshev (MVUE) UCL					12.55
64	95% Chebyshev (MVUE) UCL					14.29	97.5% Chebyshev (MVUE) UCL					16.71
65	99% Chebyshev (MVUE) UCL					21.46						
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution at 5% Significance Level											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL					10.27	95% Jackknife UCL					10.43
72	95% Standard Bootstrap UCL					10.18	95% Bootstrap-t UCL					10.38
73	95% Hall's Bootstrap UCL					10.18	95% Percentile Bootstrap UCL					10.25
74	95% BCA Bootstrap UCL					10.17						
75	90% Chebyshev(Mean, Sd) UCL					11.66	95% Chebyshev(Mean, Sd) UCL					13.05
76	97.5% Chebyshev(Mean, Sd) UCL					14.99	99% Chebyshev(Mean, Sd) UCL					18.79
77												
78	Suggested UCL to Use											
79	95% Student's-t UCL					10.43						
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	Recommendations are based upon data size, data distribution, and skewness.											
83	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
84	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
85												
86	Note: For highly negatively-skewed data, confidence limits (e.g., Chen, Johnson, Lognormal, and Gamma) may not be											
87	reliable. Chen's and Johnson's methods provide adjustments for positively skewed data sets.											
88												

Appendix I

QAQC

Appendix I

Quality Assurance and Quality Control

Part Lot 184 Deposited Plan 1237400

11.0 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 at the end of this appendix.

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	20% of primary samples; <30% RPD	PC
Trip Spikes	1 per sampling event; 60-140% recovery	PC
Trip Blanks	1 per sampling event; <PQL	PC
Laboratory / Reagent Blanks	1 per batch; <PQL	C
Laboratory Duplicate	1 per lab batch; As laboratory certificate	C
Matrix Spikes	1 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	1 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 frequency of intra-laboratory replicates were less than 20% because replicates were also collected from soil strata that were not subject to analysis (e.g. samples from elsewhere in the fill strata). The RPD results were all within the acceptable range, with the exception of those indicated in Table QA1. The exceedances are not, however, considered to be of concern given that:

- The number of replicate pairs being collected from fill soils which by its nature is heterogeneous;
- Replicates, rather than homogenised duplicates, were used to minimise risk of volatile loss, hence greater variability can be expected;
- The majority of RPDs within a replicate pair being within the acceptable limits; and
- All other QA/QC parameters met the DQIs.

In summary, the QC data is determined to be of sufficient quality to be considered acceptable for the assessment.

12.0 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 soil 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.
	Suitably trained and 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.
	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.

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

			Metals								TRH								BTEX								PAH				
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH C6 - C10	TRH >C10-C16	F1 ((C6-C10)-BTEX)	F1 ((C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Benzene	Toluene	Toluene	Ethylbenzene	Ethylbenzene	Total Xylenes	Naphthalene ^b	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs		
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/l	mg/kg	µg/l	mg/kg	µg/l	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
32	0 - 0.5 m	18/11/2021	6	<0.4	16	15	19	<0.1	6	27	<25	NT	<50	<25	NT	<50	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05		
BD1	0 m	18/11/2021	6	<0.4	15	15	24	<0.1	6	130	<25	NT	<50	<25	NT	<50	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05		
		Difference	0	0	1	0	5	0	0	103	0	-	0	0	-	0	0	0	0	0	-	0	-	0	-	0	0	0	0		
		RPD	0%	0%	6%	0%	23%	0%	0%	131%	0%	-	0%	0%	-	0%	0%	0%	0%	0%	-	0%	-	0%	-	0%	0%	0%	0%		
27	0 - 0.5 m	18/11/2021	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		
BD2	0 m	18/11/2021	7	<0.4	18	10	21	<0.1	6	23	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
219/0-0.1	0 m	22/12/2021	9	<0.4	20	11	19	<0.1	8	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		
BD1	0 m	22/12/2021	10	<0.4	22	13	22	<0.1	9	29	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		
		Difference	1	0	2	2	3	0	1	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		RPD	11%	0%	10%	17%	15%	0%	12%	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
244/0-0.1	0 m	21/12/2021	7	<0.4	18	15	24	<0.1	9	30	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		
BD1	0 m	21/12/2021	7	<0.4	16	17	24	<0.1	11	28	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT		
		Difference	0	0	2	2	0	0	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		RPD	0%	0%	12%	13%	0%	0%	20%	7%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
231/0-0.1	0 m	21/12/2021	9	<0.4	18	12	21	<0.1	8	16	<25	NT	<50	<25	NT	<50	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05		
BD2	0 m	21/12/2021	8	<0.4	16	16	24	<0.1	11	32	<25	NT	<50	<25	NT	<50	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05		
		Difference	1	0	2	4	3	0	3	16	0	-	0	0	-	0	0	0	0	0	-	0	-	0	-	0	0	0	0		
		RPD	12%	0%	12%	29%	13%	0%	32%	67%	0%	-	0%	0%	-	0%	0%	0%	0%	0%	-	0%	-	0%	-	0%	0%	0%	0%		
238/0-0.1	0 m	21/12/2021	6	<0.4	12	15	17	<0.1	8	33	<25	NT	<50	<25	NT	<50	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05		
BD3	0 m	21/12/2021	8	<0.4	20	9	19	<0.1	6	12	<25	NT	<50	<25	NT	<50	<100	<100	<0.2	NT	<0.5	NT	<1	NT	<1	<0.1	<0.05	<0.5	<0.05		
		Difference	2	0	8	6	2	0	2	21	0	-	0	0	-	0	0	0	0	0	-	0	-	0	-	0	0	0	0		
		RPD	29%	0%	50%	50%	11%	0%	29%	93%	0%	-	0%	0%	-	0%	0%	0%	0%	0%	-	0%	-	0%	-	0%	0%	0%	0%		

Table QA2: Trip Blank Results - Soils (mg/kg)

[illegible]

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

[illegible]