Douglas Partners
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Report on
Detailed Site Investigation (Contamination)

Surface & Civil Alignment Works (SCAW) Package for
Sydney Metro - Western Sydney Airport (SMWSA)
Area of Environmental Concern (AEC) 36, 37 & 38,
Patons Lane & Stockdale Road, Orchard Hills
and Luddenham Road, Luddenham

Prepared for
CPB Contractors Pty Limited & United Infrastructure
Pty Limited Joint Venture (CPBUI JV)

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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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Douglas Partners acknowledges Australia's First Peoples as the Traditional Owners of the Land and Sea on which we operate. We pay our respects to Elders past and present and to all Aboriginal and Torres Strait Islander peoples across the many communities in which we live, visit and work. We recognise and respect their ongoing cultural and spiritual connection to Country.

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Executive Summary

Douglas Partners Pty Ltd (DP) has been engaged by CPB Contractors Pty Limited & United Infrastructure Pty Limited Joint Venture (CPBUI JV) to complete this Detailed Site Investigation (Contamination) (DSI) for the Sydney Metro - Western Sydney Airport (SMWSA) Surface and Civil Alignment Works (SCAW) package at Area of Environmental Concern (AEC) 36, AEC 37 and AEC 38.

Technical Paper 8: Contamination, prepared as part of *Sydney Metro - Western Sydney Airport, Environmental Impact Statement* (EIS), documents AEC identified for the Sydney Metro - Western Sydney Airport project. The objective of the DSI is to assess the suitability of the parts of AEC 36, AEC 37 and AEC 38 that will be disturbed by SCAW activities (the site) and to determine whether further investigation and / or management is required. The site is shown on Drawings AEC37/38-01 and AEC36-01 to AEC36-04, Appendix A.

The site is subject to a Site Audit by Melissa Porter, a NSW Environment Protection Authority (EPA) Site Auditor accredited under the *Contaminated Land Management Act 1997*.

Field work for the DSI included the collection of soil samples using an excavator and hand auger across the site; collection of a creek sediment sample using a hand auger; collection of a creek water sample; installation and development of six groundwater monitoring wells; and collection of groundwater samples from the six installed monitoring wells and three existing monitoring wells. Selected soil, sediment and water samples were analysed at the laboratory for potential contaminants and parameters.

At the time of field work, an above-ground storage tank (AST) was positioned next to the site boundary (AEC 38). A shed with fibre-cement walls was observed next to the AST. Mounded soil was observed to be present at the western site boundary (AEC 38) and the eastern site boundary (AEC 38). Two former bowser footprints were observed on a concrete slab next to an aircraft hanger (AEC 38). A demolished structure was identified at the central part of AEC 36 and fibre-cement sheeting was observed on the ground surface at this location.

For the current investigation, concentrations of chemicals for all analysed soil samples are within the site assessment criteria (SAC) except for benzo(a)pyrene in fill samples AEC38SS1, AEC38TP02 (depth 0-0.1 m) and AEC38TP07 (depth 0-0.1 m). The recorded benzo(a)pyrene concentrations for these samples are significantly less than the high reliability ecological guidelines of 33 mg/kg for open space and 172 mg/kg for a commercial / industrial land use published in CRC CARE, *Technical Report No. 39, Risk-based management and remediation guidance for benzo(a)pyrene*, 2017. Therefore, the recorded benzo(a)pyrene soil concentrations are not considered to warrant remediation or management.

For the current investigation, asbestos was detected in:

- The 500 mL sample from AEC36TP71, depth 0-0.1 m. The asbestos was identified in a fibre cement material > 7 mm;
- The fibrous sheet sample AEC36TP71-PACM collected from sieving the bulk fill sample (depth 0-0.1 m) at AEC36TP71. The asbestos in this sample appeared to be in friable form (i.e., not bonded). The sample weighed 6 g which equates to a concentration of 0.006% w/w in the bulk sample (assuming 15% asbestos in the fibrous sheet). This concentration is above the HSL (0.001% w/w);

- The 500 mL sample from AEC36HA78, depth 0-0.1 m. The asbestos was identified in a fibre cement material > 7 mm; and
- Fibre cement sample PACM79, collected from the ground surface at the demolished structure near AEC36TP79.

Asbestos was detected in fibre cement sample ACM01_300321 in a previous investigation. It appears that the sample was collected from the ground surface at the location of the demolished structure near AEC36HA79.

For the current investigation, groundwater samples had concentrations within the SAC except for:

- Cadmium, copper, nickel and zinc in some samples. Recorded concentration of these metals are considered to be at background levels for groundwater; and
- PFOS in the samples from SMGW-BH-B313, SMGW-BH-B317, and SMGW-BH-B319. Concentrations were above the freshwater water quality guideline for 99% species protection (0.00023 µg/L). It is noted that the recorded concentrations are well within the 95% species protection (0.13 µg/L) for PFOS in PFAS National Environmental Management Plan 2.0.

For previous investigations, results for groundwater that exceeded the SAC included:

- Some filtered metals including cadmium, chromium, copper, lead, nickel, selenium, vanadium, zinc, cobalt, iron and manganese. These are considered likely to be represent background conditions;
- Endrin in the sample from SMGW-BH-B320 (15/4/2021) which exceeded the freshwater DGV (0.01 µg/L). Endrin aldehyde was also detected in this sample. SMGW-BH-B320 is an off-site sampling location and the sample from AEC38BH01, the nearby on-site well for the current investigation, had concentration of endrin and endrin aldehyde below the practical quantitation limits;
- Di-n-butyl phthalate in the sample from SMGW-BH-B313 (10/5/2021) which slightly exceeded the DGV (10 µg/L). It is noted that, for the current investigation, the concentrations of di-n-butyl phthalate were below the practical quantitation limit in the analysed groundwater sample (BD3/20230201) and soil samples from nearby sample points. The previous detection of di-n-butyl phthalate, therefore, may be from an off-site source or as a result of cross-contamination (e.g., from drilling works equipment); and
- Sulfate in the samples from SMGW-BH-B319. The recorded concentrations are considered to be background concentration for groundwater.

Apart from a very low concentration of PFOS in the sample from SMGW-BH-B312 (collected on 12/02/2021), it is noted that PFAS was not detected above the practical quantitation limits for samples from SMGW-BH-B312, SMGW-BH-B313 and SMGW-BH-B317 in previous investigations. As it is reasonably likely that these wells have been accessed for purposes other than contamination sampling (e.g., data-logging) prior to the current investigation, these wells may have been inadvertently cross-contaminated / impacted with PFAS when accessed for these other purposes resulting in the detectable levels of PFAS in these wells for the current investigation. Apart from a very low concentration of 6:2 FTS in the sample from AEC38BH01, samples from the wells installed for the current investigation that have only accessed for contamination sampling purposes (to our knowledge), did not have PFAS concentrations above the practical quantitation limits.

From review of the analytical results for soil and observed site conditions, there is no obvious source(s) of PFAS at the site, and given that the PFAS in groundwater is more likely the result of off-site / diffuse sources (or inadvertent cross-contamination) than an on-site source, it is considered that the PFAS identified in groundwater does not warrant remediation.

TRH C_{16}-C_{34} and TRH C_{34}-C_{40} were detected in the sample from the off-site well SMGW-BH-B320 in the previous investigations, however, TRH was not detected above the practical quantitation limits in the on-site, nearby well (AEC38BH01) in the current investigation.

For the surface water sample from the creek, results were within the SAC except for:

- Total zinc in the primary sample and replicate sample (BD1/20230125), and dissolved zinc in the replicate sample (BD2/20230125). The recorded concentrations were within the hardness-adjusted DGV of 118 µg/L for a hardness of 710 mg$CaCO_3$/L; and
- PFOS in the primary sample and the replicate sample. Concentrations were above the freshwater water quality guideline.

Given the recorded concentrations of PFOS, PFHxS, PFOA, PFHxA and PFBA in soil and groundwater at the site which are low or below practical quantitation limits, it is considered that the majority of the detected PFOS, PFHxS, PFOA, PFHxA and PFBA in surface water is likely from an up-stream (off-site) source. Similarly, it is considered that the low concentrations of detected TRH in surface water are most likely from upstream (off-site) given the low TRH concentrations recorded for soil (and groundwater) at the site.

Given that asbestos has been found (at AEC36) above the HSL (for friable asbestos), it is considered that delineation and remediation of asbestos contamination is required to render the site suitable for the final intended land use. The demolished structure will need to be removed (and disposed appropriately off-site) and the footprint of the structure validated following the removal of asbestos. Given that concentrations of chemicals (i.e., excluding asbestos) are within SAC, the remediation approach may include encapsulation of the asbestos contaminated soil and management of the contamination under a long term environmental management plan (or long term asbestos management plan) rather than offsite disposal to landfill.

It is considered that the results of soil and groundwater testing at AEC37 indicate that this part of the site is suitable for the intended final land use.

At AEC38, contamination has not been identified from soil and groundwater testing. It is presumed that buried pipes lead from the off-site AST to the location of the (on-site) former bowsers near the hanger (at AEC 38). It is noted that the buried pipes have not been identified in this investigation and, therefore, the alignment of the pipes between the AST and former bowser's location is unknown These pipes should be carefully excavated and removed and the remaining soil beneath validated by an environmental consultant through sampling and analysis. Potential contamination at the footprint of the hanger should be assessed following demolition.

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Report on Detailed Site Investigation (Contamination)

Surface & Civil Alignment Works (SCAW) Package for Sydney Metro - Western Sydney Airport (SMWSA)

Area of Environmental Concern (AEC) 36, 37 & 38, Patons Lane & Stockdale Road, Orchard Hills and Luddenham Road, Luddenham

1. Introduction

Douglas Partners Pty Ltd (DP) has been engaged by CPB Contractors Pty Limited & United Infrastructure Pty Limited Joint Venture (CPBUI JV) to complete this detailed site investigation (contamination) (DSI) for the Sydney Metro - Western Sydney Airport (SMWSA) Surface and Civil Alignment Works (SCAW) package at Area of Environmental Concern (AEC) 36, AEC 37 and AEC 38.

Technical Paper 8: Contamination, prepared as part of *Sydney Metro - Western Sydney Airport, Environmental Impact Statement* (EIS), documents areas of environmental concern identified for the Sydney Metro - Western Sydney Airport project. The objective of the DSI is to assess the suitability of the parts of AEC 36, AEC 37 and AEC 38 that will be disturbed by SCAW activities (the site) and to determine whether further investigation and / or management is required. The site is shown on Drawings AEC37/38-01 and AEC36-01 to AEC36-04, Appendix A.

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

The following key 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); and
- NSW EPA *Guidelines for Consultants Reporting on Contaminated Land,* 2020 (NSW EPA, 2020).

The site is subject to a Site Audit by Melissa Porter, a NSW Environment Protection Authority (EPA) Site Auditor accredited under the *Contaminated Land Management Act 1997*.

2. Site Identification and Proposed Development

Table 1 provides a summary of information for site identification. The site covers the areas within AEC 36, 37 and 38 as shown on Drawings AEC37/38-01 and AEC36-01 to AEC36-04, Appendix A.

Table 1: Site Identification Information

Item	Details
Site Address (from SIX Maps)	No street address (off Patons Lane in Orchard Hills) (AEC 36); No street address (off Stockdale Road in Orchard Hills) (AEC 36); 2562 The Northern Road, Luddenham (AEC 37); 459B Luddenham Road, Luddenham (AEC 38); and 459C Luddenham Road, Luddenham (AEC 38).
Legal Description (from SIX Maps)	(Part of) Lot 111 Deposited Plan 1276407 (AEC 36); (Part of) Lot 115 Deposited Plan 1276407 (AEC 36); (Part of) Lot 3 Deposited Plan 229771 (AEC 37); (Part of) Lot A Deposited Plan 341745 (AEC 37); (Part of) Lot 2 Deposited Plan 1276402 (AEC 38); and (Part of) Lot 1 Deposited Plan 1276402 (AEC 38).
Approximate area of AEC 36, 37, 38 (in EIS)	35 ha
Approximate site area (within AEC 36, 37, 38)	14.5 ha
Zones for site (from ePlanning Spatial Viewer)	Not Zoned along proposed rail line. C2: Environmental Conservation (at AEC 36) SP2: Water Supply System (at AEC 37) ENT: Enterprise (at AEC 38)
Local Government Area	Penrith City Council

It is understood that Sydney Metro are the owners of Lot 111 Deposited Plan 1276407, Lot 2 Deposited Plan 1276402 and Lot 1 Deposited Plan 1276402; Water NSW are the owners of Lot 3 Deposited Plan 229771 and Lot A Deposited Plan 341745; and Department of Defence are the owners of Lot 115 Deposited Plan 1276407.

The SCAW package relates to the proposed construction of approximately 10 km of rail alignment between Orchard Hills and the (future) Western Sydney International airport consisting of a combination of viaducts and surface rail. Areas alongside the proposed rail alignment will be used by contractors for staging and maintenance for the Metro.

Cardno, *Human Health and Ecological Risk Assessment, Spoil Re-use Sydney Metro and Western Sydney Airport*, 29 June 2021 (80021888 SMSWA HHERARev3-Issued.docx) (Cardno, 2021e) (HHERA) provides (simple) conceptual site models for different general future land uses for the overall SMWSA project. The two general future land uses associated with the SCAW component of the project are considered to be:

- The rail corridor which will include the rail line, embankments / noise barriers, a stabling yard and maintenance facility and Luddenham station; and
- Passive open space. These are areas immediately adjacent to the rail corridor that may be used for bike / commuter paths. It is assumed that there is absence of buildings in areas of passive open space.

It is assumed that the site will comprise both of the above-listed land uses. The alignment of the proposed rail line which crosses the site, is shown on Drawings AEC37/38-01 and AEC36-01 to AEC36-04, Appendix A. Development of the site will likely include stripping of topsoil and placement of (geotechnically suitable) soil at the central part of the site to raise the ground level (up to approximately 7 m above current ground levels) for the surface rail line. A viaduct, on piles, will be adopted for the rail line at the northern and southern parts for the site. The site comprises an area within AEC 36, AEC 37 and AEC 38 where soil is proposed to be disturbed for SCAW. Soil to raise ground levels is likely to be sourced from off-site. Stripped topsoil from the site will be subject to reuse elsewhere for SCAW.

Given that soil is to be disturbed at the site as part of the SCAW package, it is assumed that the environmental conservation significance for the part of the site within the area zoned as C2 Environmental Conservation will not be retained.

3. Scope of Work

The scope of work for the DSI, generally based on DP, *Sampling and Analysis Quality Plan (SAQP), Surface & Civil Alignment Works (SCAW) Package for Sydney Metro - Western Sydney Airport (SMWSA) Area of Environmental Concern (AEC) 43, 1793 Elizabeth Drive, Badgerys Creek,* August 2022, (204814.01.SAQP.004.DftA), included the following:

- Collection of soil samples using an excavator or hand auger across the site;
- Collection of a creek sediment sample using a hand auger;
- Collection of a creek water sample;
- Installation and development of six groundwater monitoring wells;
- Collection of groundwater samples from the six installed monitoring wells and three existing groundwater monitoring wells;
- Analysis of selected soil samples and the sediment sample for selected potential contaminants and soil parameters;
- Analysis of groundwater samples and a surface water sample for selected potential contaminants and water parameters; and
- Preparation of this DSI including an assessment of analytical and field results.

4. Site Condition and Environment Information

Table 2 provides a summary of background information relating to the site condition and environment.

Table 2: Site Condition and Environment Information

Item	Details
Geology	Bringelly Shale (for majority of site): comprising shale, carbonaceous claystone, claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff for the majority of the site. Fluvial sediments (in the general area of the unnamed creek which crosses the site as shown on Drawings AEC36-01 and AEC36-02, Appendix A): comprising fine-grained sand, silt and clay. (Penrith 1:100,000 Geology Sheet).
Soil landscape	The majority of the site is the Blacktown soil landscape which comprises residual soils. The general area of the unnamed creek which crosses the site, is at the South Creek soil landscape which comprises alluvial soils (Penrith 1:100,000 Soils Landscape Sheet).
Topography	The site lies between approximately 38 m AHD and 54 m AHD. Slopes are generally down towards the unnamed creek which crosses the site, including slopes down to the south-east at the north of the site, and slopes down to the north-west at the south of the site. (NSW 2 m elevation contours map).
Salinity	The salinity potential at the site ranges from moderate salinity potential to high salinity potential and known salinity. Areas of high salinity potential and known salinity are in the vicinity of the unnamed creek (Department of Infrastructure Planning and Natural Resources, Salinity Potential in Western Sydney Map).
Acid sulfate soils	The site is not within an area or close to an area associated with a risk of acid sufate soils (NSW Acid Sulfate Soil Risk map).
Surface water bodies and surface water flow	An unnamed creek crosses the site near the northern end. The unnamed creek flows via a series of ponds into South Creek, approximately 2 km to the north-east of the site. There are some farm dams in the general area surrounding the site, the closet being approximately 45 m to the west of the southern end of the site. Much of the rainfall at the site is anticipated to infiltrate permeable ground surfaces. Surface water runoff at the site at AEC 38 and AEC 37 is expected to flow to the west and north-west towards off-site dams and unnamed creeks. Surface water runoff at the central and southern parts of AEC 36 is expected to flow to the north-west and north towards the unnamed creek. Surface water runoff at the northern part of AEC 36 is expected to flow to the east and south-east towards the unnamed creek.

Item	Details
Groundwater flow direction and discharge	Based on topography, shallow groundwater (if any) is anticipated to flow towards, and potentially discharge at, the unnamed creek that crosses the site. To the north of the creek, groundwater at the site is anticipated to flow to the east and south-east. To the south of creek, groundwater at the site is anticipated to flow to the west, north-west and north.
Registered groundwater bores	Bore GW105382 is located approximately 100 m to the east of the site. The bore was drilled at Osbourne Park, 227 Luddenham Road, Orchard Hills in 2004 to a depth of 252 m for industrial purposes. Water bearing zones were recorded at depths of 144 m to 145 m, 180 m to 181 m, and 240 m to 241 m. Bores GW113238, GW105054 and GW112799 were drilled at Patons Lane Landfill which is located approximately 70 m north-west of the site. GW105054 was drilled to a depth of 210 m in 2002 for industrial purposes and had water bearing zones recorded at depths of 96 m to 101 m, 143 m to 148 m and 190 m to 194 m. In 2012, GW112799 and GW113238 were installed for monitoring purposes to depths of 21 m and 18.5 m, respectively (WaterNSW).
Site use and features	The site at AEC 36 was part of a Defence Establishment which included a munitions storage facility and was formerly known as RAAF Base Kingswood. The site at AEC 37 forms part of the Warragamba to Prospect Water Supply Pipelines easement. The site at AEC 38 forms part of the Kennetts Airfield (a private airfield) (EIS). A square area surrounded by a security fence (purpose unknown) was identified at the northern end of AEC 36 (see Drawing AEC36-01, Appendix A). Unknown items amongst trees were identified at the southern end of AEC 36 (EIS) (indicated as 'Demolished Structure' on Drawing AEC36-03, Appendix A). Water supply pipes and a service road are present across the site at AEC 37 (EIS). A runway and aircraft hangers are present at the site at AEC 38 (EIS). Stockpiles were also identified at (or close to) the site (EIS).
Surrounding land use	Surrounding land to the north was part of a Defence Establishment which included a munitions storage facility and was formerly known as RAAF Base Kingswood. The Warragamba to Prospect Water Supply Pipelines easement runs east to west. Kennetts Airfield (a private airfield) is adjacent to the southern part of the site. Land approximately 70 m to the to the north-west of the site is Patons Lane Recycling Centre (landfill). Other surrounding land uses comprise mainly rural land use (EIS). A potential former cattle or sheep dip/spraying area was identified approximately 20 m to the east of AEC 36 (see Drawing AEC36-04) (EIS). A potential above-ground storage tank (AST) was identified adjacent to the site at AEC 38. Apparently, the pipeline is connected to the hanger area. Airfield features are located on adjacent land to the east of the site (EIS). Drawing AEC37/38-01, Appendix A, shows features surrounding the site at AEC 38.

Item	Details
Information from historical aerial photographs	At AEC 36, there was pastured land with scattered trees and no building structures visible other than fence lines in 1955. A small building was visible in the southeast corner of (former) Lot 3 DP242968 between 1980 and 1994. A 20 by 20 metre fenced off area was visible within (former) Lot 1 DP242968 in the 2019 aerial photograph (EIS). At AEC 37, the pipelines appeared to be under construction in 1955. The surrounding land use to the north appeared mainly rural pastoral land with some localised areas of equipment laydown and stockpiling (purpose unknown) (EIS). Kennetts Airstrip has been present since 1980s and was likely to have been grazier land prior to its establishment (EIS).
NSW EPA records	There were no NSW EPA regulated sites (under the Contaminated Land Management Act 1997) within 1 km of the site (EIS). There were no sites notified to the NSW EPA (under the Contaminated Land Management Act 1997) within 1 km of the site (EIS). Patons Lane landfill, approximately 70 m to the north-west of the site, has operated under NSW EPA Environment Protection Licence (EPL) 20814 since 2019. Conditions of the licence include quarterly and annual surface water, groundwater and subsurface gas monitoring. The Patons Lane Landfill site is also licensed under EPL 21259 for recovery of general waste and storage of waste (EIS). The Patons Lane Landfill was formerly licensed to Orchard Holdings (NSW) Pty Ltd under EPL 11706 for land based extractive activity until 2012. In 2007 Orchard Holdings (NSW) Pty Ltd was issued with a clean-up notice due to unlawfully receiving soil and demolition waste at the quarry. The waste was found to comprise soil and demolition materials containing asbestos. The asbestos waste is being placed within a containment cell within the Patons Lane Landfill. (No stockpiling from the operations was observed within the construction footprint in historical aerial photographs) (EIS). There were no NSW EPA PFAS investigation sites within 2 km of the site (EIS). No penalty notices were issued by NSW EPA for the site or nearby surrounding land (EIS).

The location of Patons Lane Landfill with respect to the site is shown on Drawing L1, Appendix A. The south-eastern portion of Patons Lane Landfill site is located somewhat up-gradient of the northern end of the site (although not directly up-gradient from a hydrogeological perspective, based on topography).

At the time of field work (November 2022 to January 2023), the following was observed:

- An (off-site) AST was positioned next to the site boundary at the southern end of the site (AEC 38). A shed with fibre-cement walls was next to the AST. The shed was on a concrete slab, however, the AST appeared to be on soil (i.e., not on hardstand) without a bund. The AST appeared to be old and not to have been used for some time;
- An air-craft hanger was at the southern end of the site. Collapsed metal frames of another structure were next to the hanger. The hanger was closed at the time of field work;

- Mounded soil was present at the western site boundary at AEC 38. The majority of the mound was outside of the site boundary. No anthropogenic materials were observed on the mound;
- Mounded soil with a flag post was present at the eastern site boundary at AEC 38. Approximately half of the mounded soil was within the site. Apart from the flag post, no anthropogenic materials were observed on the mound;
- Two former bowser footprints were on concrete slab next to the hanger. No staining of the concrete was observed at this location;
- Stockpiles of blue metal (quarried 20 mm gravel) were present at the southern end of the site (AEC 38), to the north-east of the hanger;
- A runway crossed the site at AEC 38;
- A demolished structure was identified at the central part of AEC 36. Fibre-cement sheeting was observed on the ground surface. This is presumably the small building that was 'visible in the southeast corner of Lot 3 DP242968 between 1980 and 1994' referred to in the EIS as the demolished structure is at that location which is now within Lot 111 DP1276407;
- The '20 by 20 square fenced off area' referred to in the EIS is present at the site and is now within Lot 111 DP1276407. There was nothing stored within the fenced area and the entire area was vegetated with grass and trees similar to the surrounding land; and
- The majority of the potential former cattle or sheep dip / spraying area structures, identified in the EIS to be adjacent to the east of the site, appeared to have been demolished and are up-gradient of the site. No active cattle or sheep dip / spraying structures were observed at this location.

Site features are shown on Drawings AEC37/38-01 and AEC36-01 to AEC36-04, Appendix A. Site photographs are provided in Appendix K.

Historical aerial images on Metromap indicate that the stockpiles of blue metal have been present since circa 2009, and that the bowsers next to the hanger were removed in circa 2016 which suggests that the (off-site) AST has not been used since that time. Given the position of the bowsers next to the hanger for light aircraft, it is presumed that the fuel previously stored in the AST was aviation gasoline (Avgas). The current contents of the AST (if any) has not been observed or sampled.

5. Previous Investigation Data

5.1 Golder-DP Investigation

The following reports includes data for one sample location (SMGW-BH-B319) at the site:

- Golder and Douglas Partners, *Sydney Metro Greater West, Factual Contamination Report – Preliminary Site Investigation*, 19 February 2021 (19122621-003-Rev3) (Golder-DP, 2021a); and
- Golder and Douglas Partners, *Sydney Metro Western Sydney Airport, Groundwater Monitoring Report – Phase 1-4 Locations*, 3 August 2021 (19122621-019-R-GWMR13 Rev0) (Golder- DP, 2021b).

The sample location (SMGW-BH-B319) is shown on Drawing AEC37/38-01, Appendix A. Table 3 summarises the soil / rock profile and groundwater well installation details. Table 4 summarises the analysis undertaken on soil samples. Table 5 summarised the analysis undertaken on groundwater samples. The borehole log and a summary of analytical results is included in Appendix C. It is noted that the reports were factual and did not provide an assessment of the contamination results with respect to suitability to the proposed development.

Table 3: Sample Location, Profile and Groundwater Wells

Sample Location	Test Pit / Borehole	Date	Soil / Rock Profile	Groundwater Well Details	Groundwater Depth (m)
SMGW-BH-B319 (At site at AEC 37)	Borehole	16-17/12/2020	Surficial clay fill (0.1 m thick), underlain by silty clay to a depth of 3.5 m; then siltstone, and interbedded and interlaminated sandstone, and siltstone to depth of 25 m.	Installed to 4.8 m depth. Slotted screen at 1.8 m to 4.8 m depth.	3.7 (on 17/12/2020)

Table 4: Soil Sample Testing

Sample Location	Sample Depth (m) (Replicate Identification)	Fill / Natural Soil	Laboratory Testing Suite
SMGW-BH-B319	0-0.1	Fill	pH, ammonia, total cyanide, asbestos, metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes (BTEX), organochlorine pesticides (OCP), organophosphorus pesticides (OPP), polycyclic aromatic hydrocarbons (PAH), total phenols, volatile organic compounds (VOC), and per- and polyfluoroalkyl substances (PFAS).
	0.1-0.15	Natural	pH, ammonia, total cyanide, (8) metals, TRH, BTEX, OCP, OPP, PAH and PFAS.
	0.1-0.15 (BD1/20201216)	Natural	PFAS.
	0.1-0.15 (BT1/20201216)	Natural	PFAS.
	1.5-1.95	Natural	pH, ammonia, total cyanide, (8) metals, TRH, BTEX, OCP, OPP, PAH and PFAS;
	2.5 – 2.95	Natural	PFAS.

Table 5: Groundwater Sample Testing

Sample Location	Sample Date	Laboratory Testing Suite
SMGW-BH-B319	2/3/2021	pH, electrical conductivity (EC), total dissolved solids (TDS), total suspended solids (TSS), alkalinity, sulfate, chloride, dissolved major cations, hardness, dissolved and total metals (aluminium, arsenic, beryllium, barium, cadmium, chromium, copper, cobalt, mercury, nickel, lead, zinc, manganese, molybdenum, selenium, strontium, vanadium, boron and iron), fluoride, ammonia, nitrite, nitrate, total kjeldahl nitrogen, total nitrogen, total phosphorus, reactive phosphorus, ionic balance, methane, TRH, TRH with silica gel clean up, monocyclic aromatic hydrocarbons (MAH), oxygenated compounds, carbon disulfide, fumigants, halogenated aliphatic compounds, halogenated aromatic compounds, trihalomethanes, polynuclear aromatic hydrocarbons, phenolic compounds, phthalate esters, nitrosamines, nitroaromatics and ketones, halo ethers, chlorinated hydrocarbons, anilines and benzidines, OCP, OPP, BTEX and naphthalene, PFAS, and sulfate reducing bacteria.
	26/5/2021	pH, EC, TDS, TSS, hardness, alkalinity, sulfate, chloride, dissolved major cations, total and dissolved (19) metals, fluoride, ammonia, nitrite, nitrate, total kjeldahl nitrogen, total nitrogen, total phosphorus, ionic balance, and sulfate reducing bacteria.

5.2 Cardno Investigations

The following reports include data for previous sampling at the site:

- Cardno, *Contamination Assessment Report, Sydney Metro Western Sydney Airport,* 1 September 2021 (80021888-CDO-CAR-RPT-004-RevE) (Cardno, 2021a);
- Cardno, *Contamination Assessment Report – Phase D/E, Sydney Metro Western Sydney Airport*, 26 November 2021 (80021888-CDO-RPT-019_RevB) (Cardo, 2021b); and
- Cardno, *Groundwater Monitoring Report*, *Sydney Metro Western Sydney Airport*, 25 February 2022 (8002188-CDO-GWMR7-RPT003-RevA) (Cardno, 2021c).

For Cardno investigations, Table 6 summarises the soil sample locations at the site and the associated soil / rock profile. Installed groundwater monitoring wells at or close to the site are also summarised in Table 6. Sample locations are shown on Drawings AEC37/38-01 and AEC36-01 to AEC36-04, Appendix A.

Table 6: Sample Location, Profile and Groundwater Wells

Sample Location	Test Pit / Borehole	Date	Soil / Rock Profile	Groundwater Well Details	Groundwater Depth (m)
SMGW-BH-B312 (adjacent to the northern site boundary)	Borehole	6-7/1/2021	Silty clay fill with gravel, trace sand and trace tile fragments to a depth of 0.4 m. Fill was underlain by silty gravelly clay with trace sand (and some ironstones) to a depth of 1.9 m, then sandy clay to a depth of 2.4 m, and clayey silt with sand and trace ironstone gravel to a depth of 4 m. Soil was underlain by sandstone, siltstone, and interbedded and interlaminated sandstone and siltstone to a depth of 19.94 m.	Installed to a depth of 6 m. Slotted screen from a depth of 2 to 5 m.	3.85 (on 22/1/2021), 3.73 (on 17/3/2021), 3.79 (on 17/3/2021)
SMGW-BH-B320 (adjacent to the southern site boundary).	Borehole	18-19/2/2021	Clayey silt fill with sand to a depth of 0.2 m and was underlain by clayey silt with sand to a depth of 0.5 m, then silty clay with ironstone gravel and ironstone sand to a depth of 2.5 m, gravelly clay to a depth of 2.7 m, and clay with silt to a depth of 3.9 m. Soil was underlain by shale, siltstone, interlaminated sandstone and siltstone, and sandstone to a depth of 20.27 m.	Installed to a depth of 5 m. Slotted screen from a depth of 1 m to 4 m.	1.5 (on 18/2/21), 0.54 (on 15/4/2021)
SMGW-TP-B321 (at site at AEC 36)	Test pit	29/3/2021	Silty clay fill with gravel to a depth of 0.2 m was underlain by silty clay to a depth of 1.2 m, then silty clay with gravel to a depth of 2.7 m, and gravelly clay to a depth of 2.9 m.	Not applicable	Groundwater not encountered
SMGW-BH-B313 (at site at AEC 36)	Borehole	31/3/2021-1/4/2021	Silty clay fill to a depth of 0.2 m was underlain by silty clay to a depth of 0.9 m, then silty clay with sand and / or gravel to a depth of 2.8 m, and gravelly clay to a depth of 3.5 m. Gravel with sand and clay was encountered from a depth of 5.4 m to 5.66 m and was underlain by silty clay to a depth of 5.76 m. (Core loss occurred between 3.5 m and 5.4 m). Siltstone, interlaminated siltstone and sandstone, and sandstone were encountered from a depth of 5.76 m to 20.06 m.	Installed to a depth of 5 m. Slotted screen from a depth of 1 to 4 m.	2.06 (on 10/5/2021) 2.12 (on 2/6/2021)

Sample Location	Test Pit / Borehole	Date	Soil / Rock Profile	Groundwater Well Details	Groundwater Depth (m)
SMGW-TP-B332 (at site at AEC 36)	Test pit	30/3/2021	Silty clay fill with gravel to a depth of 0.2 m was underlain by silty clay with gravel to a depth of 2.4 m, then sandy clay with gravel to a depth of 3 m.	Not applicable	Groundwater not encountered
SMGW-BH-B317 (at site at AEC 36)	Borehole	30/3/2021	Clayey silt fill to a depth of 0.2 m, was underlain by silty clay with trace gravel to a depth of 1.8 m, then silty clay to a depth of 2.79 m. Soil was underlain by sandstone and siltstone to a depth of 20.12 m	Installed to a depth of 5.5 m. Slotted screen from a depth of 1.5 to 4.5 m.	4.18 (on 2/6/2021)
ACM01_300321 (at site at AEC 36)	Fibre-cement sample	30/3/2021	Sample from area of observed potential asbestos containing materials (ACM)	Not applicable	Not applicable
SMGW-TP-B334 (at site at AEC 36)	Test pit	30/3/2021	Silty clay fill with gravel (and cobbles from 0.2 m) to a depth of 0.7 m was underlain by silty clay to a depth of 1.4 m, then silty clay with gravel to a depth of 1.8 m, then gravelly clay (with cobbles at 2.3 m and boulders at 2.6 m) to a depth of 2.7 m.	Not applicable	Groundwater not encountered
SMGW-TP-B335 (at site at AEC 36)	Test pit	30/3/2021	Silty clay fill with gravel to a depth of 0.2 m was underlain by silty clay with gravel to a depth of 1.3 m, then gravelly clay to a depth of 2.8 m.	Not applicable	Groundwater not encountered
SMGW-BH-B318 (at site at AEC 36)	Borehole	29-30/3/2021	Clayey silt fill with gravel to a depth of 0.15 m was underlain by silty clay with ironstones to a depth of 4.45 m, then clay to a depth of 5.11 m. Clay was underlain by sandstone, siltstone, and interbedded sandstone and siltstone to a depth of 20.18 m.	Not applicable	Groundwater not encountered
SMGW-TP-B336 (at site at AEC 36)	Test pit	30/3/2021	Silty clay fill with gravel to a depth of 0.2 m was underlain by silty clay with gravel to a depth of 2 m, then gravelly clay to a depth of 2.2 m.	Not applicable	Groundwater not encountered

Sample Location	Test Pit / Borehole	Date	Soil / Rock Profile	Groundwater Well Details	Groundwater Depth (m)
SMGW-TP-B361 (at the site at AEC 36)	Test pit	13/9/2021	Silty sand fill with trace gravel to a depth of 0.4 m was underlain by silty clay with gravel and trace sand to a depth of 0.7 m, then silty clay to a depth of 1 m, over clay with sand and gravel to a depth of 2 m.	Not applicable	Groundwater not encountered

Table 7 summarises the laboratory testing undertaken on soil samples from the site.

Table 7: Soil Sample Testing

Sample Location	Sample Depth (m) (Replicate Identification)	Fill / Natural Soil	Laboratory Testing Suite
SMGW-TP-B321	0.1	Fill	Asbestos, TRH, BTEX, PAH, OCP, OPP, ammonia, cyanide, pH, (8) metals, PFAS.
	0.5	Natural	TRH, BTEX, PAH, ammonia, cyanide, pH, (8) metals, PFAS, volatile organics.
	1.5	Natural	Asbestos, TRH, BTEX, PAH, pH, (8) metals, PFAS.
SMGW-BH-B313	0.1	Fill	Asbestos, TRH, BTEX, PAH, OCP, OPP, PCB, ammonia, cyanide, pH, (8) metals, PFAS.
	0.5	Natural	TRH, BTEX, PAH, ammonia, cyanide, pH, (8) metals, PFAS, volatile organics.
	3	Natural	TRH, BTEX, PAH, ammonia, cyanide, pH, (8) metals, PFAS.
SMGW-TP-B332	0.1	Fill	Asbestos, TRH, BTEX, PAH, OCP, OPP, PCB, ammonia, cyanide, pH, (8) metals, PFAS.
	0.5	Natural	TRH, BTEX, PAH, ammonia, cyanide, pH, (8) metals, PFAS, volatile organics.
	1	Natural	TRH, BTEX, PAH, ammonia, cyanide, pH, (8) metals, PFAS.
SMGW-BH-B317	0.1	Fill	Asbestos, TRH, BTEX, PAH, OCP, OPP, PCB, ammonia, cyanide, pH, (8) metals, PFAS.
	0.5	Natural	TRH, BTEX, PAH, ammonia, cyanide, pH, (8) metals, PFAS, volatile organics.
	1	Natural	TRH, BTEX, PAH, pH, (8) metals, PFAS.
ACM01_300321	surface	Fibre cement	Asbestos.
SMGW-TP-B334	0.1	Fill	Asbestos, TRH, BTEX, PAH, OCP, OPP, pH, (8) metals, PFAS.

Sample Location	Sample Depth (m) (Replicate Identification)	Fill / Natural Soil	Laboratory Testing Suite
	0.5	Fill	Asbestos, TRH, BTEX, PAH, OCP, OPP, ammonia, cyanide, pH, (8) metals, PFAS.
	1	Natural	Asbestos, TRH, BTEX, PAH, OCP, OPP, ammonia, cyanide, pH, (8) metals, PFAS.
SMGW-TP-B335	0.1	Fill	Asbestos, TRH, BTEX, PAH, OCP, OPP, ammonia, cyanide, pH, (8) metals, PFAS, phenols (halogenated), phenols (non-halogenated).
	0.5	Natural	Asbestos, TRH, BTEX, PAH, OCP, OPP, pH, (8) metals, PFAS.
	2	Natural	Asbestos, TRH, BTEX, PAH, OCP, OPP, ammonia, cyanide, pH, (8) metals, PFAS.
SMGW-BH-B318	0.1	Fill	Asbestos, TRH, BTEX, PAH, OCP, OPP, PCB, ammonia, cyanide, pH, (8) metals, PFAS.
	0.5	Natural	TRH, BTEX, PAH, ammonia, cyanide, pH, (8) metals, PFAS, volatile organics.
	3	Natural	Asbestos, TRH, BTEX, PAH, OCP, OPP, ammonia, cyanide, pH, (8) metals, PFAS.
SMGW-TP-B336	0.1	Fill	Asbestos, TRH, BTEX, PAH, OCP, OPP, PCB, ammonia, cyanide, pH, (8) metals, PFAS, phenols (halogenated), phenols (non-halogenated).
	0.5	Natural	TRH, BTEX, PAH, ammonia, cyanide, pH, (8) metals, PFAS.
	1	Natural	TRH, BTEX, PAH, ammonia, cyanide, pH, 8) metals, PFAS, volatile organics.
SMGW-TP-B361	0.1	Fill	Asbestos, TRH, BTEX, volatile organics, PAH, OCP, OPP, PCB, phenols (halogenated), phenols (non-halogenated), pH, (8) metals.
	0.5	Natural	pH, (7) metals, PFAS.
	0.7	Natural	pH, (7) metals, PFAS.
	1	Natural	pH.
	1.5	Natural	pH, (7) metals, PFAS.
	2	Natural	TRH, BTEX, PAH, phenols (halogenated), phenols (non-halogenated), pH, (8) metals.

Table 8 summarises the laboratory testing undertaken on groundwater samples from the site or close to the site.

Table 8: Groundwater Sample Testing

Sample Location	Sample Date	Laboratory Testing Suite
SMGW-BH-B312	12/2/2021	TRH, BTEX, methane, volatile organics, PAH, ammonia, chloride, conductivity, fluoride, nitrate, nitrite, pH, total phosphate, reactive phosphate, sulfate, TDS, total kjeldahl nitrogen, total nitrogen, TSS, hardness. hexavalent chromium, alkalinity, total and dissolved (19) metals, alkali metals, PFAS, OCP, OPP.
	17/2/2021	Sulfate reducing bacteria
	17/3/2021	TRH, BTEX and naphthalene, volatile organics, methane, OPP, OCP, ammonia, nitrate, nitrite, total phosphate, reactive phosphate, total kjeldahl nitrogen, total nitrogen, total metals (arsenic, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, nickel and zinc), TRH with silica gel clean up, PAH.
SMGW-BH-B320	15/4/2021	TRH, BTEX, methane, volatile organics, PAH, OCP, OPP, semi volatile organic compounds (SVOC), ammonia, chloride, fluoride, nitrate, nitrite, total phosphate, sulfate, total kjeldahl nitrogen, total nitrogen, alkalinity, filtered and dissolved metals (19) metals, alkali metals, PFAS.
SMGW-BH-B313	10/5/2021	Ammonia, chloride, conductivity, fluoride, nitrite, nitrate, pH, total phosphate, reactive phosphate, sulfate, TDS, TSS, alkalinity, total and dissolved (19) metals, akali metals, TRH, BTEX, volatile organics, methane, PAH, SVOC, OPP, OCP, PFAS.
	2/6/2021	Ammonia, chloride, fluoride, nitrate, nitrite, total phosphate, sulfate, total kjeldahl nitrogen, total nitrogen, conductivity, pH, TDS, TSS, hardness, alkalinity, total and dissolved (19) metals, alkali metals.
SMGW-BH-B317	2/6/2021	TRH, BTEX, volatile organics, methane, SVOC, PAH, OPP, OCP, ammonia, chloride, fluoride, nitrate, nitrite, total phosphate, sulfate, total kjeldahl nitrogen, total nitrogen, conductivity, pH, TDS, TSS, hardness, alkalinity, total and dissolved (19) metals, alkali metals, PFAS.

A summary of analytical results is provided in Appendix C. It is noted that the Cardno investigation reports were factual and did not provide an assessment of the contamination results with respect to suitability to the proposed development. Given this, results are assessed and discussed in Section 11.

5.3 G-tek Survey

The following reports were prepared by G-tek Australia Pty Limited (G-tek) in regard to unexploded ordnance (UXO):

- G-tek, *Unexploded Ordnance, Field Validation Survey, Patons Lane, Defence Establishment, Orchard Hills, NSW,* 26 March 2021, (project 20142SYME, V1.02) (G-tek, 2021); and
- G-tek, *Works Area Review, 22129CPBU, Defence Establishment Orchard Hills,* 8 December 2022 (review number 22129_001) (G-tek, 2022).

G-tek (2021) provides the outcomes of a 10% UXO Field Validation Survey (FVS) at AEC 36 between 16 and 18 February 2021. For the FVS, G-tek operators conducted both visual and instrumental searches in parallel transects approximately 10 m apart over the entire AEC 36 area apart from three fenced-off, inaccessible areas. G-tek considered the three inaccessible areas to be comparatively small and not an impact on the overall coverage achieved or the UXO potential within the site to be appropriately assessed. No UXO of explosive ordnance (EO) related material were identified during the FVS. It was concluded that, based on the FVS, the survey area (AEC 36) had not been used for the use or storage of explosive ordnance or related material. It was recommended that Sydney Metro activities at the survey area (AEC 36) be conducted without further unexploded ordnance works or support.

G-tek (2022) is a letter that includes the results of a review of G-tek (2021) and a site walkover on 8 December 2022. From a UXO perspective, it was considered that the conclusions and recommendations of G-tek (2021) remain valid and the survey area (AEC 36) is suitable for the proposed development works to be safely conducted.

Copies of G-tek (2021) and G-tek (2022) are provided in Appendix C.

5.4 Monitoring at Patons Lane Landfill

The following are able to be downloaded from the Bingo Industries website and relate to Patons Lane Landfill:

- Arcadis Australia Pacific Pty Limited (Arcadis), *Patons Lane Resource Recovery Centre, Orchard Hills Waste and Resource Management Facility, Annual Environmental Management Review*, April 2018 to March 2020, September 2022 (reference MP09_0074) (Arcadis, 2022);
- Bingo Industries, *Environmental Monitoring – Groundwater & Leachate* to December 2022; and
- Bingo Industries*, Environmental Monitoring – Subsurface LFG* to December 2022.

According to Arcadis (2022), the south-eastern portion of the Patons Lane Landfill property is used for clay / shale stockpiling and access to the landfill and has two dams. The nearest landfill cell (Cell 3) is approximately 350 m to the north of the northern end of the site (AEC 36). Groundwater and gas monitoring points BH14A and BH14B are at the south-east corner of the Patons Lane Landfill site which is approximately 60 m to the north-west of the site. Drawings showing the landfill features and borehole locations, extracted from Ardis (2020), are provided in Appendix A.

According to *Subsurface LFG* (landfill gas) results, concentrations of methane from 13 monitoring events between November 2019 and November 2022 at BH14 and BH14B were either 0 % v/v or 0.1% v/v. Recorded concentrations of methane at (13) other monitoring locations were also ≤ 0.1% v/v except at BH12A and BH12B which are located on the western side of the landfill site, approximately 720 m from the northern end of the site (AEC 36). Recorded concentrations of carbon dioxide were highly variable over these monitoring events and, at BH14A and BH14B, ranged between 0.9 % v/v and 63.3 % v/v. It is noted that flow rates were not recorded with the results. A copy of subsurface LFG results is provided in Appendix C.

Groundwater & Leachate results are not clearly reported, and it is suspected that some of the recorded concentrations of contaminants were actually below the laboratory practical quantitation limits (e.g., the concentrations of mercury at BH14A and BH14B over three monitoring events have all been recorded at 0.0001 mg/L and given this consistency, it is suspected that these concentrations should have been reported as <0.0001 mg/L). In addition, it is suspected that some results have not been reported correctly against the units provided with the results (e.g., the concentrations of benzene at BH14B over three monitoring events have been recorded as 0.001 mg/L, 0.001 mg/L and 1 mg/L, and it is suspected that, given the above and that the third result is exactly three orders of magnitude greater than the others, the third result should have been recorded as <0.001 mg/L). Taking the unclear reporting into account, it appears that concentrations of metals, OCP, OPP, PAH, PCB, phenols, BTEX, and total petroleum hydrocarbons for the three groundwater monitoring events between August 2020 and August 2022 at BH14A and BH14B are not indicative of contamination. The exception may be the concentration of OCP at BH14B on August 2022 which was recorded as 0.093 mg/L. Concentrations of ammonia, over 12 monitoring events between February 2020 and November 2022 at BH14A and BH14B ranged up to 1.4 mg/L (on August 2020) but were typically less than 0.5 mg/L. A copy of groundwater monitoring results for BH14A and BH14B results are provided in Appendix C.

6. Potential Contamination Sources and Preliminary Conceptual Site Model

Potential sources of contamination for AEC 36, 37 and 38 were identified in the EIS to be:

- AEC 36: *Potential unexploded ordnance (UXO), exploded ordnance (EO) and potential areas of buried waste and former hazardous building materials;*
- AEC 37: *Historical use of lead paint and asbestos;* and
- AEC 38: *Fuel storage and use (AST and underground pipelines), potential storage or use of AFFF and stockpiles.* [AST is above-ground storage tank and AFFF is aqueous film forming foams].

Potential contaminants of concern were identified in the EIS to be:

- AEC 36: '*Heavy metals, TRH, SVOC, VOC, PFAS, asbestos, UXO and EO';*
- AEC 37: '*Lead and asbestos'; and*
- AEC 38: '*TRH, BTEX, PAH, PFAS, heavy metals, asbestos'.*

DP notes that specific heavy metals, SVOC and VOC were not listed in the EIS.

Based on the findings of G-tek (2021) and G-tek (2022), UXO and EO are not considered to be potential sources of contamination at the site.

Table 9 summarises the potential sources of contamination and what are considered to be the contaminants of potential concern.

Table 9: Potential Sources of Contamination and Contaminants of Potential Concern

Potential Source of Contamination	Contaminants of Potential Concern (CoPC)
Potential areas of buried waste (AEC 36)	• Metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc); • Total recoverable hydrocarbons (TRH); • Benzene, toluene, ethylbenzene and xylenes (BTEX); • Polycyclic aromatic hydrocarbons (PAH)*; • Organochlorine pesticides (OCP); • Organophosphorus pesticides (OPP); • Polychlorinated biphenyls (PCB); • Phenols; • Asbestos; • Volatile organic compounds (VOC) (for groundwater); and • Perfluoroalkyl and polyfluoroalkyl substances (PFAS).
Former hazardous building materials (AEC 36)	• Lead; • PCB; and • Asbestos.
Historical use of lead paint and asbestos (AEC37)	• Lead; and • Asbestos.
Fuel storage and use (adjacent AST and associated pipes) (AEC 38)	• TRH; • BTEX; • PAH; • Metals; and • VOC (for groundwater).
Potential storage or use of AFFF (AEC 38)	• PFAS.
Stockpiles possibly imported from a contaminated source (AEC 38)	• Metals; • TRH; • BTEX; • PAH; • OCP; • OPP; • PCB; • Phenols; • Asbestos; and • PFAS.

Note: *Based on a review of site history, analysis for a larger suite of SVOC was considered to not be warranted.

It is considered that the methane generated at the Patons Lane Landfill is not a potential source for potential explosive ground gas at the site, based on the recorded concentrations of methane at the closest monitoring locations which are substantially below 5% v/v (the lower explosive limit). Although in-ground carbon dioxide levels have been recorded to be highly variable at the landfill, the potential presence of carbon dioxide is not considered to present a health risk for the proposed development at the site as there is an absence of proposed enclosed, occupiable structures where carbon dioxide could accumulate. There is the potential for ground gases to accumulate in a confined space, as defined in Section 5 of the *Work Health and Safety Regulation 2017*, which may be created from the construction activity, however, these are to be managed as per requirements in the Regulation.

Based on groundwater results reported by Bingo Industries, there appears to be a low potential for groundwater contamination at the site as a result of the landfill activities. Various potential contaminants may be associated with landfill (e.g., metals, VOC, TRH and ammonia). [It is noted that the previous results for groundwater monitoring well SMGW-BH-B312, positioned between the landfill and the site, are discussed further in Section 11.3].

With regard to the possible former cattle or sheep dip / spraying adjacent to the east of AEC 36 (identified in the EIS), it is considered that there is a low potential for groundwater contamination to be at the site as a result of possible former cattle dip / spraying. Potential contaminants associated with sheep or cattle dip/spraying include OCP and arsenic.

Di-n-butyl phthalate was previously detected in groundwater at SMGW-BH-B313. It is possible that the di-n-butyl phthalate in groundwater is from an unidentified up-gradient source.

A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM provides the framework for identifying how the site may have 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). Table 10 provides the preliminary CSM which forms the basis of the investigation.

Table 10: Preliminary CSM

Potential Contamination Source	Potential Exposure Pathway	Potential Receptors
Contaminated ground from potential sources listed in Table 9.	– Ingestion and direct contact – Inhalation of dust – Inhalation of vapours	– Construction workers (for the proposed development) – Future site workers including maintenance workers (post-development) – Pedestrians and commuters
	– Inhalation of dust – Inhalation of vapours	– Adjacent site users
	– Surface run-off – Leaching of contaminants into groundwater and lateral migration of groundwater	– Surface water bodies

Potential Contamination Source	Potential Exposure Pathway	Potential Receptors
	– Leaching of contaminants into groundwater	– Groundwater
	– Ingestion, inhalation and direct contact	– Terrestrial ecosystems
	– Direct contact	– In ground structures
Contaminated groundwater migrating onto the site from an off-site source	– Inhalation of vapours	– Construction workers (for the proposed development) – Future site workers including maintenance workers (post-development) – Pedestrians and commuters

7. Sampling and Groundwater Well Installation

7.1 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 D.

7.2 Soil Sampling

Based on the CSM and data quality objectives (DQO):

- To achieve a sample density of 11 sample points per hectare, based on the minimum sample density for a 5 ha site in Table 2 of NSW EPA, *Sampling Design Part 1 – application, Contaminated Land Guidelines*, August 2022 (NSW EPA, 2022), 150 sample locations were adopted to complement the nine previous sample points (see Section 5) and provide data across the site, including:
  - 135 sample locations at AEC 36. This includes 114 test pits (AEC36TP01 to AEC36TP75, AEC36TP88 to AEC36TP111, AEC36TP120 to AEC36TP129, and AEC36TP131 to AEC36TP135) and, where vegetation was present and test pits using an excavator could not be utilised, 21 hand auger boreholes (AEC36HA76 to AEC36HA87, AEC31HA112 to 119 and AEC36HA130;
  - Two sample locations (test pits) at AEC 37 (AEC37TP01 and AEC37TP02); and
  - 13 sample locations (test pits) at AEC 38 (AEC38TP01 to AEC38TP13). It is noted, however, that AEC38TP01A was an added as a sample location, as test pit AEC38TP01 was discontinued at a shallow depth (0.2 m) due to buried services encountered in fill. In addition to providing general site coverage, AEC38TP02 was positioned close to the hanger, AEC38TP03 was positioned at the end of a (landscaped) mound, and AEC38TP04 was positioned at a general stockpiling area.

- In addition to the above test pit and auger boreholes:
  - Using hand tools, two surface soil samples (AEC38SS1 and AEC38SS2) were collected from near the old bowsers footprint, near the air-craft hangers;
  - Using hand tools, three samples were collected from the mound at the western site boundary at AEC 38 (AEC38SP1A, AEC38SP1B and AEC38SP1C);
  - Using hand tools, AEC38SP2A, AEC38SP2B and AEC38SP2C were collected from the mound at the eastern boundary of the site at AEC 38; and
  - A sample of the fibre-cement sheeting (PACM79) from the demolished structure at AEC 36 was also collected.

Soil sampling was undertaken between 30 November 2022 and 20 January 2023. Sample locations are shown on Drawings AEC37/38-01 and AEC36-01 to AEC36-04, Appendix A.

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

- Collect soil samples from excavator bucket returns or the hand auger including at the surface / near surface and regular depth intervals (approximately every 0.5 m) and / or at changes of strata;
- Transfer samples in laboratory-prepared glass and plastic jars by hand, capping immediately and minimising headspace within the sample jar;
- Collect replicate samples in zip-lock bags for screening using a photo-ionisation detector (PID);
- For fill samples, collect ~500 ml samples in zip-lock bags (for asbestos analysis);
- Wear a new disposable nitrile glove for each sample point thereby minimising potential for cross-contamination;
- 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.

A bulk (10 L) soil sample from AEC36TP71, depth 0-0.1 m, was subject to sieving / screening for asbestos as a potential asbestos-containing material had been identified from sampling and analysis. The procedure was as follows:

- Weigh the bulk sample and record the mass;
- Screen the bulk sample through a ≤7 mm aperture sieve. Clods of soil were broken down by hand to fit through the sieve. Materials retained on the sieve were examined for any asbestos containing material (ACM) or suspect material; and
- Weigh all retrieved potential ACM (if any). Record the condition, size and mass of the potential ACM.

7.3 Sediment Sampling

One sample location (AEC36SED01) at the creek that crosses the site at AEC 36 was designated for the collection of a sediment sample. The sample location is shown on Drawing AEC36-02, Appendix A. The general sediment sampling and sample management procedure are as follows:

- Collect sediment sample from an accessible point using a hand auger;
- Transfer samples in laboratory-prepared plastic and glass jars, capping immediately and minimising headspace within the sample jar;
- Collect ~500 ml samples for asbestos analysis;
- Where a new disposable nitrile glove for each sample point;
- 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 of chain of custody.

7.4 Groundwater Monitoring Well Installation and Development

Boreholes for groundwater monitoring wells (AEC36BH01 to AEC36BH05 and AEC38BH01) were drilled to depths of between 6.2 m and 15 m using a track-mounted drilling rig on 30 November 2022 and 23 and 24 January 2023. The groundwater monitoring wells were positioned to provide site coverage in areas of the site where there are no existing groundwater monitoring wells (as per the SAQP). AEC38BH01 was in close proximity to the (off-site) AST and is down-gradient of the hangers. AEC36BH02 was down-gradient of the off-site possible former cattle or sheep dip / spraying area.

Auger drilling with a tc-bit was utilised at each borehole.

Monitoring wells were constructed using class 18 uPVC machine slotted screen and blank sections with screw threaded joints. The screened section of each well was backfilled with a washed sand filter pack a minimum of 0.5 m above the screened interval. Each well was completed with a hydrated bentonite plug, of more than 0.5 m thickness, to the surface or near-surface. At AEC38BH01, drilling spoil was used as backfill above the bentonite plug (i.e., at a depth of 0 – 0.5 m bgl).

The groundwater monitoring wells were developed on 16 December 2022 and 25 January 2023 using a Twister (plastic) pump.

Locations of the groundwater monitoring wells are shown on Drawings AEC37/38-01 and AEC36-01 to AEC36-04, Appendix A.

7.5 Groundwater Sampling

Groundwater sampling of monitoring wells was carried out on 24 January 2023 and 1 February 2023. The sampling method adopted (as per the SAQP) is as follows:

- Wear new disposable nitrile gloved for each sample point thereby minimising potential for cross-contamination;
- Measure the static water level using an electronic interface probe;
- Lower the well-dedicated tubing into the well at a depth that is at the screened section of the well;
- Set up the peristatic pump to draw water at a low rate that produces laminar flow;
- Measure physical parameters using a water quality meter by continuously passing the purged water through a flow cell;
- Following stabilisation of the field parameters using a water quality meter, collect samples in laboratory-prepared bottles minimising headspace within the sample bottle and cap immediately. Samples for metals analysis are filtered in the field using a 0.45 µm filter (prior to bottling of the sample).
- Place samples into a cooled, insulated, and sealed container for transport to the laboratory; and
- Use chain of custody documentation.

7.6 Surface Water Sampling

Surface water sampling was undertaken at the creek which crosses the site on 25 January 2023. The sample location (AEC36SW1) is shown on Drawing AEC36-02, Appendix A.

A disposal bailer was used to collect the sample which was decanted into laboratory-prepared bottles. Disposable nitrile gloves were used while sampling. The headspace within the sample bottle was minimised and the sample bottle was capped immediately. The sample containers were placed into a cooled, insulated, and sealed container for transport to the laboratory with chain of custody documentation.

A water quality meter was used to collect physical parameters of the surface water.

8. Laboratory Analysis

8.1 Soil and Material Samples

Fill or topsoil (primary) samples from each test pit and (hand auger) borehole were analysed at a NATA accredited laboratory for CoPC comprising: metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TRH, BTEX, PAH, OCP, OPP, PCB, total phenols, asbestos (in 500 mL) and PFAS as fill / topsoil was considered to have a greater risk of contamination compared to the observed natural soil. Natural (primary) soil samples from 26 of the test pits and (hand auger) boreholes were analysed for the same suite except for asbestos to obtain some data for the natural profile across the site. Samples AEC38SP1A and AEC38SP2B from mounded soil were also analysed for the same suite including asbestos.

The fibre-cement sample (AEC36TP71-PACM) collected from a depth of 0-0.1 m at AEC36TP71 was analysed for asbestos. The fibre-cement sample from the demolished structure (PACM79) was also analysed for asbestos.

Fill samples (depth 0-0.1 m) from AEC36HA118 and AEC36HA119 were analysed for phthalates as these samples were in the vicinity of SMGW-BH-B313 where di-n-butyl phthalate was previously detected in groundwater.

Samples with concentrations of benzo(a)pyrene above 0.8 mg/kg were subject to toxicity characteristic leaching procedure (TCLP) for waste classification assessment purposes.

Laboratory certificates and chain of custody are provided in Appendix E.

8.2 Sediment Sample

The sediment sample (AEC36SED1) was analysed for the CoPC comprising: metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TRH, BTEX, PAH, OCP, OPP, PCB, total phenols, asbestos (in 500 mL soil) and PFAS.

Laboratory certificates and chain of custody are provided in Appendix E.

8.3 Groundwater Samples

Groundwater samples were analysed for COPC comprising VOC, dissolved metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TRH, BTEX, PAH, OCP, OPP, PCB, speciated phenols and PFAS. Samples were also analysed for hardness. The replicate sample (BD3/20230201) from SMGW-BH-B313 was also analysed for phthalates (esters) given that di-n-butyl phthalate had previously detected at this location. (Samples were also analysed for pH, electrical conductivity, sulfates, and chlorides, total dissolved solids, carbonate / bicarbonate, major anions and cation and Langelier saturation index for geotechnical purposes and have not been reported herein).

Laboratory certificates and chain of custody are provided in Appendix E.

8.4 Surface Water Sample

The surface water sample was analysed for COPC comprising VOC, dissolved and total metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), TRH, BTEX, PAH, OCP, OPP, PCB, speciated phenols and PFAS. The sample was also analysed for hardness. (The sample was also analysed for pH, electrical conductivity, sulfates and chlorides, total dissolved solids, carbonate / bicarbonate, major anions and cation and Langelier saturation index for geotechnical purposes and have not been reported herein).

Laboratory certificates and chain of custody are provided in Appendix E.

9. Site Assessment Criteria

Tier 1 Site Assessment Criteria (SAC) for the assessment of soils, informed by the CSM, at the site are listed in Appendix F.

The site will be used for the rail corridor and have areas of passive open space. Therefore, SAC for the rail corridor (land use scenario D) and for passive open space (land use scenario C) have been adopted for this assessment.

10. Field Work Results

10.1 Soils

The test pit logs and hand auger borehole logs for this assessment are included in Appendix G and should be reference for detailed soil descriptions. In summary:

- Fill comprising silty sand was encountered at all test pits and hand auger boreholes, between 0.05 m and 0.6 m thick (but typically less than 0.4 m thick), except at AEC38TP04 where silty clay fill was observed to a depth of 0.2 m, at AEC38TP11 where sandy silty clay was observed to a depth of 0.15 m, and at AEC36TP31 where sandy silt was observed to a depth of 0.35 m. The silty sand fill (to depth 0.1 m) at AEC38TP03 which was at the landscaped mound, was underlain by silty clay fill to a depth of 0.8 m;
- Fill was observed to be underlain by silty clay at all test pits and hand auger boreholes except at AEC38TP01 where the test pit was discontinued due to buried services encountered at a depth of 0.2 m, AEC36HA112 where refusal on tree roots were encountered at a depth of 0.3 m, and AEC36HA116 where refusal was encountered at a depth of 0.3 m. Silty clay was encountered up to depths of 1.3 m below ground level (except at AEC38TP01, AEC36HA112 and AEC36HA116);
- Observed anthropogenic materials in fill included wire at AEC38TP01 (depth 0-0.1 m), timber at AEC36HA130 (depth 0-0.25 m), timber at AEC36HA85 (depth 0-0.3 m), fibrous sheet at AEC36TP71 (depth 0-0.1 m), timber at AEC36TP93 (depth 0-0.25 m), and timber at AEC36TP95 (depth 0-0.25 m). Fibre-cement sheets were observed on the ground surface at AEC36HA79;
- No odours were identified in the soil. PID results were all less than 5 ppm indicating a low potential for volatile contaminants. (The PID calibration certificate is provided in Appendix H); and

- No free groundwater was observed.

Results for field sieving of the bulk sample from AEC36TP71, depth 0-0.1 m, are shown in Appendix H. A fibrous sheet (approximately 50 mm wide), retained from the sieving of the bulk sample, was noted to be in poor condition.

Surface soil samples (AEC38SS1 and AEC38SS2) were observed to comprise pale brown silty sand fill with trace rootlets and fine gravel. No signs of contamination were observed.

Mound soil samples AEC38SP1A, AEC38SP1B and AEC38SP1C were observed to comprise brown to pale brown silty sand fill with trace fine to coarse sandstone gravel and trace rootlets. No signs of contamination were observed.

Mound soil samples AEC38SP2A, AEC38SP2B and AEC38SP2C were observed to comprise brown to pale brown silty sand with fine to coarse sandstone gravel, and trace rootlets.

10.2 Sediment Sample

The sediment sample from the creek at AEC 36 (AEC36SED1) was observed to comprise pale brown and orange-brown silty clay with trace fine gravel and rootlets.

10.3 Groundwater Monitoring Wells

The borehole logs for groundwater monitoring wells for this assessment are included in Appendix G. Boreholes for groundwater monitoring wells were drilled through a surface layer of fill or topsoil (0.1 m to 0.8 m thick, but typically less than 0.3 m thick) comprising silty clay, silty sand or sandy silt. At AEC36BH03, fill was underlain by sandy gravel to a depth of 0.8 m at AEC36BH03, then silty clay to a depth of 3.5 m. For other boreholes, fill or topsoil was underlain by silty clay to depths up to 5 m, then sandstone and / or siltstone to termination depths (between 6.2 m and 15 m). No signs of contamination were noted whilst drilling.

10.4 Groundwater Well Development and Sampling

Groundwater levels are summarised in Table 11.

Table 11: Groundwater Levels

Borehole	Prior to Well Development		Prior to Well Sampling	
	Groundwater Depth (m bgl)	Groundwater Level (m AHD)	Groundwater Depth (m bgl)	Groundwater Level (m AHD)
AEC36BH01	2.28 (25/1/2023)	43.77	1.64 (1/2/2023)	44.41
AEC36BH02	5.70 (25/1/2023)	43.03	4.53 (1/2/2023)	44.20
AEC36BH03	5.50 (25/1/2023)	42.18	5.49 (1/2/2023)	42.19
AEC36BH04	1.43 (25/1/2023)	39.46	1.44 (1/2/2023)	39.45
AEC36BH05	1.89 (25/1/2023)	39.07	2.84 (1/2/2023)	38.12
AEC38BH01	3.86 (16/12/2022)	46.54	4.02 (24/1/2023)	46.38
SMGW-BH-B313	-	-	2.20 (24/1/2023)	36.70
SMGW-BH-B317	-	-	2.12 (1/2/2023)	42.11
SMGW-BH-B319	-	-	2.52 (1/2/2023)	47.50

Groundwater levels correspond with the anticipated groundwater flow direction which is towards the unnamed creek that crosses the site (see Section 4).

The water from the development of AEC36BH01, AEC36BH03, AEC36BH04, AEC36BH05, AEC38BH01 was highly turbid and brown, dark brown or pale grey-brown in colour. The water from the development of AEC38BH02 had low turbidity. No odours were identified in the water during well development.

No phase separated hydrocarbons were identified in any of the wells from use of the interface dipmeter prior to sampling. The water sampled from AEC36BH01 and AEC36BH04 was highly turbid, and the water sampled from AEC36BH02, AEC36BH03, AEC36BH05, SMGW-BH-B313, SMGW-BH-B317 and SMGW-BH-B319 had low turbidity. No odours were associated with any of the samples.

The groundwater field sheets, and water quality meter calibration record are provided in Appendix H.

10.5 Surface Water Sampling

The surface water sample, AEC36SW1, was observed to have very low turbidity (slightly cloudy) and no odour.

The field sheet and water quality meter calibration record are provided in Appendix H.

11. Discussion of Laboratory Analytical Results

11.1 Soil Samples

Analytical results for soil samples for the current assessment are summarised in Table I1, Appendix I, against (Tier 1) SAC (see Appendix F). The most conservative health-based SAC and ecological-based SAC are shown in Table I1. Analytical results for the previous investigation sample locations and the current SAC are shown on Tables C1 to C3, Appendix C.

For the current investigation, concentrations of chemicals for all analysed soil samples are within the SAC except for benzo(a)pyrene in fill samples AEC38SS1, AEC38TP02 (depth 0-0.1 m) and AEC38TP07 (depth 0-0.1 m). The benzo(a)pyrene concentrations (maximum 2 mg/kg) in these three samples exceeded the (low reliability) open space ESL (0.7 mg/kg) and, in two samples, the (low reliability) commercial / industrial ESL (1.4 mg/kg). The recorded benzo(a)pyrene concentrations are significantly less than the high reliability ecological guidelines of 33 mg/kg for open space and 172 mg/kg for a commercial / industrial land use published in CRC CARE, *Technical Report No. 39*, *Risk-based management and remediation guidance for benzo(a)pyrene,* 2017. Therefore, the recorded benzo(a)pyrene soil concentrations are not considered to warrant remediation or management.

For the current investigation, it is noted that concentrations of mercury, TRH C_6-C_{10}, TRH >C_{10}-C_{16}, naphthalene, BTEX, OCP, OPP, PCB and PFAS were less than the practical quantitation limits. Phthalates were not detected in the two analysed soil samples. TRH >C_{16}-C_{34} or TRH >C_{34}-C_{40} were detected above the practical quantitation limits in a number of samples (at low concentrations) and these detections are considered to be most likely attributed to organic matter in the fill (topsoil).

For the current investigation, asbestos was detected in:

- The 500 mL sample from AEC36TP71, depth 0 – 0.1 m. The asbestos was identified in fibre cement material > 7 mm;
- The fibrous sheet sample AEC36TP71-PACM collected from sieving the bulk fill sample (depth 0-0.1 m) at AEC36TP71. The asbestos in this sample appeared to be in friable form (i.e., not bonded). The sample weighed 6 g which equates to a concentration of 0.006% w/w in the bulk sample (assuming 15% asbestos in the fibrous sheet which may be an underestimate). This concentration is above the HSL (0.001% w/w);
- The 500 mL sample from AEC36HA78, depth 0 – 0.1 m. The asbestos was identified in fibre cement material > 7 mm; and
- Fibre cement sample PACM79, collected from the ground surface at the demolished structure near AEC36HA79. The asbestos in the fibre cement was considered to be in bonded form.

The asbestos identified at AEC36TP71 may either be associated with the fill (of unknown origin) or as a result of fly tipping (dumping) as this sample location is close to structures and an access track adjacent the site to the east. The asbestos identified at AEC36HA78 may be associated with the fill (of unknown origin), or as a result of fly tipping (dumping) as this location is near an access track, or as a result of nearby demolition of the former structure where PACM79 was found.

For the previous investigations, concentrations of chemicals were within the SAC. Asbestos was detected in:

- The fibre cement sample ACM01_300321. Although little information was reported by Cardno on the fibre-cement find, it appears that the sample was collected from the ground surface at the location of the demolished structure near AEC36HA79.

For previous investigations, concentrations of BTEX, MAH, TRH C_6-C_{10}, TRH >C_{10}-C_{16}, TRH >C_{16}-C_{34}, TRH >C_{34}-C_{40}, mercury, cadmium, cyanide, ammonia, OCP, OPP, PAH, PCB, phenols and VOC were less than the practical quantitation limits.

11.2 Sediment Sample

Concentrations of chemicals for the analysed sediment sample, AEC36SED01, were all within the SAC. Asbestos was not detected in this sample. It is noted that concentrations of cadmium, mercury, TRH C_6-C_{10}, TRH >C_{10}-C_{16}, TRH >C_{34}-C_{40}, BTEX, PAH, OCP, OPP, PCB, total phenols and PFAS were less than the laboratory practical quantitation limits.

11.3 Groundwater Samples

Analytical results for groundwater samples are summarised in Table I2, Appendix I.

For the current investigation, groundwater samples had concentrations within the SAC except for:

- Cadmium in samples from AEC36BH02 (0.5 µg/L), AEC36BH03 (0.8 µg/L), AEC36BH04 (0.3 µg/L) and SMGW-BH-B317 (0.3 µg/L). Concentrations were above the DGV (0.2 µg/L) which has not been adjusted for hardness. The recorded concentrations are considered to be at background levels for groundwater and are less than a hardness-adjusted DGV of 3.3 µg/L for a hardness of 710 mg$CaCO_3$/L (which was obtained for surface water sample AEC36SW1);
- Copper in samples from AEC36BH01 (2 µg/L), AEC36BH02 (2 µg/L), AEC36BH03 (3 µg/L) and SMGW-BH-B319 (4 µg/L). Concentrations were above the DGV (1.4 µg/L). The recorded concentrations are considered to be at background levels for groundwater;
- Nickel in samples from AEC36BH01 (15 µg/L and 14 µg/L), AEC36BH02 (24 µg/L), AEC36BH03 (12 µg/L), AEC36BH05 (22 µg/L) and SMGW-BH-B319 (270 µg/L). Concentrations were above the DGV (11 µg/L) and, for the sample from SMGW-BH-B319, above the adopted recreational health guideline (200 µg/L). Except for the concentration recorded for the sample from SMGW-BH-B319, the recorded concentrations were less than a hardness-adjusted DGV of 162 µg/L for a hardness of 710 mg$CaCO_3$/L. The recorded concentrations are considered to be at background levels for groundwater, particularly given that nickel concentrations in tested fill / soil samples were low;

- Zinc in samples from AEC36BH01 (37 µg/L and 35 µg/L), AEC36BH02 (110 µg/L), AEC36BH03 (35 µg/L), AEC36BH04 (40 µg/L), AEC36BH05 (15 µg/L), SMGW-BH-B317 (15 µg/L), SMGW-BH-B319 (450 µg/L) and AEC38BH01 (10 µg/L). Concentrations were above the DGV (8 µg/L) which has not been adjusted for hardness. Except for the concentration recorded for the sample from SMGW-BH-B319, the recorded concentrations were less than a hardness-adjusted DGV of 118 µg/L for a hardness of 710 mg$CaCO_3$/L. The recorded concentrations are considered to be at background levels for groundwater, particularly given that zinc concentrations in tested fill / soil samples were low; and
- PFOS in the samples from SMGW-BH-B313 (0.0007 µg/L), SMGW-BH-B317 (0.0006 µg/L), and SMGW-BH-B319 (0.001 µg/L). Concentrations were above the freshwater water quality guideline for 99% species protection (0.00023 µg/L). It is noted that the recorded concentrations are well within the 95% species protection (0.13 µg/L) for PFOS in PFAS National Environmental Management Plan 2.0.

In addition to above, it is noted that:

- Low concentrations of naphthalene (0.04 µg/L) and toluene (8 µg/L) were recorded for the sample from AEC36BH04. Although groundwater at this location may be within 2 m of the final ground level, such low concentrations are not considered to pose a vapour intrusion risk to the proposed development;
- A low concentration (1 µg/L) of 2-Methylphenol (0-Cresol) was recorded for the sample form AEC36BH04. With regard to human health, this concentration was well below the US EPA Regional Screening Level (RSL) for tap water (TR=1E-06, HQ=1, November 2022) of 930 µg/L for 0-Cresol. With regard to freshwater ecology, the recorded concentration is well below the British Columbia, Ministry of Water, Land And Air Protection*, Ambient Interim Water Quality Guidelines for Phenols*, 19 April 2002 water quality guideline of 50 µg/L for phenols (excluding chlorinated phenols, hydroquinone and resorcinol);
- PFHxS was detected in samples from SMGW-BH-B313 (0.0003 µg/L) and SMGW-BH-B317 (0.0002 µg/L);
- PFOA was detected in samples from SMGW-BH-B313 (0.0007 µg/L), SMGW-BH-B317 (0.001 µg/L) and SMGW-BH-B319 (0.0007 µg/L);
- 6:2 FTS was detected at the practical quantitation limit (0.0004 µg/L) in the primary sample from AEC38BH01 but was below the practical quantitation limit in associated replicate sample (BD1/20230125);
- Perfluorohexanoic acid was detected in the samples from SMGW-BH-B317 (0.0009 µg/L) and SMGW-BH-B319 (0.0006 µg/L); and
- Perfluoroheptanoic acid was detected in the sample from SMGW-BH-B317 (0.0007 µg/L).

With respect to human health, it is noted that total PFAS concentrations for each groundwater sample are well below the European Union *Drinking Water Directive* of 0.5 µg/l for all PFAS. There is a general absence of international guideline values for freshwater ecosystems for PFHxS, 6:2 FTS, Perfluorohexanoic acid and Perfluoroheptanoic acid.

For previous investigations, results for groundwater that exceeded the SAC included:

- Some metals in unfiltered samples. (Filtering of samples is generally preferred for sampling from groundwater wells to avoid analysis of solids in the sample);
- Some filtered metals including cadmium (maximum concentration of 1.4 µg/L), chromium (maximum concentration of 8 µg/L), copper (maximum concentration of 14 µg/L), lead (maximum concentration of 4 µg/L), nickel (maximum concentration of 533 µg/L), selenium (9 µg/L), vanadium (20 µg/L), zinc (482 µg/L), cobalt (maximum concentration of 1110 µg/L), iron (maximum concentration of 11 000 µg/L) and manganese (maximum concentration of 23 000 µg/L). These are considered likely to be represent background conditions;
- Endrin (0.1 µg/L) in the sample from SMGW-BH-B320 (15/4/2021) which exceeded the freshwater DGV (0.01 µg/L). Endrin aldehyde (0.4 µg/L) was also detected in this sample. SMGW-BH-B320 is an off-site sampling location and the sample from AEC38BH01, the nearby on-site well for the current investigation, had concentration of endrin and endrin aldehyde below the practical quantitation limits;
- Di-n-butyl phthalate (12 µg/L) in the sample from SMGW-BH-B313 (10/5/2021) which slightly exceeded the DGV (10 µg/L). It is noted that, for the current investigation, the concentrations of di-n-butyl phthalate were below the practical quantitation limit in the analysed groundwater sample (<5 µg/L in sample BD3/20230201) and soil samples from nearby sample points. The previous detection of di-n-butyl phthalate, therefore, may be from an off-site source or as a result of cross-contamination (e.g., from drilling works equipment); and
- Sulfate in the samples from SMGW-BH-B319. The recorded concentrations are considered to be background concentration for groundwater.

Apart from a very low concentration of PFOS (0.0002 µg/L) in the sample from SMGW-BH-B312 (collected on 12/02/2021), it is noted that PFAS was not detected above the practical quantitation limits for samples from SMGW-BH-B312, SMGW-BH-B313 and SMGW-BH-B317 in previous investigations. As it is reasonably likely that these wells have been accessed for purposes other than contamination sampling (e.g., data-logging of groundwater levels) prior to the current investigation, these wells may have been inadvertently cross-contaminated / impacted with PFAS when accessed for these other purposes resulting in the detectable levels of PFAS in these wells for the current investigation. Apart from a very low concentration of 6:2 FTS in the sample from AEC38BH01, samples from the wells installed for the current investigation (AEC36BH01 to AEC36BH05 and AEC38BH01) that have only accessed for contamination sampling purposes (to our knowledge), did not have PFAS concentrations above the practical quantitation limits.

From review of the analytical results for soil and observed site conditions, there is no obvious source(s) of PFAS at the site and given that the PFAS in groundwater is more likely the result of off-site / diffuse sources (or inadvertent cross-contamination discussed above) than an on-site source, it is considered that the PFAS identified in groundwater does not warrant remediation.

TRH C_{16}-C_{34} (2600 µg/L) and TRH C_{34}-C_{40} (200 µg/L) were detected in the sample from the off-site well SMGW-BH-B320 in the previous investigations, however, TRH was not detected above the practical quantitation limits in the on-site, nearby well (AEC38BH01) in the current investigation.

11.4 Surface Water

For the surface water sample from the creek, results were within the SAC except for:

- Total zinc in the primary sample (AEC36SW1) (17 µg/L) and replicate sample (BD1/20230125) (12 µg/L), and dissolved zinc in the replicate sample (BD2/20230125). Concentrations were above the DGV (8 µg/L) which has not been adjusted for hardness. The recorded concentrations were within the hardness-adjusted DGV of 118 µg/L for a hardness of 710 mg$CaCO_3$/L; and
- PFOS in the primary sample (0.0081 µg/L) and the replicate sample (0.0088 µg/L). Concentrations were above the freshwater water quality guideline (0.00023 µg/L).

In addition to the above:

- The TRH >C_{16}-C_{34} concentration in the replicate sample (BD2/30230125) (60 µg/L) was above the practical quantitation limit, but below the practical quantitation limit in the primary sample and other replicate sample (BD1/20230125) (<50 µg/L);
- The TRH >C_{16}-C_{34} concentrations in the primary sample (110 µg/L) and the replicate sample (BD2/30230125) (300 µg/L) were above the practical quantitation limit but was below the practical quantitation limit in the other replicate sample (<100 µg/L); and
- PFHxS (0.002 µg/L), PFOA (0.0064 µg/L and 0.0065 µg/L), PFHxA (0.003 µg/L) and PFBA (0.007 µg/L) were detected.

Given the recorded concentrations of PFOS, PFHxS, PFOA, PFHxA and PFBA in soil and groundwater at the site which are low or below practical quantitation limits, it is considered that the majority of the detected PFOS, PFHxS, PFOA, PFHxA and PFBA in surface water is likely from an up-stream (off-site) source. Similarly, it is considered that the low concentrations of detected TRH in surface water are most likely from upstream (off-site) given the low TRH concentrations recorded for soil (and groundwater) at the site.

11.5 Preliminary Waste Classification Comments

It is understood that excavated soil at the site is to be reused for the SCAW project (wherever possible). The following preliminary waste classification comments are made for the case that soil is to be disposed off-site to a licensed landfill or subject to use outside of the SCAW project.

Table I3, Appendix I, presents the analytical results for the current investigation against criteria from NSW EPA, *Waste Classification Guidelines*, 2014 (NSW EPA, 2014); NSW EPA, *Addendum to the Waste Classification Guidelines (2014) - Part 1: classifying waste*, 2016 (NSW EPA, 2016); and NSW EPA, *The excavated natural material order 2014*. Tables C1, C2 and C4, Appendix C, presents the analytical results for the previous investigations against the same criteria.

With respect to fill samples (including from soil mounds) and the sediment sample:

- Concentrations of chemical contaminants were within the CT1 criteria for general solid waste (GSW) except for benzo(a)pyrene in samples AEC38SS1 (depth 0-0.1 m), AEC38TP02 (depth 0-0.1 m) and AEC38TP07 (depth 0-0.1 m). The benzo(a)pyrene concentrations were within the SCC1 and TCLP1 criteria for these three samples;

- PFAS concentrations were within the SCC1 criteria, however, for previous investigation results, TCLP analysis was (apparently) not undertaken on samples of fill with detectable (albeit very low) concentrations of PFAS. TCLP analysis for PFAS would need to be undertaken to complete waste classification assessment where PFAS has been identified;
- Asbestos was detected in the fill at AEC36TP71 and AEC36HA78. Asbestos, including fill containing asbestos, is pre-classified as special waste (and cannot be excavated natural material by definition);
- Concentrations of chemicals and pH were with the absolute maximum concentrations for ENM except for benzo(a)pyrene in samples from AEC38SS1 (depth 0-0.1 m) and AEC38TP07 (depth 0- 0.1 m). The fill represented by these samples cannot be ENM;
- Concentration of chemicals exceeded the maximum average concentrations for ENM but not the absolute maximum concentrations for:
  - Cadmium in the sample from AEC38SS2;
  - Lead in the sample from AEC36TP95, depth 0-0.1 m;
  - Benzo(a)pyrene in the sample from AEC38TP02, depth 0-0.1 m; and
  - Chromium in the sample from SMGW-TP-B332, depth 0-0.1 m.

With respect to natural soil samples, concentrations it is noted that:

- TRH C_{29} - C_{36} (110 mg/kg) was detected in the sample from AEC36HA84, depth 0.3-0.4 m. It is possible that this may be from a natural (organic) source; and
- PFOS was detected (at low concentrations) in the previous investigation samples from SMGW-TP-B335, depth 0.5 m and SMGW-TP-B318, depth 0.5 m.

According to the definition of virgin excavated natural material (VENM), as defined in *Protection of the Environment Operations Act 1997*, the presence of manufactured chemicals in the natural soil precludes the natural soil (impacted by chemicals) as being classifiable as VENM. Concentrations of other chemicals in natural soil samples were within typical background ranges and were considered to be consistent with the definition of VENM.

11.6 Data Quality Assurance and Quality Control

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

12. Conclusion

Asbestos was identified in the fill at AEC36TP71 and AEC36HA78, and on the ground surface near AEC36HA79 where a demolished structure was observed. Given that asbestos has been found above the HSL (for friable asbestos), it is considered that delineation and remediation of asbestos contamination is required to render the site suitable for the final intended land use. The demolished structure will need to be removed (and disposed appropriately off-site) and the footprint of the structure validated following the removal of asbestos. Given that concentrations of chemicals (i.e., excluding asbestos) are within SAC, the remediation approach may include encapsulation of the asbestos contaminated soil and management of the contamination under a long term environmental management plan (or long term asbestos management plan) rather than offsite disposal to landfill.

It is considered that the results of soil and groundwater testing at AEC37 indicate that this part of the site is suitable for the intended final land use.

At AEC38, contamination has not been identified from soil and groundwater testing. It is presumed that buried pipes lead from the off-site AST to the location of the (on-site) former bowsers near the hanger (at AEC 38). It is noted that the buried pipes have not been identified in this investigation and, therefore, the alignment of the pipes between the AST and former bowser's location is unknown These pipes should be carefully excavated and removed and the remaining soil beneath validated by an environmental consultant through sampling and analysis. Potential contamination at the footprint of the hanger should be assessed following demolition.

13. Limitations

Douglas Partners (DP) has prepared this report (or services) for the SCAW package for SMWSA. The work was carried out under a Service Contract. This report is provided for the exclusive use of CPBUI JV for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and / or their agents.

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

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

Asbestos has been detected in laboratory analysis of soil samples. 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, 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 hazardous building materials (HBM), 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 further asbestos is not present.

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

CH 25300

PATONS LANE

SMGW-BH-B312 (C)

AEC36TP135

AEC36TP134

AEC36TP133

SMGW-TP-B360-DOD (C)

AEC36TP132

AEC36BH05

AEC36TP131

AEC-36

AEC36HA130

CH 25500

AEC36TP129

AEC36TP128

SMGW-TP-B320 (C)

AEC36TP127

AEC36TP126

SMGW-TP-B362-DOD (C)

AEC36TP125

AEC36TP124

AEC36TP123

SMGW-TP-B321 (C)

AEC36TP122

SQUARE AREA SURROUNDED BY SECURITY CHAIN WIRE FENCE (PURPOSE UNKNOWN) IDENTIFIED IN EIS

CH 25700

AEC36TP121

AEC36TP120

AEC36HA119

Unnamed Creek

SMGW-BH-B313 (C)

CH 25800

0 20 40 60 80 100 m

LOCALITY PLAN

SITE

PATONS LANE

LUDDENHAM RD

LUDDENHAM RD

LUDDENHAM RD

Legend

- SCAW Alignment
- EIS AEC: High Risk
- Site Boundary
- Previous Borehole with Groundwater Well
- Previous Test Pit
- Sediment Sample
- Surface Water Sample
- Borehole / Groundwater Well
- Hand Auger Borehole
- Test Pit

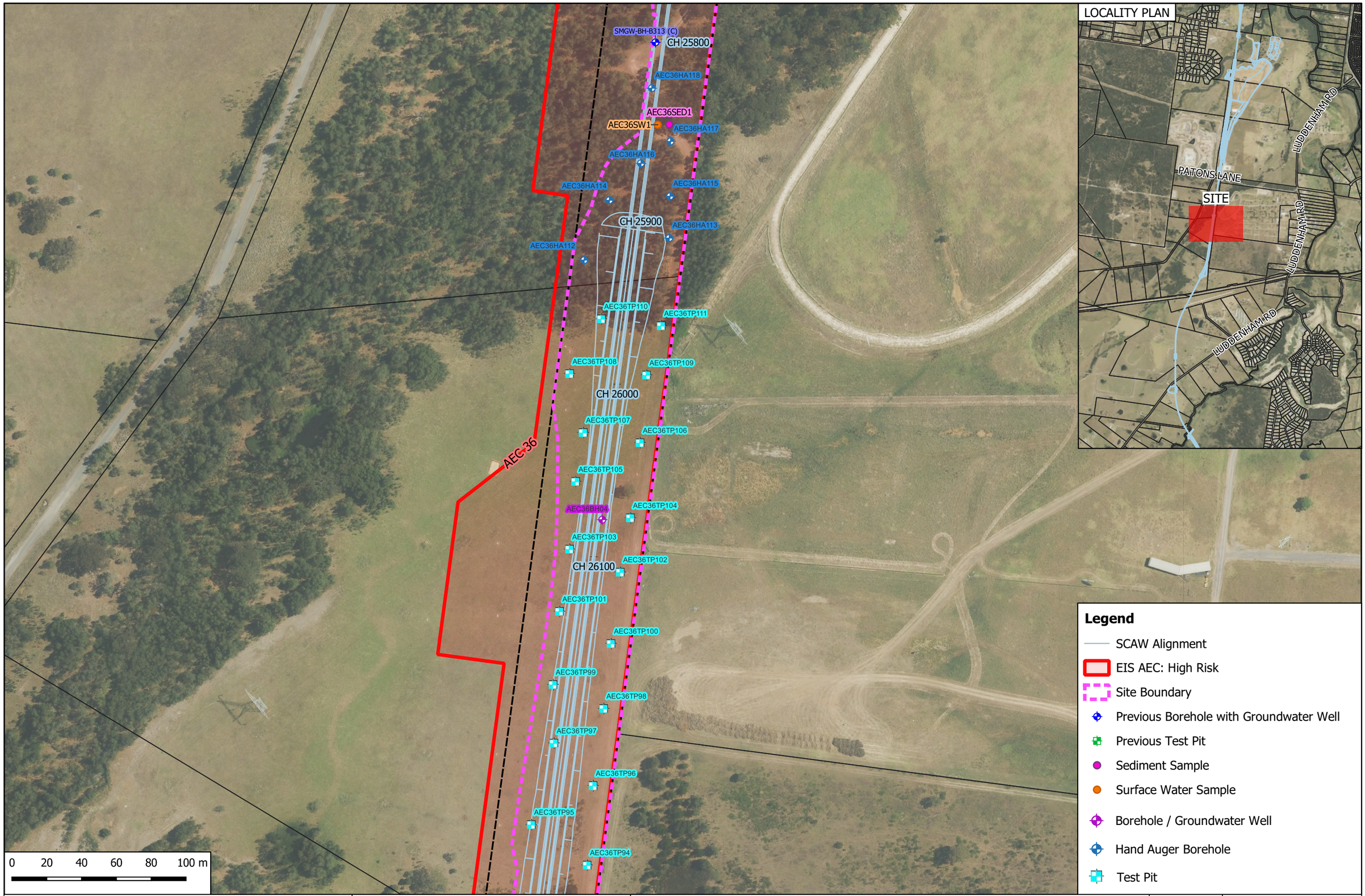
Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT:	CPBUI JV		
OFFICE:	Sydney	DRAWN BY:	MG
SCALE:	1:2000 @ A3	DATE:	21/02/2023

TITLE: **AEC36 Test Location Plan**
Sydney Metro Western Sydney Airport - SCAW
Stockdale Road, Orchard Hills

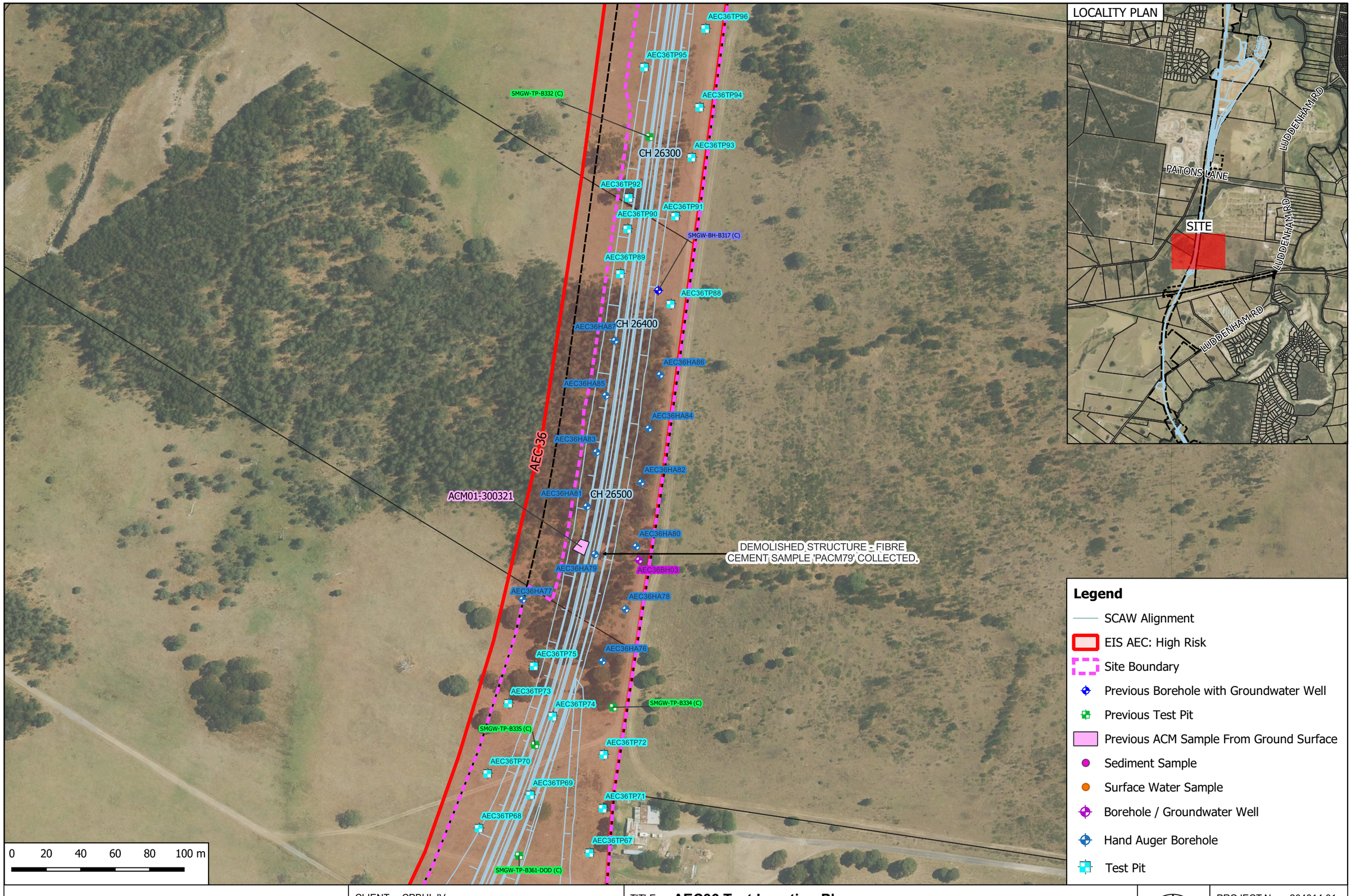
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PROJECT No:	204814.01
DRAWING No:	AEC36-01
REVISION:	0



Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: CPBUI JV		TITLE: **AEC36 Test Location Plan**	PROJECT No: 204814.01
OFFICE: Sydney	DRAWN BY: MG	**Sydney Metro Western Sydney Airport - SCAW**	DRAWING No: AEC36-02
SCALE: 1:2000 @ A3	DATE: 17/02/2023	**Stockdale Road, Orchard Hills**	REVISION: 0



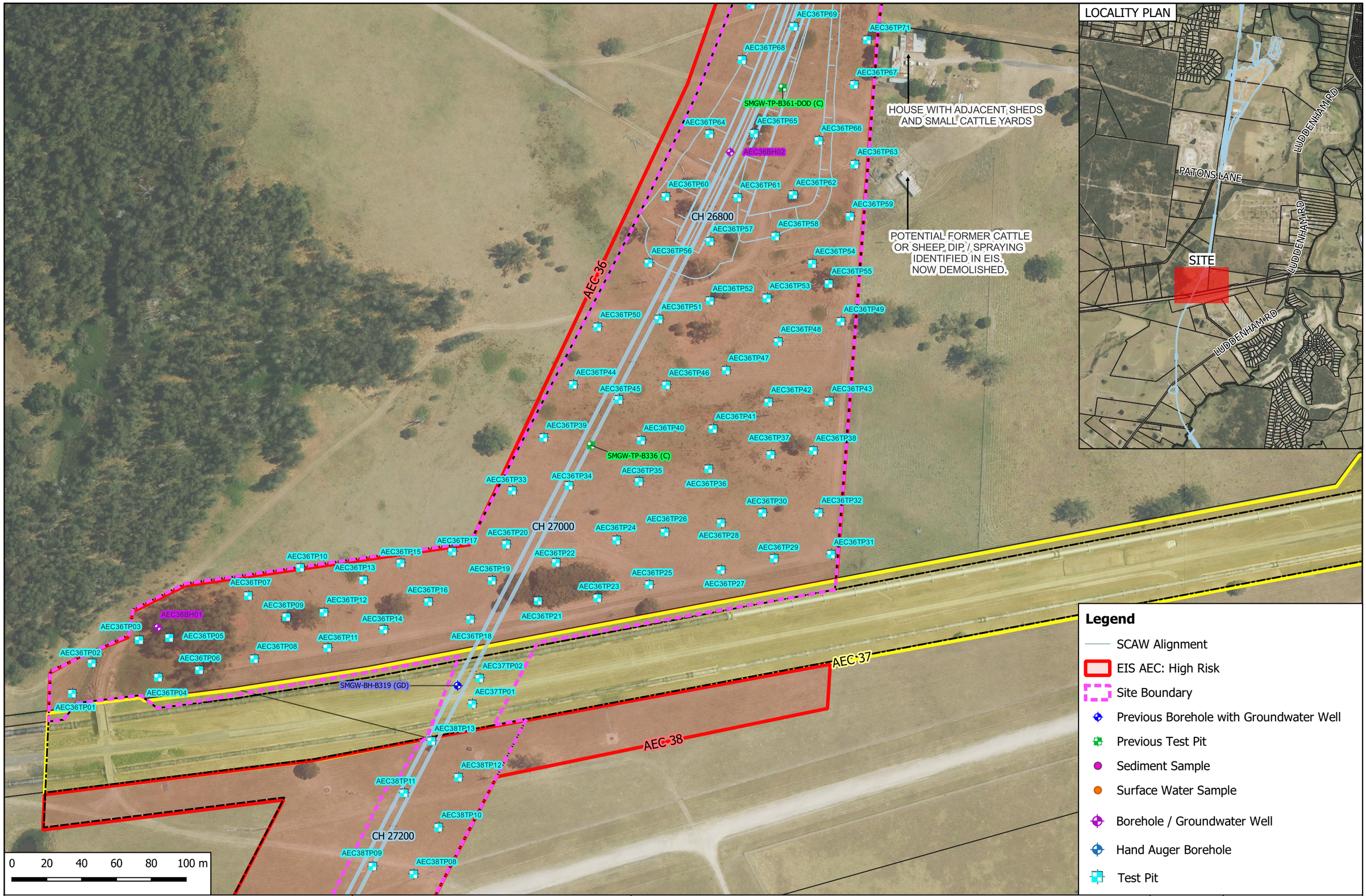
Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT:	CPBUI JV		
OFFICE:	Sydney	DRAWN BY:	MG
SCALE:	1:2000 @ A3	DATE:	20/03/2023

TITLE: **AEC36 Test Location Plan**
Sydney Metro Western Sydney Airport - SCAW
Stockdale Road, Orchard Hills

N

PROJECT No:	204814.01
DRAWING No:	AEC36-03
REVISION:	1



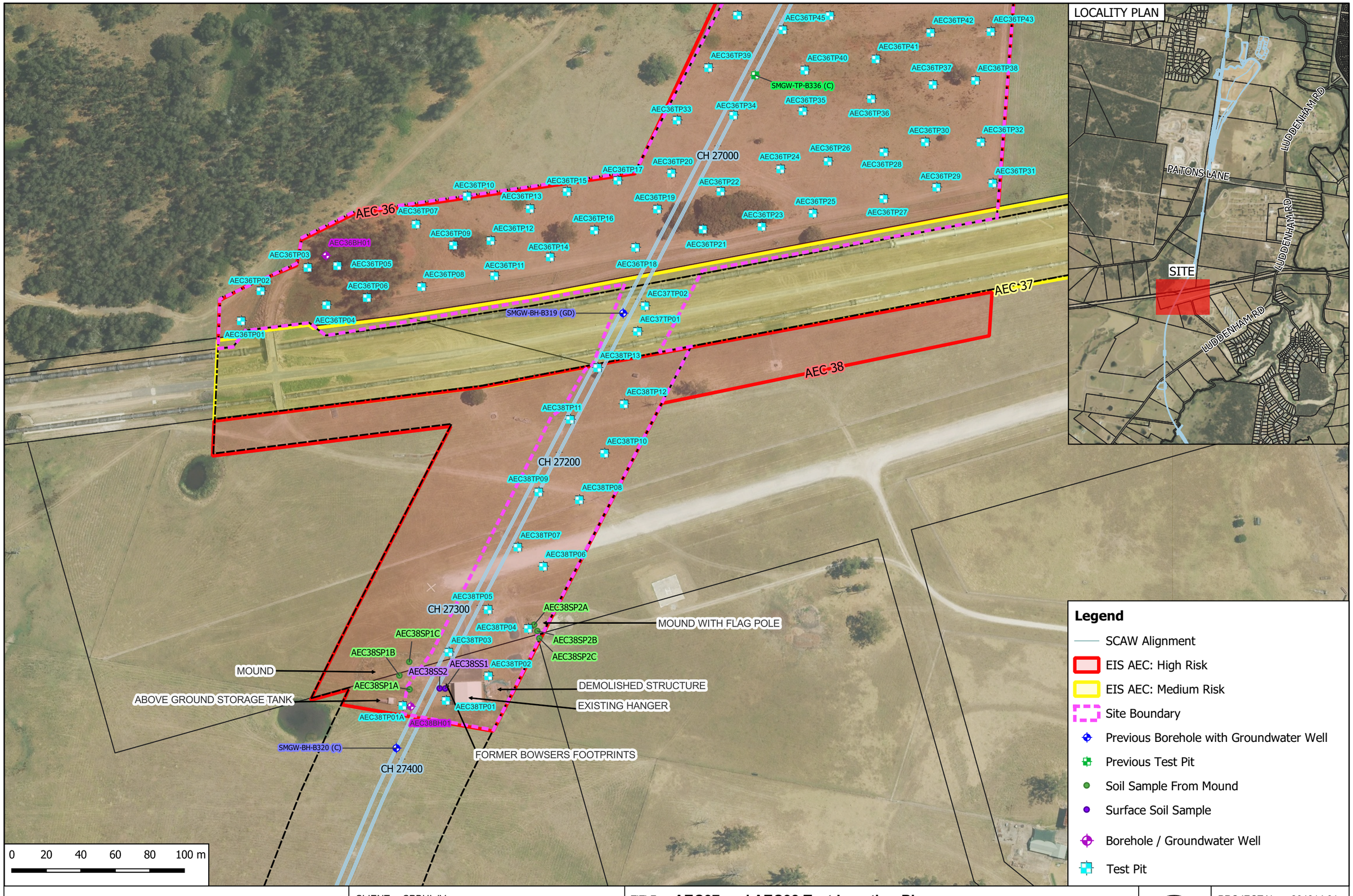
Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT:	CPBUI JV		
OFFICE:	Sydney	DRAWN BY:	MG
SCALE:	1:2000 @ A3	DATE:	17/02/2023

TITLE: **AEC36 Test Location Plan**
Sydney Metro Western Sydney Airport - SCAW
Stockdale Road, Orchard Hills

N

PROJECT No:	204814.01
DRAWING No:	AEC36-04
REVISION:	0



Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: CPBUI JV		TITLE:	**AEC37 and AEC38 Test Location Plan**
OFFICE: Sydney	DRAWN BY: MG		**Sydney Metro Western Sydney Airport - SCAW**
SCALE: 1:2000 @ A3	DATE: 17/02/2023		**Luddenham Road, Luddenham**

PROJECT No: 204814.01
DRAWING No: AEC37/38-01
REVISION: 0



Approximate Scale

Douglas Partners Geotechnics / Environment / Groundwater	**Location of Patons Lane Landfill** **Sydney Metro Western Sydney Airport-SCAW,** **Elizabeth Drive, Badgerys Creek**	PROJECT: 204814.01
		DWG No: L1
		REV: 0
	CLIENT: CPBUI JV	DATE: 20-Mar-23



Figure 3-1: Site establishment activities

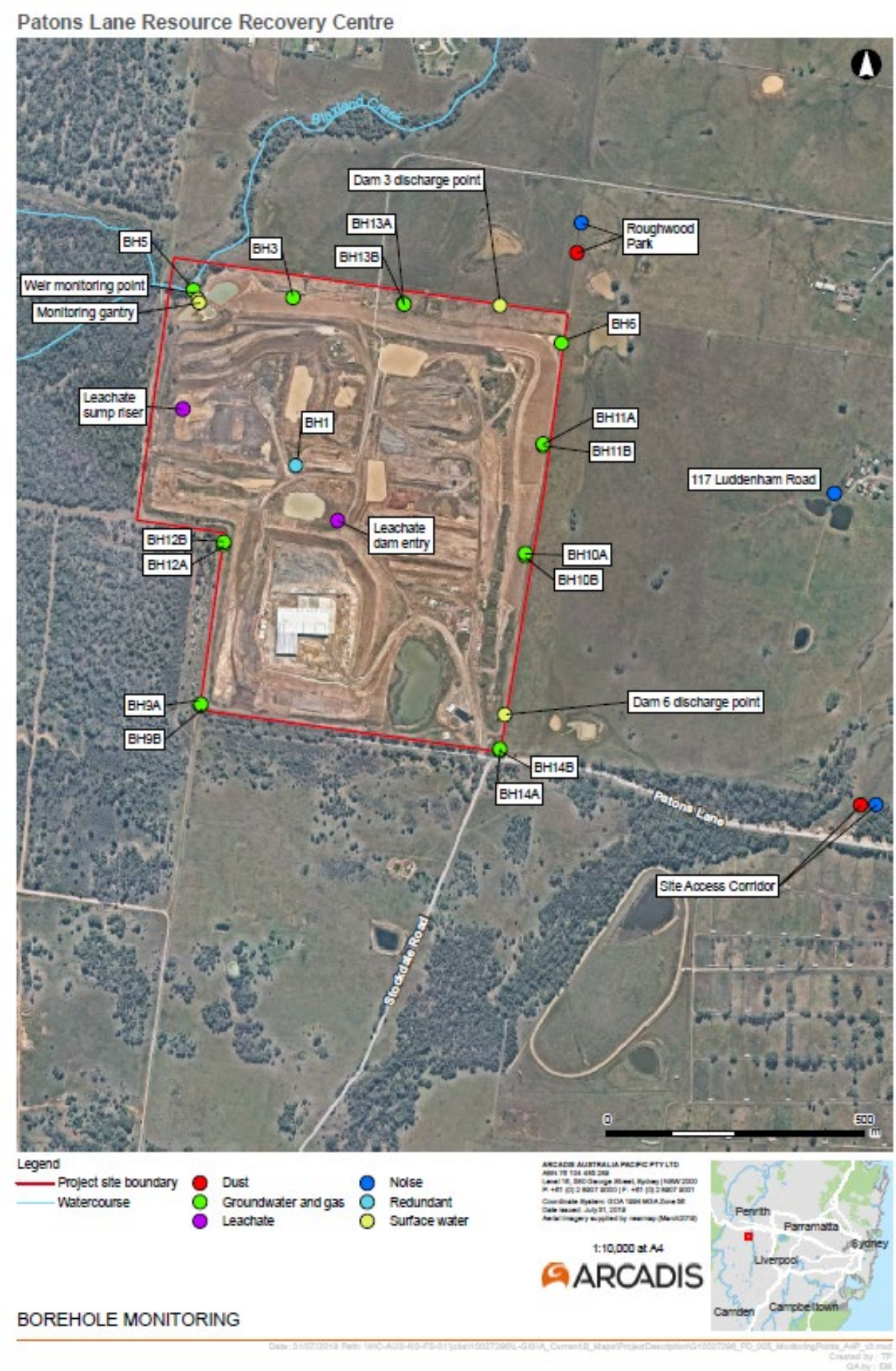


Figure 5-17: Environmental monitoring locations

Appendix B

About this Report

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.

Copyright

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

Borehole and Test Pit Logs

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

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

Groundwater

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

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

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

Reports

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

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

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

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

About this Report

Site Anomalies

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

Information for Contractual Purposes

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

Site Inspection

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

Appendix C

Previous Investigation Results

EXCAVATION - GEOLOGICAL LOG

PIT NO : SMGW-TP-B321 REV 1
FILE / JOB NO : 80021888
SHEET : 1 OF 1

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291528.578, N: 6255635.558 (56 MGA2020)	SURFACE ELEVATION : 38.319 (AHD)
EQUIPMENT TYPE : 4-6t Excavator	METHOD : 350mm Toothed Bucket
DATE EXCAVATED : 29/3/21	LOGGED BY : AT — CHECKED BY : TH/KP
EXCAVATION DIMENSIONS : 3.00 m LONG 1.00 m WIDE	

DRILLING | MATERIAL

DEPTH (m)	PENETRATION (VE E F H)	SUPPORT	GROUNDWATER LEVELS	SAMPLES & FIELD TESTS	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION (Soil Type, Colour, Plasticity or Particle Characteristic, Secondary and Minor Components)	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER kPa	DCP TEST (AS 1289.6.3.2-1997) Blows/100 mm	STRUCTURE & Other Observations
0.0		STABLE	Not Encountered	0.30m D 0.50m			FILL: SILTY CLAY: dark brown, low to medium plasticity, with fine-grained subangular gravel, with rootlets				1 1	TOPSOIL
							0.20m SILTY CLAY: pale grey, brown, medium to high plasticity				1 1	0.10: Non-calcareous POSSIBLE RESIDUAL SOIL
0.5						CI-CH		W	F		1 2	
				0.80m B 1.00m U					St		2 3 5 6 7	0.50: Non-calcareous
1.0											9 10	1.00: Non-calcareous
				1.30m D 1.40m			1.20m SILTY CLAY: orange-brown, pale grey, medium to high plasticity, with fine to medium grained ironstone gravel				8 7 7	
1.5				1.50m							9 12 12 12	1.50: Non-calcareous
				2.00m B D 2.30m		CI-CH		M	VSt to H		11 12 17 18 16	2.00: Non-calcareous
2.0				2.50m D			2.50m: with medium to coarse grained ironstone gravel				13 R 20	
2.5				2.90m		CI-CH	2.70m GRAVELLY CLAY: pale grey, red-brown, medium to coarse, medium to high plasticity, with fine to medium grained ironstone gravel 2.90m		H			
3.0							EXCAVATION SMGW-TP-B321 REV 1 TERMINATED AT 2.90 m Refusal					2.90: Non-calcareous
3.5												
4.0												
4.5												
5.0												

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

File: 80021888 SMGW-TP-B321 REV 1 1 OF 1

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA EXCAVATION 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:30 10.0.000 Cardno M6E

EXCAVATION - GEOLOGICAL LOG

PIT NO : SMGW-TP-B332 REV 1
FILE / JOB NO : 80021888
SHEET : 1 OF 1

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291435.165, N: 6255024.320 (56 MGA2020) | SURFACE ELEVATION : 42.468 (AHD)
EQUIPMENT TYPE : 4-6t Excavator | METHOD : 350mm Toothed Bucket
DATE EXCAVATED : 30/3/21 | LOGGED BY : AT | CHECKED BY : TH/KP
EXCAVATION DIMENSIONS : 3.00 m LONG 1.00 m WIDE

DRILLING | MATERIAL

DEPTH (m)	PENETRATION (VE E F H)	SUPPORT	GROUNDWATER LEVELS	SAMPLES & FIELD TESTS	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION (Soil Type, Colour, Plasticity or Particle Characteristic, Secondary and Minor Components)	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER kPa (100 200 300 400)	DCP TEST (AS 1289.6.3.2-1997) Blows/100 mm (5 10 15 20 25)	STRUCTURE & Other Observations
0.0		STABLE	Not Encountered	0.30m D			FILL: SILTY CLAY: dark brown, dark grey, low to medium plasticity, with fine to medium grained gravel, with rootlets				1	TOPSOIL
0.20m											1	0.10: Non-calcareous
				0.50m			SILTY CLAY: brown-orange, dark grey, medium to high plasticity, with fine to medium grained gravel				2	POSSIBLE RESIDUAL SOIL
0.5				0.60m B		CI-CH			F		2	0.50: Non-calcareous
0.90m											2	
1.0				1.00m U 1.20m		CI-CH	SILTY CLAY: pale grey, mottled orange-brown, medium to high plasticity, trace fine to medium grained gravel	W	St		3	1.00: Non-calcareous
1.5											5	
1.90m											7	
2.0				2.00m B D 2.20m		CI-CH	SILTY CLAY: pale grey, brown-red, medium to high plasticity, with fine to medium grained ironstone gravel		VSt		9	2.00: Non-calcareous
2.40m											14	
2.5				2.80m D		CL-CI	SANDY CLAY: pale grey, yellow, low to medium plasticity, with medium to coarse grained ironstone gravel 2.80m: with ironstone cobbles		H	E	15	
3.00m				3.00m			EXCAVATION SMGW-TP-B332 REV 1 TERMINATED AT 3.00 m Target depth				16	3.00: Non-calcareous
3.0												
3.5												
4.0												
4.5												
5.0												

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

File: 80021888 SMGW-TP-B332 REV 1 1 OF 1

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EXCAVATION - GEOLOGICAL LOG

PIT NO : SMGW-TP-B334 REV 1
FILE / JOB NO : 80021888
SHEET : 1 OF 1

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291414.161, N: 6254693.210 (56 MGA2020) | SURFACE ELEVATION : 49.995 (AHD)
EQUIPMENT TYPE : 4-6t Excavator | METHOD : 350mm Toothed Bucket
DATE EXCAVATED : 30/3/21 | LOGGED BY : AT | CHECKED BY : TH/KP
EXCAVATION DIMENSIONS : 3.00 m LONG 1.00 m WIDE

DRILLING | MATERIAL

DEPTH (m)	SAMPLES & FIELD TESTS	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION (Soil Type, Colour, Plasticity or Particle Characteristic, Secondary and Minor Components)	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER kPa	DCP TEST (AS 1289.6.3.2-1997) Blows/100 mm	STRUCTURE & Other Observations
0.0				FILL: SILTY CLAY: dark brown, dark grey, low to medium plasticity, with medium to coarse grained subangular gravel, with rootlets				3	TOPSOIL
0.20m								7	0.10: Non-calcareous
	0.30m D			FILL: SILTY CLAY: brown-orange, and pale grey, mottled dark brown, grey, red, medium to high plasticity, with medium to coarse grained gravel, with cobbles				5	FILL
0.5	**0.50m** B							8	
0.70m	0.80m D			SILTY CLAY: pale grey, brown-yellow, medium to high plasticity		St		5	
	1.00m U		CI-CH					8	0.50: Non-calcareous
1.0	1.20m							4	
	1.30m D							1	POSSIBLE RESIDUAL SOIL
1.40m	1.50m			SILTY CLAY: pale grey, brown-yellow, medium to high plasticity, with fine to medium grained ironstone gravel	W			3	
	1.60m B		CI-CH			VSt		3	1.00: Non-calcareous
1.5	1.80m D							3	
1.80m	2.00m			GRAVELLY CLAY: pale grey, brown-red, medium to high plasticity, with medium to coarse grained subangular gravel, with ironstone gravel				4	
2.0								6	2.00: Non-calcareous
	2.30m D		CI-CH			H		R	
	2.40m			2.30m: with ironstone cobbles					
	2.50m								
2.5									
2.70m				2.60m: with ironstone boulders					
				EXCAVATION SMGW-TP-B334 REV 1 TERMINATED AT 2.70 m Refusal					2.70: Non-calcareous
3.0									
3.5									
4.0									
4.5									
5.0									

SUPPORT: STABLE
GROUNDWATER LEVELS: Not Encountered
PENETRATION: VE E F H

PHOTOGRAPHS NOTES: ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
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CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

File: 80021888 SMGW-TP-B334 REV 1 1 OF 1

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EXCAVATION - GEOLOGICAL LOG

PIT NO : SMGW-TP-B335 REV 1
FILE / JOB NO : 80021888
SHEET : 1 OF 1

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291368.742, N: 6254671.429 (56 MGA2020) | SURFACE ELEVATION : 49.166 (AHD)
EQUIPMENT TYPE : 4-6t Excavator | METHOD : 350mm Toothed Bucket
DATE EXCAVATED : 30/3/21 | LOGGED BY : AT | CHECKED BY : TH/KP
EXCAVATION DIMENSIONS : 3.00 m LONG 1.00 m WIDE

DRILLING | MATERIAL

DEPTH (m)	SAMPLES & FIELD TESTS	GROUNDWATER LEVELS	SUPPORT	PENETRATION (VE E F H)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION (Soil Type, Colour, Plasticity or Particle Characteristic, Secondary and Minor Components)	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	DCP TEST (AS 1289.6.3.2-1997) Blows/100 mm	STRUCTURE & Other Observations
0.0							FILL: SILTY CLAY: dark brown, dark grey, low to medium plasticity, with fine to medium grained, angular to subangular gravel, with rootlets				1	TOPSOIL
0.20m											1	0.10: Non-calcareous
	0.30m D 0.50m						SILTY CLAY: brown-yellow, pale grey, medium to high plasticity, trace fine grained angular gravel	W			3 3 1	POSSIBLE RESIDUAL SOIL
0.5	0.60m B 0.80m D					CI-CH			F		2 1 1	0.50: Non-calcareous
0.80m											1 2	
1.0	1.00m U 1.20m					CL-CI	SILTY CLAY: pale grey, brown-yellow, mottled red, low to medium plasticity, with fine to coarse grained ironstone gravel		St		6 5 5	1.00: Non-calcareous
1.30m	1.30m D 1.50m	Not Encountered									10 14 10	
1.5	1.60m B						GRAVELLY CLAY: pale grey, brown-red, medium to high plasticity, with medium to coarse grained subangular gravel	M			9 10 15	
2.0						CI-CH			VSt to H		9 7 9	2.00: Non-calcareous
2.5	2.50m D 2.70m										11 10 12 13 11 12 12	
2.80m							EXCAVATION SMGW-TP-B335 REV 1 TERMINATED AT 2.80 m Refusal					2.80: Non-calcareous
3.0												
3.5												
4.0												
4.5												
5.0												

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

File: 80021888 SMGW-TP-B335 REV 1 1 OF 1

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA EXCAVATION 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:30 10.0.000 Cardno M6E

EXCAVATION - GEOLOGICAL LOG

PIT NO : SMGW-TP-B336 REV 1
FILE / JOB NO : 80021888
SHEET : 1 OF 1

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291249.487, N: 6254401.839 (56 MGA2020) | SURFACE ELEVATION : 46.888 (AHD)
EQUIPMENT TYPE : 4-6t Excavator | METHOD : 350mm Toothed Bucket
DATE EXCAVATED : 30/3/21 | LOGGED BY : AT | CHECKED BY : TH/KP
EXCAVATION DIMENSIONS : 3.00 m LONG 1.00 m WIDE

DRILLING | MATERIAL

DEPTH (m)	SAMPLES & FIELD TESTS	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION (Soil Type, Colour, Plasticity or Particle Characteristic, Secondary and Minor Components)	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER kPa	DCP TEST (AS 1289.6.3.2-1997) Blows/100 mm	STRUCTURE & Other Observations
0.0				FILL: SILTY CLAY: dark brown, dark grey, low to medium plasticity, with fine grained angular to subangular gravel, with rootlets				1	TOPSOIL
0.20m								1	0.10: Non-calcareous
	0.30m D 0.50m			SILTY CLAY: brown-orange, dark grey, medium to high plasticity, with fine to medium grained angular to subangular gravel				2	POSSIBLE RESIDUAL SOIL
0.5	0.70m B		CI-CH		W	F to St		2 3 3 3 2	0.50: Non-calcareous
1.00m	1.00m D 1.20m							3 3 4	
1.0			CI-CH	SILTY CLAY: pale grey, mottled brown-red, medium to high plasticity		St		3 4 4	1.00: Non-calcareous
1.30m				SANDY SILTY CLAY: pale grey, brown-orange, medium to high plasticity, with fine to medium grained ironstone gravel				8	
1.5	1.50m D 1.60m B 1.70m		CI-CH		M	VSt to H		15 11 14	
	1.90m D			1.80m: with medium to coarse grained gravel				R 20	
2.00m									
2.0	2.10m 2.20m		CI-CH	GRAVELLY CLAY: brown-red, pale grey, medium to coarse, medium to high plasticity, with fine to medium grained ironstone gravel		H			
2.20m				EXCAVATION SMGW-TP-B336 REV 1 TERMINATED AT 2.20 m Refusal					2.20: Non-calcareous
2.5									
3.0									
3.5									
4.0									
4.5									
5.0									

SUPPORT: STABLE
GROUND WATER LEVELS: Not Encountered
PENETRATION: VE E F H

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

File: 80021888 SMGW-TP-B336 REV 1 1 OF 1

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA EXCAVATION 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:30 10.0.000 Cardno M6E

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : SMGW-BH-B312 REV 1
FILE / JOB NO : 80021888
SHEET : 1 OF 4

PROJECT : SMWSA GI
LOCATION : Patons Ln Orchard Hills

POSITION : E: 291561.638, N: 6255941.579 (56 MGA2020) SURFACE ELEVATION : 41.865 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JG

DATE STARTED : 6/1/21 DATE COMPLETED : 7/1/21 DATE LOGGED : 6/1/21 LOGGED BY : SL CHECKED BY : KP

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA	N/A				0.0 41.9			FILL: SILTY CLAY: brown, orange, medium plasticity, with fine grained, sub-angular to angular gravel, trace sand, trace tile fragments			FILL 0.10: Non-calcareous
								0.40m			
				0.50m D				SILTY GRAVELLY CLAY: orange-brown, medium plasticity, fine to medium grained gravel, medium plasticity silt, with fine to coarse grained sand			POSSIBLE RESIDUAL SOIL 0.40: Non-calcareous
				1.00m SPT 8, 11, 11 N=22	1.0 40.9		CI	1.00m: with some ironstones			0.90: Non-calcareous 1.00: SPT Recovery: 0.45 m
				1.45m U							
								1.90m			
		F	Not Encountered	2.00m D	2.0 39.9		CL	SANDY CLAY: pale grey, low plasticity, fine grained sand	M	VSt	1.90: Non-calcareous
								2.40m			
AD/V				2.50m SPT 4, 8, 18 N=26				CLAYEY SILT: yellow-brown, pale grey, low to medium plasticity, with fine to coarse grained sand, trace fine grained ironstone gravel			2.50: Non-calcareous 2.50: SPT Recovery: 0.45 m
				2.95m D	3.0 38.9		ML				3.00: Non-calcareous
				4.00m				4.00m			
HW Casing		H		SPT 7, 8/65mm HB	4.0 37.9			SANDSTONE: recovered as CLAYEY SAND, fine to coarse grained, yellow brown, low to medium plasticity, with rock fragments, inferred very low strength			POSSIBLE WEATHERED MATERIAL 4.00: Non-calcareous 4.00: SPT Recovery: 0.215 m
				N=R 4.21m				4.21m Continued as Cored Drill Hole			
					5.0 36.9						
					6.0 35.9						
					7.0 34.9						
					8.0 33.9						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 14:53 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B312 REV 1
FILE / JOB NO : 80021888
SHEET : 2 OF 4

PROJECT : SMWSA GI
LOCATION : Patons Ln Orchard Hills

POSITION : E: 291561.638, N: 6255941.579 (56 MGA2020) SURFACE ELEVATION : 41.865 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JG

DATE STARTED : 6/1/21 DATE COMPLETED : 7/1/21 DATE LOGGED : 6/1/21 LOGGED BY : SL CHECKED BY : KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Step BIT CONDITION : Good

DRILLING						MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL -0.1 L -0.4 M -1.3 H -3.8 VH -12.5 EH	NATURAL FRACTURE (mm) 20 40 100 300 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
					0.0 *41.9*						
					1.0 *40.9*						
					2.0 *39.9*						
					3.0 *38.9*						
					4.0 *37.9*						
							4.21m START CORING AT 4.21m				
	Water LOSS	0% LOSS 4.50	0	SPT 7, 8/65mm HB N=R 4.21m			4.33m SANDSTONE: brown, fine grained	EW			4.21-4.33: EWS Clay 120 mm
		0% LOSS	80	Is(50) d=0.43 a=0.85 MPa			SANDSTONE: yellow-brown, grey, fine grained	SW			4.42: BP 5° Clay UN S 4.57: BP 0° CN PR S 4.70: BP 0° CN PR S
	0% Water LOSS			Is(50) d=0.5 a=1.15 MPa	5.0 *36.9*						4.94: BP 0° CN PR S 5.00: Non-calcareous 5.15: BP 0° CN PR S 5.20: BP 0° CN PR S 5.34: BP 0° CN PR S 5.42: JT 10° CN PR RF 5.55: JT 40° CN UN RF 5.61: BP 5° CN PR S 5.72: BP 5° CN PR S 5.76: BP 5° CN PR S
				UCS =20 MPa 6.00m							
HQ3 HW Casing		6.00 0% LOSS	90	Is(50) d=0.58 a=1.09 MPa	6.0 *35.9*						6.00: Non-calcareous 6.05: BP 5° Clay CU S 6.20: BP 10° Fe UN S 6.29: BP 0° CN PR S 6.44: BP 5° CN PR S 6.62-6.68: JT 10° Fe IR RF
	0% Water LOSS			UCS =90.9 MPa 7.20m			6.85m SANDSTONE: grey, fine grained, less than 5% carbonaceous laminations	F			6.85: BP 0° Fe PR S 7.00: Non-calcareous
				Is(50) d=4.6 a=5.33 MPa	7.0 *34.9*		7.50m: 5-15mm sub-rounded clasts				7.22: BP 15° Fe CU S 7.31: BP 10° Fe CU S
					8.0 *33.9*						7.83: BP 10° CN PR S

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B312 REV 1
FILE / JOB NO : 80021888
SHEET : 3 OF 4

PROJECT : SMWSA GI
LOCATION : Patons Ln Orchard Hills

POSITION : E: 291561.638, N: 6255941.579 (56 MGA2020) SURFACE ELEVATION : 41.865 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JG

DATE STARTED : 6/1/21 DATE COMPLETED : 7/1/21 DATE LOGGED : 6/1/21 LOGGED BY : SL CHECKED BY : KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Step BIT CONDITION : Good

DRILLING | MATERIAL | FRACTURES

PROGRESS: DRILLING & CASING; WATER; DRILL DEPTH; (CORE LOSS RUN %); RQD (%); SAMPLES & FIELD TESTS; DEPTH (m) RL (m AHD); GRAPHIC LOG; DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable); Weathering; ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL -0.1 L -0.4 M -1.3 H -3.8 VH -12.5 EH; NATURAL FRACTURE (mm) 20 40 100 300 1000; ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other

HW Casing — HQ3

0% Water LOSS — 30% Water LOSS — 10% Water LOSS — 0% Water LOSS — 0% Water LOSS

DRILL DEPTH	(CORE LOSS RUN %)	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	DESCRIPTION	Weathering
	0% LOSS	90		8.0 33.9	SANDSTONE: grey, fine grained, less than 5% carbonaceous laminations *(continued)*	F
9.03			Is(50) d=1.74 a=3.19 MPa	9.0 32.9		
	0% LOSS	90				
9.93			Is(50) d=2.04 a=2.02 MPa		9.79m	
	0% LOSS	105	Is(50) d=1.49 a=1.09 MPa	10.0 31.9	9.95m SANDSTONE: grey, fine grained, with 5-15mm sub-angular clasts	SW
					SILTSTONE: grey-dark grey, indistinctly bedded	
					10.30m SANDSTONE: grey, fine grained	
					10.62m	
			Is(50) d=0.32 a=0.5 MPa		SILTSTONE: dark grey, indistinctly bedded	
			Is(50) d=0.29 a=0.53 MPa	11.0 30.9	11.01m	
					SANDSTONE: grey to dark grey, fine grained, with 10-30mm rounded clasts	
11.87					11.25m INTERLAMINATED SILTSTONE (60%) AND SANDSTONE (40%): grey to dark grey siltstone, dark grey, fine grained sandstone	
	0% LOSS	80	Is(50) d=0.48 a=0.52 MPa	12.0 29.9	11.60m INTERBEDDED SANDSTONE (70%) AND SILTSTONE (70%)	SW
						EW
						SW
			Is(50) d=0.3 a=0.54 MPa			
			Is(50) d=0.32 a=0.7 MPa	13.0 28.9	13.60-13.64m: 5mm sub-angular clasts	
			UCS =15 MPa	14.0 27.9	14.00m: 20-30mm sub-rounded clasts	
			14.25m			
			Is(50) d=0.68 a=1.27 MPa		14.75m	
14.86					SILTSTONE: dark grey, indistinctly bedded, with less than 5% sandstone laminations	MW
	0% LOSS	40	Is(50) d=0.09 a=0.29 MPa	15.0 26.9		EW
			Is(50) d=0.05 a=0.31 MPa			MW
						EW
				16.0 25.9		

ADDITIONAL DATA
8.00: Non-calcareous
8.01: BP 10° CN PR S
8.20: BP 0° Clay UN S
8.73: BP 20° CN PR S
8.91: BP 15° CN PR S
9.00: Non-calcareous
8.93-9.31: JT 80 - 90° Fe UN RF Sub-vertical
9.48: BP 0° CN CU S
9.58: BP 0° CN CU S
9.79: BP 0° CN PR S
10.00: Non-calcareous
10.11: JT 45° CN PR S
10.31: BP 0° CN PR S
10.53: BP 0° CN PR S
10.65: BP 0° CN PR S
10.83: BP 15 - 25° UN S
10.95: BP 0° CN UN S
11.00: Non-calcareous
11.25: JT 0 - 30° CN IR RF
11.50: BP 0° CN PR S
11.70: BP 0° CN PR S
12.00: Non-calcareous
12.04-12.14: JT 45 - 90° CN IR RF
12.14-12.20: EWS Clay 60 mm
12.33-12.34: BP 0° Clay PR S
12.57: JT 25° CN PR S
12.68-13.12: BP 0° CN PR S 90mm to 170mm spacing
13.00: Non-calcareous
13.20: BP 0 - 5° CN UN S
13.34: BP 0° CN PR S
13.39-13.41: BP 0° Clay PR S
13.73: BP 5° CN UN S
13.86: JT 0 - 45° Clay IR S
14.00: Non-calcareous
14.26: BP 5° CN PR S
14.48: BP 0° CN PR S
14.54-14.57: BP 0 - 10° CN CU S
14.63: BP 5° CN PR S
14.72-14.74: BP 0° Clay PR RF
15.00: Non-calcareous
15.04: BP 0° CN PR S
15.13-15.20: SZ 70 mm
15.30-15.98: SZ 680 mm

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B312 REV 1
FILE / JOB NO : 80021888
SHEET : 4 OF 4

PROJECT : SMWSA GI
LOCATION : Patons Ln Orchard Hills

POSITION : E: 291561.638, N: 6255941.579 (56 MGA2020) SURFACE ELEVATION : 41.865 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JG

DATE STARTED : 6/1/21 DATE COMPLETED : 7/1/21 DATE LOGGED : 6/1/21 LOGGED BY : SL CHECKED BY : KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Step BIT CONDITION : Good

DRILLING						MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION: ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral: VL -0.1, L -0.4, M -1.3, H -3.8, VH -12.5, EH	NATURAL FRACTURE (mm): 20, 40, 100, 300, 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
HQ3 HW Casing	0% Water LOSS	0% LOSS 16.42	40		16.0 25.9		SILTSTONE: dark grey, indistinctly bedded, with less than 5% sandstone laminations *(continued)*	MW			16.00: Non-calcareous
		0% LOSS 18.00	67	Is(50) d=0.03 a=0.21 MPa	17.0 24.9			EW			16.32-16.42: EWS Clay 100 mm
				Is(50) d=0.33 a=0.43 MPa				MW			16.44-16.65: JT 60 - 90° CN IR RF Sub-vertical 16.65-16.69: BP 0° CN IR S 16.74: JT 30° CN PR S 16.89: JT 40° CN PR S 16.98: BP 5° CN UN S 17.00: Non-calcareous 17.01-17.10: JT 65° CN PR S 17.11: BP 0° CN PR S 17.16-17.18: EWS 20 mm 17.22: BP 5° CN UN S
							17.86m	SW			17.63-17.66: BP 0 - 15° CN CU S
		0% LOSS 19.94	69	Is(50) d=2.16 a=2.47 MPa	18.0 23.9		INTERLAMINATED AND INTERBEDDED SANDSTONE (50%) AND SILTSTONE (50%): grey, fine grained sandstone, dark grey siltstone	F			17.93-17.96: BP 10° CN IR RF 18.00: Non-calcareous 18.09: JT 10° CN IR RF 18.22: JT 15° CN CU RF 18.28-18.31: BP 0° Clay PR S 18.37: BP 0° CN UN S 18.40: BP 0° CN PR S 18.61: BP 5° CN PR S 18.64: BP 5° Clay PR S 18.83: BP 10° Clay CU S
	0% Water LOSS			Is(50) d=1.32 a=3.76 MPa	19.0 22.9						19.00: Non-calcareous 19.08: BP 10° CN PR S 19.17-19.32: BP 0° CN CU S 19.39: BP 10° CN CU S 19.49: BP 5° CN UN S 19.59: JT 40° CN CU S 19.70: BP 5° Clay PR S 19.80: BP 0° CN PR S
				Is(50) d=0.86 a=1.12 MPa			19.94m				
					20.0 21.9		BOREHOLE SMGW-BH-B312 REV 1 TERMINATED AT 19.94 m Target depth				
					21.0 20.9						
					22.0 19.9						
					23.0 18.9						
					24.0 17.9						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

File: 80021888 SMGW-BH-B312 REV 1 4 OF 4

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : **SMGW-BH-B313 REV 1**
FILE / JOB NO : 80021888
SHEET : 1 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291503.632, N: 6255514.163 (56 MGA2020) SURFACE ELEVATION : 38.896 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Geo 300 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : A

DATE STARTED : 31/3/21 DATE COMPLETED : 1/4/21 DATE LOGGED : 31/3/21 LOGGED BY : NL/AT CHECKED BY : TH/KP

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
AD/V	N/A	F	Not Encountered	0.50m D	0.0 38.9			FILL: SILTY CLAY: dark brown, low to medium plasticity, with rootlets			FILL
								0.20m			
								SILTY CLAY: brown grey mottled orange, medium to high plasticity			POSSIBLE RESIDUAL SOIL
							CI-CH			St	
								0.90m			
				1.00m SPT 5, 6, 7 N=13	1.0 37.9			SILTY CLAY: pale grey mottled brown, medium to high plasticity, trace fine grained sand	D		1.00: Non-calcareous
				1.45m			CI-CH			St	
				1.50m U							
								1.80m			
				1.90m			CI-CH	SILTY CLAY: brown mottled pale grey, medium to high plasticity, with fine to medium grained, ironstone gravel		VSt	
					2.0 36.9			2.10m			
								SANDY CLAY: pale grey, low to medium plasticity, fine to medium grained sand, with fine to medium grained, ironstone gravel			
				2.50m SPT 6, 13, 21 N=34			CL-CI		D		2.50: Non-calcareous
								2.80m			
HW Casing		H		2.95m	3.0 35.9			GRAVELLY CLAY: brown mottled pale grey, medium to high plasticity, medium to coarse grained, sub-angular to angular gravel, with medium to coarse grained, ironstone gravel		H	
							CI-CH				
								3.50m			
								Continued as Cored Drill Hole			
					4.0 34.9						
					5.0 33.9						
					6.0 32.9						
					7.0 31.9						
					8.0 30.9						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 14:53 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B313 REV 1
FILE / JOB NO : 80021888
SHEET : 2 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291503.632, N: 6255514.163 (56 MGA2020) SURFACE ELEVATION : 38.896 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Geo 300 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : A

DATE STARTED : 31/3/21 DATE COMPLETED : 1/4/21 DATE LOGGED : 31/3/21 LOGGED BY : NL/AT CHECKED BY : TH/KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Impreg BIT CONDITION : Good

DRILLING					MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL (-0.1) L (-0.4) M (-1.3) H (-3.8) VH (-12.5) EH	NATURAL FRACTURE (mm) 20 40 100 300 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
					0.0 / 38.9						
					1.0 / 37.9						
					2.0 / 36.9						
					3.0 / 35.9						
							3.50m START CORING AT 3.50m				
HQ	HW Casing	82% LOSS	0		4.0 / 34.9		CORE LOSS 1.90m (3.50-5.40)				
					5.0 / 33.9		5.40m				5.40: Non-calcareous
							GRAVEL: red-brown, medium to coarse gravel, sub-angular, with fine to medium grained sand, with clay	RS			
							5.66m 5.76m SILTY CLAY (CI-CH): pale grey, medium to high plasticity, with medium to coarse grained, sub-angular gravel	HW			
	10% Water LOSS	5.83						MW			
		0% LOSS	89		6.0 / 32.9		SILTSTONE: grey to dark grey, bedded at 0°, 1-3mm spacing with sandstone lamination, trace sandstone clast up to 20mm, iron stained				6.10: BP 10° CN IR RF 6.20: Non-calcareous
	10% Water LOSS	6.30									6.33-6.36: EWS 30 mm
		0% LOSS	85	Is(50) d=0.27 a=0.31 MPa			6.57m				6.50: Non-calcareous
							INTERLAMINATED SILTSTONE (60%) AND SANDSTONE (40%): grey to dark grey siltstone, pale grey, fine to medium grained sandstone, bedded at 0°, 2-10mm spacing 6.80-7.08m: becoming undulating laminations	SW			6.90: Non-calcareous
	5% Water LOSS			Is(50) d=0.31 a=0.61 MPa	7.0 / 31.9						7.08: BP 0° CN IR RF 7.20: Non-calcareous 7.36: BP 0° CN PR RF
							7.48m SILTSTONE: grey to dark grey, bedded at 0°, trace sandstone laminations				
							7.87-7.92m: becoming pale grey	MW			7.85: BP 0° PR RF 7.90: Non-calcareous
					8.0 / 30.9						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B313 REV 1
FILE / JOB NO : 80021888
SHEET : 3 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291503.632, N: 6255514.163 (56 MGA2020) SURFACE ELEVATION : 38.896 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Geo 300 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : A

DATE STARTED : 31/3/21 DATE COMPLETED : 1/4/21 DATE LOGGED : 31/3/21 LOGGED BY : NL/AT CHECKED BY : TH/KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Impreg BIT CONDITION : Good

DRILLING					MATERIAL			FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION: ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral: VL -0.1, L -0.4, M -1.3, H -3.8, VH -12.5, EH	NATURAL FRACTURE (mm): 20, 40, 100, 300, 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
HQ	5% Water LOSS	0% LOSS 9.09	85	Is(50) d=0.23 a=0.18 MPa	8.0 30.9		SILTSTONE: grey to dark grey, bedded at 0°, trace sandstone laminations *(continued)*	SW EW MW			8.05-8.12: EWS 70 mm 8.10: Non-calcareous 8.18-8.19: SM 0° sandy gravel, X CT PR S 10 mm 8.26: BP 30° sandy gravel CT IR RF 2 mm 8.33: BP 40° X CT IR RF 8.53: BP 10° Clay VNR PR RF 8.60: Non-calcareous 8.72-8.80: EWS 80 mm
							8.38m INTERLAMINATED SILTSTONE (60%) AND SANDSTONE (40%): grey to dark grey siltstone, pale grey, fine to medium grained sandstone, irregular lamination and spacing	EW SW			
		0% LOSS 12.19	95	Is(50) d=0.76 a=0.93 MPa Is(50) d=1.84 a=3.46 MPa Is(50) d=0.32 a=0.28 MPa Is(50) d=5.98 a=3.59 MPa Is(50) d=6.97 a=5.81 MPa Is(50) d=0.19 a=0.58 MPa	9.0 29.9 10.0 28.9 11.0 27.9 12.0 26.9		9.60m SANDSTONE: pale grey to grey, fine grained, laminated at 0°, undulating to irregular, with siltstone laminations 10.26m SILTSTONE: grey to dark grey, bedded at 0°, trace sandstone laminations 10.82m SANDSTONE: pale grey to grey, fine grained, undulating to irregular 11.00m SANDSTONE: grey to dark grey, fine grained, bedded at 5°, with siltstone laminations 12.20m	F SW HW SW F SW			9.20: Non-calcareous 9.45: BP 5° Sandy Clay VNR PR RF 9.70: Calcareous 10.10: Calcareous 10.36: BP 5° Sandy Clay VNR IR RF 10.37-10.38: EWS Sandy Clay 10 mm 10.39-10.41: EWS Sandy Clay 20 mm 10.50: Non-calcareous 10.56: BP 10° Sandy Clay VNR PR RF 10.80: BP 5° CN IR RF 10.90: Calcareous 11.20: Calcareous 11.50: Non-calcareous 11.43-11.60: BP 0° Sandy Clay VNR PR RF 11.69: JT 40° Sandy Clay VNR PR RF 11.84: BP 0° Sandy Clay VNR PR RF 12.07: BP 5° PR Healed
		0% LOSS 15.20	94	Is(50) d=0.33 a=0.95 MPa Is(50) d=0.57 a=0.74 MPa Is(50) d=0.71 a=1.08 MPa Is(50) d=0.48 a=1.2 MPa Is(50) d=0.54 a=1.14 MPa	13.0 25.9 14.0 24.9 15.0 23.9		SILTSTONE: grey to dark grey, bedded at 15°, trace sandstone lamination 13.31m SANDSTONE: grey to dark grey, fine to medium grained, bedded at 0°, with siltstone lamination 15.16m	SW			12.30: Non-calcareous 12.80: Non-calcareous 13.10: JT 0° Sandy Clay VNR PR RF 13.15: BP 10° Sandy Clay VNR PR RF 13.50: Non-calcareous 14.10: Non-calcareous 14.50: Non-calcareous 14.70: Non-calcareous 14.90: JT 45° CN PR RF Closed, in-situ 15.10: Non-calcareous
		0% LOSS	98	Is(50) d=1.01 a=0.63 MPa	16.0 22.9		SANDSTONE: pale grey, medium grained, laminated at 0°, with siltstone laminations, trace carbonaceous laminations 15.63m SILTSTONE: dark grey, trace sandstone laminations, trace siltstone clasts up to 40mm				15.42: BP 5° CN PR RF 15.50: Non-calcareous 15.63: BP 10° Clayey Sand VNR IR RF 15.70: Non-calcareous

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B313 REV 1
FILE / JOB NO : 80021888
SHEET : 4 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291503.632, N: 6255514.163 (56 MGA2020) SURFACE ELEVATION : 38.896 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Geo 300 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : A

DATE STARTED : 31/3/21 DATE COMPLETED : 1/4/21 DATE LOGGED : 31/3/21 LOGGED BY : NL/AT CHECKED BY : TH/KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Impreg BIT CONDITION : Good

DRILLING						MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL -0.1 L -0.4 M -1.3 H -3.8 VH -12.5 EH	NATURAL FRACTURE (mm) 20 40 100 300 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
HQ	5% Water LOSS	0% LOSS	98	Is(50) d=0.62 a=0.94 MPa Is(50) d=0.64 a=1.32 MPa Is(50) d=0.58 a=1.26 MPa Is(50) d=0.56 a=0.83 MPa Is(50) d=0.27 a=0.85 MPa	16.0 22.9		16.19m INTERLAMINATED SANDSTONE (50%) AND SILTSTONE (50%): pale grey, medium grained sandstone, dark grey, brown siltstone, laminated at 0°. 1-5mm spacing 16.81m INTERLAMINATED SILTSTONE (60%) AND SANDSTONE (40%): dark grey, brown siltstone, grey to dark grey, medium grained sandstone, laminated at 0-5°, 5-20mm spacing, irregular to undulating laminations, trace carbonaceous laminations	SW			16.04: BP 0° X VNR IR RF 16.34: BP 0° CN PR RF 16.50: Calcareous 16.55: BP 0° CN PR RF 16.70: BP 0° Sandy Clay CT PR RF 1 mm 16.91: BP 5° CN CU RF 17.10: Non-calcareous 17.19: JT 5° CN PR RF 17.45: JT 35° CN PR RF 17.50: Non-calcareous
					17.0 21.9						
					18.0 20.9		18.21m SILTSTONE: grey to dark grey, trace sandstone laminations, trace carbonaceous laminations 18.60-18.90m: becoming pale grey				17.90-17.94: EWS 40 mm 18.20: Non-calcareous 18.40: Non-calcareous 18.85: BP 0° Sandy Clay VNR IR RF 18.90: Non-calcareous 18.92: BP 0° Sandy Clay VNR IR RF Evidence of shearing 19.10: Non-calcareous
	18.25										
	5% Water LOSS	0% LOSS	76	Is(50) d=1.22 a=1.16 MPa Is(50) d=0.98 a=1.11 MPa	19.0 19.9		19.16m INTERLAMINATED SANDSTONE (80%) AND SILTSTONE (20%): grey to dark grey, fine to medium grained sandstone, dark grey siltstone, laminated at 0-5°, 2-20mm spacing	F EW F			19.53-19.58: CS 50 mm 19.65-19.69: CS Sandy Clay with gravel 40 mm 19.72: JT 50° CN IR RF 19.75: JT 40° CN IR RF 19.77: BP 0° Sandy Clay VNR IR RF 19.85: JT 20° Sandy Clay VNR IR RF 19.90: Non-calcareous
		20.05			20.0 18.9		20.06m BOREHOLE SMGW-BH-B313 REV 1 TERMINATED AT 20.06 m Target depth				
					21.0 17.9						
					22.0 16.9						
					23.0 15.9						
					24.0 14.9						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : **SMGW-BH-B317 REV 1**
FILE / JOB NO : 80021888
SHEET : 1 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291440.316, N: 6254935.210 (56 MGA2020) SURFACE ELEVATION : 44.228 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JI

DATE STARTED : 30/3/21 DATE COMPLETED : 31/3/21 DATE LOGGED : 30/3/21 LOGGED BY : SL CHECKED BY : TH/KP

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
SFA HW Casing	N/A	E-F	Not Encountered	1.00m SPT 2, 3, 4 N=7	0.0 44.2			FILL: CLAYEY SILT: brown to dark brown, low plasticity, trace rootlets			FILL
								0.20m SILTY CLAY: brown-orange, brown red, medium plasticity, trace fine to medium grained, sub-rounded, ironstone gravel			POSSIBLE RESIDUAL SOIL
								0.60m: becoming pale grey, red, orange			
					1.0 43.2		CI		M	F	1.00: Non-calcareous
				1.45m 1.50m U							
								1.80m SILTY CLAY: pale brown-yellow, grey, low plasticity			
				1.90m 2.00m D	2.0 42.2		CL			St to VSt	1.90: Shear Vane: >207 kPa
		H		2.50m SPT 6, 16/90mm HB N=R 2.74m				2.79m		H	2.50: Non-calcareous
								Continued as Cored Drill Hole			
					3.0 41.2						
					4.0 40.2						
					5.0 39.2						
					6.0 38.2						
					7.0 37.2						
					8.0 36.2						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 14:53 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B317 REV 1
FILE / JOB NO : 80021888
SHEET : 2 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291440.316, N: 6254935.210 (56 MGA2020) SURFACE ELEVATION : 44.228 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JI

DATE STARTED : 30/3/21 DATE COMPLETED : 31/3/21 DATE LOGGED : 30/3/21 LOGGED BY : SL CHECKED BY : TH/KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Impreg BIT CONDITION : Good

DRILLING					MATERIAL			FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION: ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral: VL -0.1, L -0.4, M -1.3, H -3.8, VH -12.5, EH	NATURAL FRACTURE (mm): 20, 40, 100, 300, 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
					0.0 *44.2*						
					1.0 *43.2*						
					2.0 *42.2*						
							2.79m START CORING AT 2.79m				
HQ	0% Water LOSS	0% LOSS 3.13	97	Is(50) d=0.03 a=0.22 MPa	3.0 *41.2*		SANDSTONE: brown-yellow, fine grained, 10% siltstone laminations at 0-10°, iron stained	MW			2.90: Non-calcareous 2.90-2.91: EWS Clay 10 mm
	0% Water LOSS	0% LOSS	31								3.20: Non-calcareous 3.19-3.31: BP 0° CN PR S 3.32-3.41: JT 70 - 90° Fe UN RF 3.42: BP 0° Clay PR S 3.42-3.49: JT 40 - 90° Fe IR RF 3.60: Non-calcareous 3.66-3.74: EWS Clay 80 mm 3.77: BP 0° Fe PR S
				Is(50) d=0.02 a=0.1 MPa	4.0 *40.2*			HW EW MW HW MW			3.92: JT 20° Fe PR S 4.00: JT 30° Fe PR S 4.07: JT 15° Clay IR RF 4.20: Non-calcareous 4.28: BP 5° Fe ST RF
				Is(50) d=0.06 a=0.17 MPa Is(50) d=0.34 a=0.98 MPa			4.71-4.83m: fine to medium grained	HW MW			4.68-4.70: EWS Clay 20 mm 4.80: Calcareous
					5.0 *39.2*		5.32m	HW			5.10: Non-calcareous
				Is(50) d=0.06 a=0.12 MPa			SANDSTONE: grey, fine grained, 10-15% carbonaceous and dark grey siltstone laminations and bands at 0-10° 5.63-5.81m: iron stained	MW HW MW			5.60: Non-calcareous 5.65-5.66: EWS Clay 10 mm 5.77: BP 10° Clay, Fe PR S 5.90: Non-calcareous 5.95-5.99: BP 10° Clay PR S
	0% Water LOSS	6.04 0% LOSS	87	Is(50) d=0.1 a=0.19 MPa	6.0 *38.2*						6.14: BP 5° CN PR S 6.20: Non-calcareous 6.30: BP 10° CN PR S
				UCS =3.5 MPa 7.00m							6.46-6.48: EWS Clay 20 mm 6.50: BP 5° CN PR S 6.55: BP 5° Clay PR S 6.70: Non-calcareous 6.73: BP 5° CN PR S 6.78: BP 0° CN PR S
				Is(50) d=0.03 a=0.17 MPa	7.0 *37.2*		7.02-7.39m: carbonaceous band				7.00: BP 10° CN PR S 7.13: BP 5° CN PR S 7.33: BP 10° CN PR S 7.36: BP 5° CN PR S 7.50: Calcareous 7.66: BP 10° CN PR S 7.94: BP 10° CN PR S
					8.0 *36.2*						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B317 REV 1
FILE / JOB NO : 80021888
SHEET : 3 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291440.316, N: 6254935.210 (56 MGA2020) SURFACE ELEVATION : 44.228 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JI

DATE STARTED : 30/3/21 DATE COMPLETED : 31/3/21 DATE LOGGED : 30/3/21 LOGGED BY : SL CHECKED BY : TH/KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Impreg BIT CONDITION : Good

DRILLING						MATERIAL			FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	NATURAL FRACTURE (mm)	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
HQ	0% Water LOSS	0% LOSS 9.06	87	Is(50) d=0.17 a=0.41 MPa	8.0 36.2		SANDSTONE: grey, fine grained, 10-15% carbonaceous and dark grey siltstone laminations and bands at 0-10° *(continued)* 8.29-8.62m: carbonaceous band	MW		8.08: BP 10° CN PR S 8.20: Non-calcareous 8.30: BP 10° CN PR S 8.48: BP 10° CN PR S 8.70: BP 5° CN PR S 8.70: Non-calcareous 8.72-8.73: EWS Clay 10 mm 8.77: BP 10° CN PR S 8.98: JT 10° Clay IR S
	0% Water LOSS	0% LOSS	73	Is(50) d=0.12 a=0.4 MPa	9.0 35.2		9.30-9.43m: 10mm rounded to sub-rounded siltstone clasts	EW MW		9.20: Non-calcareous 9.26: BP 5° CN UN S 9.45: BP 0° CN PR S 9.50: Calcareous 9.52: BP 0° CN PR S 9.54-9.60: CS 60 mm
					10.0 34.2		10.03m SILTSTONE: grey to dark grey, indistinctly bedded, less than 5% grey, fine grained sandstone laminations at 0-10°			9.80: Non-calcareous 9.92: BP 10° CN PR S 10.03: JT 0° CN PR S 10.20: Calcareous
	0% Water LOSS			Is(50) d=0.19 a=0.21 MPa						10.50: Non-calcareous 10.63-10.67: CS Clay, Gravel 40 mm
					11.0 33.2					10.90: Non-calcareous 10.91: BP 0° CN PR S 11.06: BP 0° Clay PR S
				UCS =1.1 MPa 11.34m						
				Is(50) d=0.12 a=0.17 MPa Is(50) d=0.06 a=0.07 MPa			11.44-11.63m: grey 11.63-11.81m: dark grey	HW		11.50: Non-calcareous
		12.02					11.93m			11.84-11.87: CS 30 mm
		0% LOSS	50		12.0 32.2		SANDSTONE: grey, fine grained, less than 5% carbonaceous laminations at 0-10°	MW SW		12.12: BP 0° CN PR S
				Is(50) d=0.61 a=0.85 MPa			12.43m SILTSTONE: grey to dark grey, indistinctly bedded, less than 5% grey, fine grained sandstone laminations at 0-10°	MW		12.40: Calcareous 12.49: JT 5° Clay CU S
	0% Water LOSS							HW EW HW MW HW MW EW MW		12.80: Non-calcareous 12.84: BP 0° CN PR S 12.89-13.09: EWS Clay 200 mm 13.30: Non-calcareous 13.58-13.66: SM Clay, Silt, Gravel 80 mm 13.80: Non-calcareous
				Is(50) d=0.09 a=0.14 MPa	13.0 31.2					
				Is(50) d=0.09 a=0.17 MPa	14.0 30.2		14.10-14.35m: dark grey	HW		14.24: BP 5° Clay PR S 14.30: Non-calcareous
		15.04		Is(50) d=0.05 a=0.13 MPa						14.78: BP 0° Clay PR S 14.90: Non-calcareous
	0% Water LOSS	0% LOSS	70		15.0 29.2			MW		15.17: JT 30° CN PR S 15.20: Non-calcareous 15.42: BP 0° CN PR S
				Is(50) d=0.09 a=0.21 MPa	16.0 28.2					15.66: BP 0° CN UN S 15.70: Non-calcareous 15.88: BP 5° CN PR S

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B317 REV 1
FILE / JOB NO : 80021888
SHEET : 4 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291440.316, N: 6254935.210 (56 MGA2020) SURFACE ELEVATION : 44.228 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JI

DATE STARTED : 30/3/21 DATE COMPLETED : 31/3/21 DATE LOGGED : 30/3/21 LOGGED BY : SL CHECKED BY : TH/KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Impreg BIT CONDITION : Good

DRILLING						MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL (-0.1) L (-0.4) M (-1.3) H (-3.8) VH (-12.5) EH	NATURAL FRACTURE (mm) 20 40 100 300 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
HQ	0% Water LOSS	0% LOSS 18.02	70	Is(50) d=0.04 a=0.12 MPa Is(50) d=0.02 a=0.4 MPa	16.0 28.2		SILTSTONE: grey to dark grey, indistinctly bedded, less than 5% grey, fine grained sandstone laminations at 0-10° *(continued)*	MW			16.00: BP 0° CN PR S 16.20: BP 0° CN PR S 16.41: BP 0° X PR S 16.50: Non-calcareous 16.68-16.86: BP 0° CN PR S 16.87-16.91: EWS Clay 40 mm
					17.0 27.2		17.01m SILTSTONE: dark grey, indistinctly bedded, 5% grey, fine grained sandstone laminations at 0-5°	HW MW			17.03-17.05: BP 5° Clay PR S 17.16: BP 0° Clay PR S 17.30: Non-calcareous 17.35: BP 10° Clay PR S 17.46-17.51: JT 85° Healed 17.60: BP 5° Coal PR S 17.60-17.68: JT 90° CN PR RF 17.69: BP 5° CN PR S
	0% Water LOSS	0% LOSS 20.12	65	Is(50) d=0.12 a=0.05 MPa Is(50) d=0.16 a=0.28 MPa Is(50) d=0.13 a=0.15 MPa	18.0 26.2		18.46m SILTSTONE: grey to dark grey, indistinctly bedded, 5-10% grey, fine grained sandstone laminations at 0-5°	EW MW			17.90: Non-calcareous 17.93-18.02: JT 80 - 90° CN IR RF 18.02-18.07: CS 50 mm 18.20: Non-calcareous 18.17-18.32: JT 80° CN PR RF 18.35: BP 0° CN PR S 18.37-18.38: CS 10 mm 18.66: JT 20° CN UN S 18.70: Non-calcareous 18.75-18.76: CS 10 mm
					19.0 25.2		19.65-19.89m: dark grey 19.90m	MW HW MW			18.94: BP 0° CN PR S 19.20: Non-calcareous 19.25: BP 0° CN PR S 19.48: BP 0° CN PR S 19.70: Calcareous 19.73-19.76: BP 0° CN PR S 19.89: BP 0° Clay PR S
					20.0 24.2		20.12m SILTSTONE: grey to dark grey, indistinctly bedded				20.05-20.09: BP 5° CN PR RF
							BOREHOLE SMGW-BH-B317 REV 1 TERMINATED AT 20.12 m Target depth				
					21.0 23.2						
					22.0 22.2						
					23.0 21.2						
					24.0 20.2						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

File: 80021888 SMGW-BH-B317 REV 1 4 OF 4

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : SMGW-BH-B318 REV 1
FILE / JOB NO : 80021888
SHEET : 1 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291313.476, N: 6254557.843 (56 MGA2020) SURFACE ELEVATION : 48.017 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JI

DATE STARTED : 29/3/21 DATE COMPLETED : 30/3/21 DATE LOGGED : 29/3/21 LOGGED BY : SL CHECKED BY : TH/KP

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
	N/A				0.0 48.0			0.15m FILL: CLAYEY SILT: brown, low plasticity, trace fine grained, angular gravel			FILL
								SILTY CLAY: brown-red, medium to high plasticity, with ironstones			POSSIBLE RESIDUAL SOIL
				1.00m SPT 3, 7, 6 N=13	1.0 47.0		CI-CH			F to St	1.00: Non-calcareous
				1.45m				1.70m SILTY CLAY: pale grey, brown-yellow, high plasticity, with ironstones			
SFA		E-F	Not Encountered	2.00m U	2.0 46.0				M		
HW Casing				2.40m							2.40: Shear Vane at U75 failed, unable to push in due to ironstones
				2.50m SPT 6, 7, 6 N=13			CH			St	2.50: Non-calcareous
				2.95m	3.0 45.0						
				3.20m D							
				3.70m				3.60m SILTY CLAY: brown-red, pale grey, low plasticity, with ironstones		St to VSt	
				4.00m SPT 4, 13, 20 N=33	4.0 44.0		CL				4.00: Non-calcareous
				4.45m			CL	4.20m SILTY CLAY: grey, low plasticity, rock fabrics visible		H	POSSIBLE WEATHERED MATERIAL
								4.40m 4.45m SILTSTONE: recovered as SILTY CLAY, dark grey, low plasticity, inferred as very low strength rock			
								Continued as Cored Drill Hole			
					5.0 43.0						
					6.0 42.0						
					7.0 41.0						
					8.0 40.0						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 14:54 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B318 REV 1
FILE / JOB NO : 80021888
SHEET : 2 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291313.476, N: 6254557.843 (56 MGA2020) SURFACE ELEVATION : 48.017 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JI

DATE STARTED : 29/3/21 DATE COMPLETED : 30/3/21 DATE LOGGED : 29/3/21 LOGGED BY : SL CHECKED BY : TH/KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Impreg BIT CONDITION : Good

DRILLING					MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL (-0.1) L (-0.4) M (-1.3) H (-3.8) VH (-12.5) EH	NATURAL FRACTURE (mm) 20 40 100 300 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
					0.0 / 48.0						
					1.0 / 47.0						
					2.0 / 46.0						
					3.0 / 45.0						
					4.0 / 44.0						
							4.45m START CORING AT 4.45m				
HW Casing	0% Water LOSS	0% LOSS	0		5.0 / 43.0		CLAY (CL): brown-red, yellow, pale grey, grey, low plasticity	RS			4.70: Non-calcareous
							5.11m				
							SANDSTONE: pale grey to grey, brown-yellow, brown-orange, fine grained, iron stained	EW HW			5.11-5.18: CS Fe 70 mm 5.30: Non-calcareous 5.50: Non-calcareous
				Is(50) d=0.02 a=0.04 MPa							5.77: JT 20° Fe IR RF 5.80: Non-calcareous
		6.00									
HQ		0% LOSS	40		6.0 / 42.0			EW MW			5.93-6.00: CS 70 mm 6.00-6.07: JT 90° Fe UN S 6.10: Non-calcareous 6.18: JT 50° Fe IR S
				Is(50) d=0.04 a=0.05 MPa							6.39: JT 30° Fe PR S
							6.70m	HW			6.50: Non-calcareous 6.50-6.69: JT 75 - 85° Fe PR S
	0% Water LOSS						SILTSTONE: brown-yellow, grey, indistinctly bedded, iron stained				6.82: JT 25° Fe CU S 6.82-6.90: JT 45 - 90° Fe CU S 6.71-7.09: JT 80 - 90° Fe CU S 6.90: Non-calcareous
					7.0 / 41.0			EW MW			7.09-7.11: SM Clay, Fe 20 mm 7.15-7.22: EWS Clay 70 mm 7.30: Non-calcareous
				Is(50) d=0.06 a=0.03 MPa				HW			
							7.77m 7.70m: 40mm rounded sandstone clast 7.79-7.85m: 5-10mm sub-rounded to sub-angular siltstone clasts				7.80: Non-calcareous
					8.0 / 40.0						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B318 REV 1
FILE / JOB NO : 80021888
SHEET : 3 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291313.476, N: 6254557.843 (56 MGA2020) SURFACE ELEVATION : 48.017 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JI

DATE STARTED : 29/3/21 DATE COMPLETED : 30/3/21 DATE LOGGED : 29/3/21 LOGGED BY : SL CHECKED BY : TH/KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Impreg BIT CONDITION : Good

DRILLING					MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	NATURAL FRACTURE (mm)	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
					8.0 40.0		8.12m: 7.93m: 20mm rounded siltstone clast, coal lens SANDSTONE: brown-yellow, grey, fine grained, 5% carbonaceous laminations at 0-5°, iron stained *(continued)*	MW HW		8.12: BP 5° Clay PR S 8.20-8.40: JT 90° Healed 8.30: Non-calcareous
	0% Water LOSS	0% LOSS 8.92	40	Is(50) d=0.16 a=0.15 MPa Is(50) d=0.11 a=0.1 MPa			SILTSTONE: grey, dark grey, indistinctly bedded, 5% grey, fine grained, iron stained sandstone laminations at 0-10°, iron stained 8.86m	MW HW		8.54-8.56: EWS Clay 20 mm 8.70: Non-calcareous 8.70-8.80: JT 75° Fe Healed 8.90: Non-calcareous
	0% Water LOSS	0% LOSS 12.04	30	Is(50) d=0.11 a=0.1 MPa	9.0 39.0		SANDSTONE: pale grey to grey, medium grained 9.09m SILTSTONE: grey, indistinctly weathered, less than 5% grey, fine grained sandstone laminations at 0-10°	MW HW MW EW HW EW HW		9.06: BP 0° CN PR S 9.10: Non-calcareous 9.40: Non-calcareous 9.47-9.53: SM Clay 60 mm 9.57-9.67: JT 80° Fe PR S 9.67-9.78: EWS Clay 110 mm 9.90: Non-calcareous
	0% Water LOSS	0% LOSS 15.07	73	UCS =1.2 MPa 10.18m Is(50) d=0.09 a=0.08 MPa Is(50) d=0.17 a=0.15 MPa Is(50) d=0.31 a=2.38 MPa Is(50) d=0.17 a=0.32 MPa Is(50) d=0.02 a=0.06 MPa Is(50) d=0.09 a=0.17 MPa Is(50) d=0.11 a=0.13 MPa Is(50) d=0.07 a=0.23 MPa	10.0 38.0 11.0 37.0 12.0 36.0 13.0 35.0 14.0 34.0 15.0 33.0		11.57m INTERBEDDED SANDSTONE (70%) AND SILTSTONE (30%): bedded at 0-10°, grey, fine grained sandstone, grey to dark grey, pale brown siltstone 12.67m SILTSTONE: pale grey, dark grey, interbedded and indistinctly bedded 12.92m SILTSTONE: grey, indistinctly bedded 13.64m SANDSTONE: grey, fine grained, 10% carbonaceous laminations at 0-10° 13.94m SILTSTONE: grey to dark grey, dark grey, indistinctly bedded, 5% grey, fine grained sandstone laminations at 0-10°	MW SW HW MW SW EW HW MW HW MW HW		10.30: Non-calcareous 10.61: BP 5° Clay CU S 10.65: JT 50° Clay ST S 10.80: Non-calcareous 11.12: BP 10° CN UN S 11.20: Non-calcareous 11.38: BP 10° CN UN S 11.50: Non-calcareous 11.56: JT 20° Clay PR S 11.90: Calcareous 12.20: Non-calcareous 12.07-12.52: BP 0° CN PR S 12.50: Non-calcareous 12.69-12.77: EWS Clay 80 mm 12.75: Non-calcareous 12.90: BP 10° Clay UN S 12.95: Non-calcareous 13.30: Non-calcareous 13.60: Calcareous 13.90: Non-calcareous 14.00: BP 5° Clay UN S 14.13: BP 10° Clay UN S 14.20: Non-calcareous 14.25-14.27: CS 20 mm 14.50: Non-calcareous 14.78: BP 5° Coal PR S 14.80: Non-calcareous
	0% Water LOSS	0% LOSS	63	Is(50) d=0.01 a=0.06 MPa UCS =2.1 MPa 15.87m	16.0 32.0		15.31m SILTSTONE: grey, indistinctly bedded, 5% pale brown siltstone laminations at 0-15°. 5% grey, fine grained sandstone laminations at 0-10°, with 5-20mm rounded to sub-rounded siltstone clasts 15.87-15.92m: grey, pale brown, fine to medium	HW MW SW		15.20: Non-calcareous 15.31: JT 0° CN ST S 15.50: Non-calcareous 15.56: JT 20° CN IR RF 15.70: Non-calcareous 15.74: BP 0° Clay PR S 15.92: BP 0° CN PR S

HQ

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B318 REV 1
FILE / JOB NO : 80021888
SHEET : 4 OF 4

PROJECT : SMWSA GI
LOCATION : DOD Orchard Hills

POSITION : E: 291313.476, N: 6254557.843 (56 MGA2020) SURFACE ELEVATION : 48.017 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Massenza M14 MOUNTING : Track CONTRACTOR : Stratacore DRILLER : JI

DATE STARTED : 29/3/21 DATE COMPLETED : 30/3/21 DATE LOGGED : 29/3/21 LOGGED BY : SL CHECKED BY : TH/KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Impreg BIT CONDITION : Good

DRILLING						MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL (-0.1) L (-0.4) M (-1.3) H (-3.8) VH (-12.5) EH	NATURAL FRACTURE (mm) 20 40 100 300 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
HQ	0% Water LOSS	0% LOSS 18.03	63	Is(50) d=0.04 a=0.15 MPa Is(50) d=0.14 a=0.2 MPa Is(50) d=0.05 a=0.19 MPa Is(50) d=0.04 a=0.16 MPa	16.0 *32.0*		16.15m grained sandstone band 15.92-16.01m: grey to dark grey SILTSTONE: dark grey, indistinctly bedded 16.38m SILTSTONE: grey, indistinctly bedded 16.57m SILTSTONE: grey to dark grey, indistinctly bedded 16.76m SILTSTONE: grey, grey to dark grey, indistinctly bedded, 5% grey, fine grained sandstone laminations at 0-10°	MW HW MW HW EW HW MW HW MW EW MW		16.08: BP 5° Clay UN S 16.20: Non-calcareous 16.28: BP 0° CN PR S 16.50: Non-calcareous 16.63: BP 5° Clay UN S 16.66-16.74: EWS Clay 80 mm 16.74: BP 0° CN PR S 16.90: Non-calcareous 17.20: Non-calcareous 17.31-17.41: EWS Clay 100 mm 17.70: Non-calcareous
	0% Water LOSS	0% LOSS 20.18	65	Is(50) d=0.2 a=0.21 MPa Is(50) d=0.09 a=0.22 MPa Is(50) d=0.02 a=0.25 MPa Is(50) d=0.08 a=0.31 MPa Is(50) d=0.1 a=0.24 MPa Is(50) d=0.27 a=0.39 MPa	17.0 *31.0* 18.0 *30.0* 19.0 *29.0* 20.0 *28.0*		18.48m SILTSTONE: grey to dark grey, dark grey, pale brown, interlaminated and interbedded 18.88-18.99m: coal lenses 19.08m SILTSTONE: grey, indistinctly bedded 19.21-19.30m: grey, fine to medium grained sandstone band 19.57m SILTSTONE: dark grey, grey to dark grey, indistinctly bedded 19.74-20.18m: with grey, pale brown siltstone laminations, 5-20mm rounded to sub-rounded siltstone clasts 20.18m	SW MW HW MW HW MW HW SW		18.30: Non-calcareous 18.40-18.84: BP 0° CN PR S 18.70: Non-calcareous 18.89: JT 0° Coal PR S 18.97: BP 0° CN PR S 19.03: BP 0° CN PR S 19.20: Non-calcareous 19.40-19.44: BP 0° CN PR S 19.89: JT 15° CN UN S 19.90: Non-calcareous 20.10: Non-calcareous
					21.0 *27.0* 22.0 *26.0* 23.0 *25.0* 24.0 *24.0*		BOREHOLE SMGW-BH-B318 REV 1 TERMINATED AT 20.18 m Target depth				

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

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RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : SMGW-BH-B320 REV 1
FILE / JOB NO : 80021888
SHEET : 1 OF 4

PROJECT : SMWSA GI
LOCATION : 463A Luddenham Rd Luddenham

POSITION : E: 291041.377, N: 6254011.732 (56 MGA2020) SURFACE ELEVATION : 49.934 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Comacchio 450 MOUNTING : Track CONTRACTOR : Terratest DRILLER : BM

DATE STARTED : 18/2/21 DATE COMPLETED : 19/2/21 DATE LOGGED : 18/2/21 LOGGED BY : LJ CHECKED BY : KP

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
	N/A				0.0 49.9			FILL: CLAYEY SILT: brown, low plasticity, with fine grained sand, trace rootlets			FILL
								0.20m			0.10: Non-calcareous
								CLAYEY SILT: brown to orange, low plasticity, with fine grained sand, trace rootlets			0.15: Non-calcareous
							ML			St	POSSIBLE ALLUVIUM
				0.50m				0.50m			
				U				SILTY CLAY: red to brown, medium plasticity, with fine grained, ironstone gravel, with fine to coarse grained, ironstone sand			POSSIBLE RESIDUAL SOIL
											0.50: Non-calcareous
				0.90m							
				SPT 7, 7, 9 N=16	1.0 48.9						0.90: Non-calcareous
											1.00: Non-calcareous
										St to VSt	
				1.35m							
				1.40m							
				D							
			18/02/21	1.60m			CI				1.50: Non-calcareous
				1.70m							
				D							
				1.95m							
					2.0 47.9			2.00m: becoming dark red			2.00: Non-calcareous
SD		E-F									
HW Casing									M		
				2.50m				2.50m			
				D			GC	CLAYEY GRAVEL: dark red, fine to coarse gravel, medium plasticity clay, with fine to coarse grained sand, with silt			
				2.70m				2.70m			
								CLAY: grey, medium plasticity, with silt			
				3.00m						VSt	
				SPT 6, 9, 10 N=19	3.0 46.9		CI				3.00: Non-calcareous
				3.45m				3.40m			
								CLAY: grey, medium plasticity, with silt			3.40: Non-calcareous
							CI				
								3.90m			3.80: Non-calcareous
					4.0 45.9			SILTSTONE: recovered as SILTY CLAY, grey, medium plasticity, inferred very low strength			POSSIBLE WEATHERED MATERIAL
											4.20: Non-calcareous
				4.50m							
		H		SPT 7, 11/80mm N=R							4.50: Non-calcareous
				4.73m				4.73m			
								Continued as Cored Drill Hole			
					5.0 44.9						
					6.0 43.9						
					7.0 42.9						
					8.0 41.9						

See Explanatory Notes for details of abbreviations & basis of descriptions.

CARDNO NSW/ACT PTY LTD

Cardno

RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA NON-CORE DRILL HOLE 2 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 14:54 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B320 REV 1
FILE / JOB NO : 80021888
SHEET : 2 OF 4

PROJECT : SMWSA GI
LOCATION : 463A Luddenham Rd Luddenham

POSITION : E: 291041.377, N: 6254011.732 (56 MGA2020) SURFACE ELEVATION : 49.934 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Comacchio 450 MOUNTING : Track CONTRACTOR : Terratest DRILLER : BM

DATE STARTED : 18/2/21 DATE COMPLETED : 19/2/21 DATE LOGGED : 18/2/21 LOGGED BY : LJ CHECKED BY : KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Step BIT CONDITION : Good

DRILLING					MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL ~0.1 L ~0.4 M ~1.3 H ~3.8 VH ~12.5 EH	NATURAL FRACTURE (mm) 20 40 100 300 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
HW	0-5% Water LOSS	0% LOSS 6.25	0	Is(50) d=0.05 6.00m D 0.11 MPa Is(50) d=0.04 a=0.06 MPa	0.0 49.9 1.0 48.9 2.0 47.9 3.0 46.9 4.0 45.9						
					4.73m		START CORING AT 4.73m				
					5.0 44.9		SILTSTONE: grey to dark grey, with 10% brown bands of CLAY, hard, laminated at 0-5° 5.06m: fine to medium grained, rounded, ironstone gravel	HW EW HW			5.00: Non-calcareous 5.16: BP 5° CN PR S 5.15-5.20: JT 90° X VNR PR S 5.28-5.48: EWS Clay 200 mm 5.45: Non-calcareous 5.48-5.55: JT 70 - 80° X VNR UN S 5.58-5.60: CS Clay PR S 20 mm 5.63-5.65: CS Silt PR S 20 mm
					6.0 43.9		6.27m				5.85: Non-calcareous 5.96: BP 0° Fe VNR UN S 5.96-6.06: EWS 100 mm 6.15-6.17: CS Gravel, Silt 20 mm
HW	0-5% Water LOSS	0% LOSS	16	Is(50) d=0.04 a=0.06 MPa Is(50) d=0.02 a=0.08 MPa			INTERLAMINATED SANDSTONE (70%) AND SILTSTONE (30%): light grey, fine grained sandstone with undisturbed to disturbed laminations from 1-15mm at 0-5°, grey siltstone, with undisturbed to disturbed laminations from 1-10mm at 0-5°	EW HW			6.42-6.49: BP 0° CN UN S 6.57: BP 5° CN PR S 6.67: BP 0° CN PR S 6.67: Non-calcareous 6.84: BP 0° CN PR S
					7.0 42.9		7.49m	SW			7.03-7.04: CS 0° Clay, Gravel PR S 10 mm 7.05-7.06: JT 90° CN DIS S 7.06: CS 0° Gravel Healed 7.25: BP 0° UN S 7.40: BP 5° CN UN S
				UCS =0d=7.0MPa 7.86m 0.11 MPa			SILTSTONE: grey to dark grey, indistinctly bedded at 0-10°, less than 5% clay seams	HW EW HW			7.72: BP 5° X CT UN S 2 mm 7.72: Non-calcareous 7.75-7.86: CS 5° Clay 110 mm
					8.0 41.9						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3 EXTERNAL M6E REV1.3.GLB Log RTA CORED DRILL HOLE 5 80021888 SMWSA GI GINT LOGS.GPJ <<DrawingFile>> 11/Aug/2021 16:21 10.0.000 Cardno M6E

CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B320 REV 1
FILE / JOB NO : 80021888
SHEET : 3 OF 4

PROJECT : SMWSA GI
LOCATION : 463A Luddenham Rd Luddenham

POSITION : E: 291041.377, N: 6254011.732 (56 MGA2020) SURFACE ELEVATION : 49.934 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Comacchio 450 MOUNTING : Track CONTRACTOR : Terratest DRILLER : BM

DATE STARTED : 18/2/21 DATE COMPLETED : 19/2/21 DATE LOGGED : 18/2/21 LOGGED BY : LJ CHECKED BY : KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Step BIT CONDITION : Good

DRILLING

PROGRESS: DRILLING & CASING; WATER; (CORE LOSS RUN %); DRILL DEPTH; RQD (%); SAMPLES & FIELD TESTS

DRILLING & CASING	WATER	(CORE LOSS RUN %)	DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS
HW	0-5% Water LOSS	0% LOSS	9.25	16	Is(50) d=0.04 a=0.15 MPa
		0% LOSS	12.24	59	Is(50) d=0.06 a=0.08 MPa Is(50) d=0.59 a=0.85 MPa Is(50) d=0.01 a=0.1 MPa UCS =3.6 MPa 10.74m Is(50) d=0.2 a=0.32 MPa Is(50) d=0.09 a=0.28 MPa
		0% LOSS	15.20	60	Is(50) d=0.03 a=0.39 MPa Is(50) d=0.02 a=0.11 MPa Is(50) d=0.15 a=0.33 MPa Is(50) d=0.13 a=0.35 MPa
		0% LOSS		48	

DEPTH (m) / RL (m AHD): 8.0 / 41.9; 9.0 / 40.9; 10.0 / 39.9; 11.0 / 38.9; 12.0 / 37.9; 13.0 / 36.9; 14.0 / 35.9; 15.0 / 34.9; 16.0 / 33.9

MATERIAL

GRAPHIC LOG

DESCRIPTION
ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)

SILTSTONE: grey to dark grey, indistinctly bedded at 0-10°, less than 5% clay seams *(continued)*

9.44m: less than 5% light grey sandstone laminations, 10mm

10.31m

SANDSTONE: grey to pale grey, fine grained, slightly disturbed, indistinct bedding at 0-10°, less than 5% siltstone and carbonaceous laminations less than 2mm thick

11.45m

SILTSTONE: grey to dark grey, indistinct bedding at 0-5°
11.48-11.53m: grey clay seam

12.46m: grey clay seam

12.87-13.08m: grey clay seam, high carbonaceous content
13.01-13.11m: carbonaceous laminations along bedding planes
13.14-13.22m: disturbed bedding, soft sediment deformation

13.82-13.98m: grey, fine to medium grained sandstone laminations up to 20mm
13.85m: bioturbation

14.15m: bioturbation

15.16-15.20m: grey, fine grained sandstone

15.70m

Weathering: HW; EW; HW; EW; HW; EW; HW; SW; HW; MW; HW; MW; HW; SW; HW; MW; EW; MW

ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral
VL (-0.1) L (-0.4) M (-1.3) H (-3.8) VH (-12.5) EH

FRACTURES

NATURAL FRACTURE (mm): 20 40 100 300 1000

ADDITIONAL DATA (joints, partings, seams, zones, etc)
Description, orientation, infilling or coating, shape, roughness, thickness, other

- 8.04-8.18: JT 85° X VNR PR S
- 8.25-8.32: CS 5° Clay 70 mm
- 8.38-8.41: CS 5° Clay 30 mm
- 8.71: BP 0° CN PR S
- 8.71: Non-calcareous
- 8.84-8.89: CS 5° Clay 50 mm
- 9.09-9.14: CS 10° Gravel 50 mm
- 9.18: Calcareous
- 9.61: PID = 7.5 ppm; Calcareous
- 9.63-9.70: BP 0° CN PR S
- 9.97: BP 5° CN UN S
- 10.19: JT 50° CN UN S
- 10.53: Non-calcareous
- 10.82: Calcareous
- 10.90-10.92: BP 5° CN PR S
- 10.93-10.94: EWS 5° Clay FLD PR S 10 mm
- 11.07: JT 20° CN CU S
- 11.16: Calcareous
- 11.48-11.52: EWS 10° Clay, Gravel 40 mm
- 11.69: Non-calcareous
- 11.89: BP 10° X CT PR S
- 12.06-12.07: CS 5° Clay 10 mm
- 12.14: BP PR S
- 12.23: BP 5 - 10° CN CU
- 12.24: BP 0° CN PR S
- 12.34: BP 0° CN PR S
- 12.43: BP 0° CN
- 12.45: JT 15° PR S
- 12.50-12.58: BP 0° CN PR S
- 12.63: BP 5° CN PR S
- 12.78-12.97: BP 5° CN PR S
- 13.00: Non-calcareous
- 13.01: BP 0° X CT PR S 2 mm
- 13.06: BP 0° X CT PR S 10 mm
- 13.20: BP 0° X CU S Soft sediment deformation
- 13.23-13.24: CS 0° Clay PR S 10 mm
- 13.63: Non-calcareous
- 13.64: BP 10° CN PR S
- 13.90: Calcareous
- 13.95: BP 10° CN CU S
- 14.26-14.31: BP 0° CN PR S
- 14.76: Non-calcareous
- 15.28-15.29: CS 0° Clay, Gravel 10 mm
- 15.35: BP 0° X CU S
- 15.54: Non-calcareous
- 15.55: BP 0° Clay, Gravel CT PR S
- 15.55-15.68: EWS 0° Clay, Gravel PR S 130 mm
- 15.79-15.80: CS Clay 10 mm
- 15.83-15.95: JT 85° CN PR S

See Explanatory Notes for details of abbreviations & basis of descriptions.

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CORED DRILL HOLE LOG

HOLE NO : SMGW-BH-B320 REV 1
FILE / JOB NO : 80021888
SHEET : 4 OF 4

PROJECT : SMWSA GI
LOCATION : 463A Luddenham Rd Luddenham

POSITION : E: 291041.377, N: 6254011.732 (56 MGA2020) SURFACE ELEVATION : 49.934 (AHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Comacchio 450 MOUNTING : Track CONTRACTOR : Terratest DRILLER : BM

DATE STARTED : 18/2/21 DATE COMPLETED : 19/2/21 DATE LOGGED : 18/2/21 LOGGED BY : LJ CHECKED BY : KP

CASING DIAMETER : HW BARREL (Length) : 3.00 m BIT : Step BIT CONDITION : Good

DRILLING						MATERIAL				FRACTURES	
PROGRESS: DRILLING & CASING	PROGRESS: WATER	(CORE LOSS RUN %) / DRILL DEPTH	RQD (%)	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	DESCRIPTION ROCK TYPE : Colour, Grain size, Structure (texture, fabric, mineral composition, hardness alteration, cementation, etc as applicable)	Weathering	ESTIMATED STRENGTH Is(50) ● - Axial ○ - Diametral VL -0.1 L -0.4 M -1.3 H -3.8 VH -12.5 EH	NATURAL FRACTURE (mm) 20 40 100 300 1000	ADDITIONAL DATA (joints, partings, seams, zones, etc) Description, orientation, infilling or coating, shape, roughness, thickness, other
HW	0-5% Water LOSS	0% LOSS 17.20	48	Is(50) d=0.08 a=0.3 MPa Is(50) d=1.65 a=3.03 MPa Is(50) d=0.13 a=0.3 MPa	16.0 33.9 17.0 32.9		INTERLAMINATED SILTSTONE (80%) AND SANDSTONE (20%): grey to dark grey siltstone, indistinctly bedded at 0-5°, light grey, fine grained, sandstone, indistinct and disturbed bedding at 0-10° *(continued)*	MW F MW EW SW F			15.85-15.98: JT 85° CN PR S 15.93: BP 0° CN UN S 16.00: Calcareous 16.05: BP 0° CN UN S 16.21: PID = 3.5 ppm; Calcareous 16.29-16.30: CS 0° UN S 10 mm 16.32-16.42: BP 0° CN PR S 16.59: BP CA CT PR S 1 mm 16.75-16.76: BP 0° X VNR PR S 16.84-17.10: CS 0° Cobble PR S 260 mm Fine grained
	0-5% Water LOSS	0% LOSS 18.20	65								17.15-17.89: BP 5° CN PR S 17.72: PID = 8.1 ppm; Calcareous
	0-5% Water LOSS	0% LOSS 20.27	100	UCS =7.4 MPa 18.60m Is(50) d=0.13 a=0.46 MPa Is(50) d=0.44 a=0.62 MPa Is(50) d=0.55 a=0.84 MPa Is(50) d=0.21 a=0.85 MPa	18.0 31.9 19.0 30.9 20.0 29.9		17.65-18.06m: interlaminated grey to dark grey siltstone (50%) and light grey, fine grained sandstone (50%), bedding very disturbed 18.96-19.10m: interlaminated light grey, fine to medium grained sandstone (50%), and grey to dark grey siltstone (50%), bedding very disturbed 19.35-20.27m: interlaminated grey to brown siltstone (50%) and sandstone (50%)	HW SW			18.03: BP 0° CN UN S 18.06: BP 0° X CT UN S 1 mm 18.09-18.12: BP 10° CN PR S 18.60: BP 10° CN UN S 18.77: Non-calcareous 18.98: Calcareous 19.03: BP 5° CN PR S 19.41: BP 5° CN PR S 19.80: Non-calcareous
					20.27m		BOREHOLE SMGW-BH-B320 REV 1 TERMINATED AT 20.27 m Target depth				
					21.0 28.9 22.0 27.9 23.0 26.9 24.0 25.9						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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Table C1: Previous results for soil

	BTEX						MAH					TPH					CRC Care TPH Fractions						
	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total MAH	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.5	0.5	0.5	0.5	20	20	50	50	50	20	50	100	100	50	20	50
NSW 2014 Excavated Natural Material (Absolute Max)	0.5	65	25			15										500							
NSW 2014 Excavated Natural Material (Max average)	NA	NA	NA			NA										250							
NSW 2014 General Solid Waste CT1 (No Leaching)	10	288	600			1000					60	650				10000							
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																							
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	40	1152	2400			4000					240	2600				40000							
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																							
NEPM 2013 EIL UR/POS																							
NEPM 2013 ESL UR/POS, Coarse	50	85	70			180												120	300	2800		180	
NEPM 2013 ESL UR/POS, Fine	65	105	105			45												120	1300	5600		180	
NEPM 2013 EILComm./Ind																							
NEPM 2013 ESL Comm./Ind, coarse	75	135	165			180												170	1700	3300		215	
NEPM 2013 ESL Comm./Ind, fine	95	135	135			95												170	2500	6600		215	
PFAS NEMP 2.0 Table 3 Ecologcal Indirect Exposure																							
NEPM 2013 HIL, Recreational C																							
PFAS NEMP 2.0 Table 2 Health Public open space																							
HSL C for Direct Contact	120	18,000	5300			15,000													5300	7400		5100	3800
NEPM 2013 HIL, Commercial/Industrial D																							
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																							
0-1m	4	NL	NL			NL																310	NL
1-2m	6	NL	NL			NL																480	NL
2-4m	9	NL	NL			NL																NL	NL
>4m	20	NL	NL			NL																NL	NL
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																							
0-1m	3	NL	NL			230																260	NL
1-2m	3	NL	NL			NL																370	NL
2-4m	3	NL	NL			NL																630	NL
>4m	3	NL	NL			NL																NL	NL
HSL D for Direct Contact	430	99,000	27,000			81,000													27,000	38,000		26,000	20,000
PFAS NEMP 2.0 Health Com/Ind																							
NEPM 2013 Management Limits, POS, Coarse Soil																	700	1000	2500	10000			
NEPM 2013 Management Limits, C/I, Coarse Soil																	700	1000	3500	10000			

Field ID	Location ID	Sample Date	Easting	Northing	Lab Report																				
BH-B313_0.1	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	73	73	<20	<50	<100	<100	<100	<20	<50
BH-B313_0.5	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
BH-B313_3	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B332_0.1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B332_0.5	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B332_1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
BH-B317_0.1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
BH-B317_0.5	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
BH-B317_1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
ACM01_300321	SMGW-ACM01_300321	30/03/2021	291409.605	6254780.937	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_0.1	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B335_0.5	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B335_2	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
BH-B318_0.1	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
BH-B318_0.5	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
BH-B318_3	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B336_0.1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B336_0.5	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B336_1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B334_0.1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B334_0.5	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B334_1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B321_0.1	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B321_0.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50
TP-B321_1.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50

Table C1: Previous results for soil

	Metals								Asbestos				
	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	Asbestos Results	Ammonia as N	Cyanide Total	Moisture Content (dried @ 103°C)	pH (aqueous extract)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	Comment	mg/kg	mg/kg	%	pH Units
LOR	2	0.4	1	1	1	0.1	1	1		5	1	1	0.1
NSW 2014 Excavated Natural Material (Absolute Max)	40	1	150	200	100	1	60	300					
NSW 2014 Excavated Natural Material (Max average)	20	0.5	75	100	50	0.5	30	150					
NSW 2014 General Solid Waste CT1 (No Leaching)	100	20	100		100	4	40				320		
NSW EPA PFAS Waste Class Addendum 2016 - SCC1													
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	400	80	400		400	16	160				1280		
NSW EPA PFAS Waste Class Addendum 2016 - SCC2													
NEPM 2013 EIL UR/POS	100		190	210	1100		180	490					
NEPM 2013 ESL UR/POS, Coarse													
NEPM 2013 ESL UR/POS, Fine													
NEPM 2013 EILComm./Ind	160		300	300	1800		300	720					
NEPM 2013 ESL Comm./Ind, coarse													
NEPM 2013 ESL Comm./Ind, fine													
PFAS NEMP 2.0 Table 3 Ecologcal Indirect Exposure													
NEPM 2013 HIL, Recreational C	300	90		17000	600	80	1200	30000					
PFAS NEMP 2.0 Table 2 Health Public open space													
HSL C for Direct Contact													
NEPM 2013 HIL, Commercial/Industrial D	3000	900		240000	1500	730	6000	400000					
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay													
0-1m													
1-2m													
2-4m													
>4m													
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand													
0-1m													
1-2m													
2-4m													
>4m													
HSL D for Direct Contact													
PFAS NEMP 2.0 Health Com/Ind													
NEPM 2013 Management Limits, POS, Coarse Soil													
NEPM 2013 Management Limits, C/I, Coarse Soil													

Field ID	Location ID	Sample Date	Easting	Northing	Lab Report												
BH-B313_0.1	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	6	<0.4	19	17	23	<0.1	10	33	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	22	6
BH-B313_0.5	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	6	<0.4	25	23	14	<0.1	13	34	-	<5	<1	21	6.3
BH-B313_3	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	25	<0.4	34	60	55	<0.1	38	120	-	<5	<1	13	6.2
TP-B332_0.1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	29	<0.4	100	22	53	<0.1	22	42	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	22	6.3
TP-B332_0.5	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	22	<0.4	100	25	38	<0.1	22	36	-	<5	<1	25	6.2
TP-B332_1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	10	<0.4	38	22	22	<0.1	5.2	16	-	<5	<1	16	4.9
BH-B317_0.1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	16	<0.4	53	29	40	<0.1	29	60	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	19	6.4
BH-B317_0.5	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	9.1	<0.4	28	42	22	<0.1	15	59	-	<5	<1	23	5.4
BH-B317_1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	7.5	<0.4	22	41	22	<0.1	12	48	-	-	-	25	5.4
ACM01_300321	SMGW-ACM01_300321	30/03/2021	291409.605	6254780.937	785874	-	-	-	-	-	-	-	-	Chrysotile asbestos detected.	-	-	-	-
TP-B335_0.1	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	24	<0.4	57	19	37	<0.1	14	40	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	26	6
TP-B335_0.5	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	16	<0.4	52	16	29	<0.1	13	25	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	-	-	21	6.3
TP-B335_2	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	6.5	<0.4	14	27	16	<0.1	5.9	28	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	16	4.9
BH-B318_0.1	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	15	<0.4	44	18	22	<0.1	<5	16	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	24	5.8
BH-B318_0.5	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	20	<0.4	70	23	28	<0.1	6.3	12	-	<5	<1	19	5.2
BH-B318_3	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	11	<0.4	25	22	14	<0.1	<5	53	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	45	5
TP-B336_0.1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	7.9	<0.4	18	15	32	<0.1	8.7	38	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	24	5.8
TP-B336_0.5	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	11	<0.4	32	32	20	<0.1	10	39	-	<5	<1	20	5.1
TP-B336_1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	11	<0.4	17	31	13	<0.1	<5	20	-	<5	<1	23	4.8
TP-B334_0.1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	20	<0.4	65	26	45	<0.1	21	41	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	-	-	23	6
TP-B334_0.5	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	28	<0.4	84	30	39	<0.1	9.4	32	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	21	6
TP-B334_1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	5	<0.4	7.2	13	6.3	<0.1	<5	9.5	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	20	5.3
TP-B321_0.1	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	6.9	<0.4	19	17	20	<0.1	12	31	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	<5	<1	25	6.8
TP-B321_0.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	5.9	<0.4	21	27	16	<0.1	7.1	25	-	<5	<1	19	5.6
TP-B321_1.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	6.5	<0.4	18	24	19	<0.1	16	36	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	-	-	21	7.2

Table C1: Previous results for soil

	Organochlorine Pesticides																						
	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.1
NSW 2014 Excavated Natural Material (Absolute Max)																							
NSW 2014 Excavated Natural Material (Max average)																							
NSW 2014 General Solid Waste CT1 (No Leaching)												60	60	60									
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																							
NSW 2014 Restricted Solid Waste CT2 (No Leaching)												240	240	240									
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																							
NEPM 2013 EIL UR/POS									180														
NEPM 2013 ESL UR/POS, Coarse																							
NEPM 2013 ESL UR/POS, Fine																							
NEPM 2013 EILComm./Ind									640														
NEPM 2013 ESL Comm./Ind, coarse																							
NEPM 2013 ESL Comm./Ind, fine																							
PFAS NEMP 2.0 Table 3 Ecologcal Indirect Exposure																							
NEPM 2013 HIL, Recreational C				10		70				400					20				10		10	400	30
PFAS NEMP 2.0 Table 2 Health Public open space																							
HSL C for Direct Contact																							
NEPM 2013 HIL, Commercial/Industrial D				45		530				3600					100				50		80	2500	160
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
HSL D for Direct Contact																							
PFAS NEMP 2.0 Health Com/Ind																							
NEPM 2013 Management Limits, POS, Coarse Soil																							
NEPM 2013 Management Limits, C/I, Coarse Soil																							

Field ID	Location ID	Sample Date	Easting	Northing	Lab Report																				
BH-B313_0.1	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
BH-B313_0.5	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B313_3	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B332_0.1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP-B332_0.5	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B332_1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B317_0.1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
BH-B317_0.5	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B317_1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACM01_300321	SMGW-ACM01_300321	30/03/2021	291409.605	6254780.937	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_0.1	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP-B335_0.5	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP-B335_2	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
BH-B318_0.1	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
BH-B318_0.5	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B318_3	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP-B336_0.1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP-B336_0.5	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B336_1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B334_0.1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP-B334_0.5	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP-B334_1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP-B321_0.1	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.1
TP-B321_0.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B321_1.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C1: Previous results for soil

	Organophosphorous Pesticides																							
	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.1	0.2	0.2	0.1	0.1	2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	2	0.2
NSW 2014 Excavated Natural Material (Absolute Max)																							
NSW 2014 Excavated Natural Material (Max average)																							
NSW 2014 General Solid Waste CT1 (No Leaching)				4																			
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																							
NSW 2014 Restricted Solid Waste CT2 (No Leaching)				16																			
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																							
NEPM 2013 EIL UR/POS																							
NEPM 2013 ESL UR/POS, Coarse																							
NEPM 2013 ESL UR/POS, Fine																							
NEPM 2013 EILComm./Ind																							
NEPM 2013 ESL Comm./Ind, coarse																							
NEPM 2013 ESL Comm./Ind, fine																							
PFAS NEMP 2.0 Table 3 Ecologcal Indirect Exposure																							
NEPM 2013 HIL, Recreational C				250																			
PFAS NEMP 2.0 Table 2 Health Public open space																							
HSL C for Direct Contact																							
NEPM 2013 HIL, Commercial/Industrial D				2000																			
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
HSL D for Direct Contact																							
PFAS NEMP 2.0 Health Com/Ind																							
NEPM 2013 Management Limits, POS, Coarse Soil																							
NEPM 2013 Management Limits, C/I, Coarse Soil																							

Field ID	Location ID	Sample Date	Easting	Northing	Lab Report																				
BH-B313_0.1	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
BH-B313_0.5	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B313_3	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B332_0.1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
TP-B332_0.5	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B332_1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B317_0.1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
BH-B317_0.5	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B317_1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACM01_300321	SMGW-ACM01_300321	30/03/2021	291409.605	6254780.937	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_0.1	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
TP-B335_0.5	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
TP-B335_2	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
BH-B318_0.1	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
BH-B318_0.5	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B318_3	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
TP-B336_0.1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
TP-B336_0.5	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B336_1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B334_0.1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
TP-B334_0.5	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
TP-B334_1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
TP-B321_0.1	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2
TP-B321_0.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B321_1.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C1: Previous results for soil

									Herbicides	Insecticides			PAH												
									Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Dinoseb	Tokuthion	Parathion	Pirimiphos-methyl	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene
									mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR									2	0.2	0.2	0.1	0.2	0.2	0.2	20	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5
NSW 2014 Excavated Natural Material (Absolute Max)																															
NSW 2014 Excavated Natural Material (Max average)																															
NSW 2014 General Solid Waste CT1 (No Leaching)																															
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																															
NSW 2014 Restricted Solid Waste CT2 (No Leaching)																															
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																															
NEPM 2013 EIL UR/POS																					170										
NEPM 2013 ESL UR/POS, Coarse																															
NEPM 2013 ESL UR/POS, Fine																															
NEPM 2013 EILComm./Ind																					370										
NEPM 2013 ESL Comm./Ind, coarse																															
NEPM 2013 ESL Comm./Ind, fine																															
PFAS NEMP 2.0 Table 3 Ecologcal Indirect Exposure																															
NEPM 2013 HIL, Recreational C																															
PFAS NEMP 2.0 Table 2 Health Public open space																															
HSL C for Direct Contact																															
NEPM 2013 HIL, Commercial/Industrial D																															
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																															
0-1m																					NL										
1-2m																					NL										
2-4m																					NL										
>4m																					NL										
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																															
0-1m																															
1-2m																															
2-4m																															
>4m																															
HSL D for Direct Contact																															
PFAS NEMP 2.0 Health Com/Ind																															
NEPM 2013 Management Limits, POS, Coarse Soil																															
NEPM 2013 Management Limits, C/I, Coarse Soil																															

Field ID	Location ID	Sample Date	Easting	Northing	Lab Report																										
BH-B313_0.1	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B313_0.5	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B313_3	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B332_0.1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B332_0.5	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B332_1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B317_0.1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B317_0.5	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B317_1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ACM01_300321	SMGW-ACM01_300321	30/03/2021	291409.605	6254780.937	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_0.1	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B335_0.5	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B335_2	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B318_0.1	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B318_0.5	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B318_3	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B336_0.1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B336_0.5	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B336_1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B334_0.1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B334_0.5	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B334_1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B321_0.1	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B321_0.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B321_1.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	-	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table C1: Previous results for soil

										Phenols										Polychlorinated Biphenyl				
	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene TEQ (Zero LOR)	Benzo(a)pyrene TEQ (Half LOR)_1	Benzo(a)pyrene TEQ (Full LOR)	PAHs (Sum of total)	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-chloro-3-methylphenol	4-nitrophenol	Phenol	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.05	0.1	0.1	0.1	0.5	0.5	0.5	0.5	0.5	5	0.2	1	0.4	5	20	1	5	0.5	0.5	0.1	0.5	0.5	0.5
NSW 2014 Excavated Natural Material (Absolute Max)	1							40															
NSW 2014 Excavated Natural Material (Max average)	0.5							20															
NSW 2014 General Solid Waste CT1 (No Leaching)	0.8							200			4000												
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																							
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	3.2										16000												
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																							
NEPM 2013 EIL UR/POS																							
NEPM 2013 ESL UR/POS, Coarse	0.7																						
NEPM 2013 ESL UR/POS, Fine	0.7																						
NEPM 2013 EILComm./Ind																							
NEPM 2013 ESL Comm./Ind, coarse	1.4																						
NEPM 2013 ESL Comm./Ind, fine	1.4																						
PFAS NEMP 2.0 Table 3 Ecologcal Indirect Exposure																							
NEPM 2013 HIL, Recreational C						3		300										40000					
PFAS NEMP 2.0 Table 2 Health Public open space																							
HSL C for Direct Contact																							
NEPM 2013 HIL, Commercial/Industrial D						40		4000										240000					
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
HSL D for Direct Contact																							
PFAS NEMP 2.0 Health Com/Ind																							
NEPM 2013 Management Limits, POS, Coarse Soil																							
NEPM 2013 Management Limits, C/I, Coarse Soil																							

Field ID	Location ID	Sample Date	Easting	Northing	Lab Report																					
BH-B313_0.1	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5
BH-B313_0.5	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B313_3	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B332_0.1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5
TP-B332_0.5	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B332_1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B317_0.1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5
BH-B317_0.5	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B317_1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACM01_300321	SMGW-ACM01_300321	30/03/2021	291409.605	6254780.937	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_0.1	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	-	-	-	-	-
TP-B335_0.5	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_2	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B318_0.1	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5
BH-B318_0.5	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B318_3	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B336_0.1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	<0.5	<5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	<0.5	<0.1	<0.5	<0.5	<0.5
TP-B336_0.5	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B336_1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B334_0.1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B334_0.5	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B334_1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B321_0.1	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	<0.5	<0.1	<0.5	<0.5	<0.5
TP-B321_0.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B321_1.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	1.2	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C1: Previous results for soil

	ls			Perfluorocarbons																			
	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	8:2 Fluorotelomer sulfonate	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (FOSA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Sum of PFAS (WA DER List)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.5	0.5	0.5	0.0005	0.0001	0.0005	0.0005	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0002	0.0002
NSW 2014 Excavated Natural Material (Absolute Max)																							
NSW 2014 Excavated Natural Material (Max average)																							
NSW 2014 General Solid Waste CT1 (No Leaching)			<50																				
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																							
NSW 2014 Restricted Solid Waste CT2 (No Leaching)			<50																				
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																							
NEPM 2013 EIL UR/POS																							
NEPM 2013 ESL UR/POS, Coarse																							
NEPM 2013 ESL UR/POS, Fine																							
NEPM 2013 EILComm./Ind																							
NEPM 2013 ESL Comm./Ind, coarse																							
NEPM 2013 ESL Comm./Ind, fine																							
PFAS NEMP 2.0 Table 3 Ecologcal Indirect Exposure																							
NEPM 2013 HIL, Recreational C			1																				
PFAS NEMP 2.0 Table 2 Health Public open space																							
HSL C for Direct Contact																							
NEPM 2013 HIL, Commercial/Industrial D			7																				
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
HSL D for Direct Contact																							
PFAS NEMP 2.0 Health Com/Ind																							
NEPM 2013 Management Limits, POS, Coarse Soil																							
NEPM 2013 Management Limits, C/I, Coarse Soil																							

Field ID	Location ID	Sample Date	Easting	Northing	Lab Report																			
BH-B313_0.1	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.5	<0.5	<0.5	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005
BH-B313_0.5	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
BH-B313_3	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B332_0.1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.5	<0.5	<0.5	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B332_0.5	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B332_1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
BH-B317_0.1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.5	<0.5	<0.5	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
BH-B317_0.5	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
BH-B317_1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
ACM01_300321	SMGW-ACM01_300321	30/03/2021	291409.605	6254780.937	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_0.1	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	0.0006	<0.0001	<0.0001	<0.0005	<0.0005
TP-B335_0.5	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B335_2	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
BH-B318_0.1	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.5	<0.5	<0.5	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
BH-B318_0.5	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
BH-B318_3	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B336_0.1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.5	<0.5	<0.5	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B336_0.5	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B336_1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B334_0.1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B334_0.5	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B334_1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B321_0.1	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.5	<0.5	<0.5	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B321_0.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005
TP-B321_1.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0005

Table C1: Previous results for soil

	Perfluorobutanoic acid (PFBA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctane sulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Sum of PFAS	Perfluorodecanesulfonic acid (PFDS)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)	Perfluorononanesulfonic acid (PFNS)	Perfluoropropanesulfonic acid (PFPrS)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	EPN	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	µg/kg	µg/kg	µg/kg	µg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.1	0.1	0.1	0.1	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NSW 2014 Excavated Natural Material (Absolute Max)																							
NSW 2014 Excavated Natural Material (Max average)																							
NSW 2014 General Solid Waste CT1 (No Leaching)																	200	600	26	24		14	
NSW EPA PFAS Waste Class Addendum 2016 - SCC1			1.8	1.8							18												
NSW 2014 Restricted Solid Waste CT2 (No Leaching)																	800	2400	104	96		56	
NSW EPA PFAS Waste Class Addendum 2016 - SCC2			7.2	7.2							72												
NEPM 2013 EIL UR/POS																							
NEPM 2013 ESL UR/POS, Coarse																							
NEPM 2013 ESL UR/POS, Fine																							
NEPM 2013 EILComm./Ind																							
NEPM 2013 ESL Comm./Ind, coarse																							
NEPM 2013 ESL Comm./Ind, fine																							
PFAS NEMP 2.0 Table 3 Ecologcal Indirect Exposure				0.01																			
NEPM 2013 HIL, Recreational C																							
PFAS NEMP 2.0 Table 2 Health Public open space									1		10												
HSL C for Direct Contact																							
NEPM 2013 HIL, Commercial/Industrial D										900													
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
HSL D for Direct Contact																							
PFAS NEMP 2.0 Health Com/Ind									20		50												
NEPM 2013 Management Limits, POS, Coarse Soil																							
NEPM 2013 Management Limits, C/I, Coarse Soil																							

Field ID	Location ID	Sample Date	Easting	Northing	Lab Report																			
BH-B313_0.1	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.0005	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0005	<0.0001	0.0002	<0.0005	<0.0001	<0.1	<0.1	0.2	0.2	<0.2	-	-	-	-	-	-	-
BH-B313_0.5	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B313_3	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
TP-B332_0.1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	<0.2	-	-	-	-	-	-	-
TP-B332_0.5	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B332_1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
BH-B317_0.1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	<0.2	-	-	-	-	-	-	-
BH-B317_0.5	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B317_1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
ACM01_300321	SMGW-ACM01_300321	30/03/2021	291409.605	6254780.937	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_0.1	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.0005	<0.0001	<0.0001	0.0005	<0.0001	<0.0001	0.0006	<0.0001	0.0005	<0.0005	0.0001	<0.1	<0.1	0.6	0.6	<0.2	-	-	-	-	-	-	-
TP-B335_0.5	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.0005	<0.0001	<0.0001	0.0003	<0.0001	<0.0001	<0.0005	<0.0001	0.0003	<0.0005	<0.0001	<0.1	<0.1	0.3	0.3	<0.2	-	-	-	-	-	-	-
TP-B335_2	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	<0.2	-	-	-	-	-	-	-
BH-B318_0.1	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.0005	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0005	<0.0001	0.0002	<0.0005	<0.0001	<0.1	<0.1	0.2	0.2	<0.2	-	-	-	-	-	-	-
BH-B318_0.5	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.0005	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0005	<0.0001	0.0001	<0.0005	<0.0001	<0.1	<0.1	0.1	0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B318_3	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	<0.2	-	-	-	-	-	-	-
TP-B336_0.1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.0005	<0.0001	<0.0001	0.0003	<0.0001	<0.0001	<0.0005	<0.0001	0.0003	<0.0005	<0.0001	<0.1	<0.1	0.3	0.3	<0.2	-	-	-	-	-	-	-
TP-B336_0.5	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-
TP-B336_1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B334_0.1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.0005	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0005	<0.0001	0.0001	<0.0005	<0.0001	<0.1	<0.1	0.1	0.1	<0.2	-	-	-	-	-	-	-
TP-B334_0.5	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	<0.2	-	-	-	-	-	-	-
TP-B334_1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	<0.2	-	-	-	-	-	-	-
TP-B321_0.1	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.0005	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0005	<0.0001	0.0001	<0.0005	<0.0001	<0.1	<0.1	0.1	0.1	<0.2	-	-	-	-	-	-	-
TP-B321_0.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B321_1.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-

Table C1: Previous results for soil

	Chlorinated Hydrocarbons																						
	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	1,2-dibromoethane	1,2-dichlorobenzene	1,3-dichlorobenzene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LOR	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NSW 2014 Excavated Natural Material (Absolute Max)																							
NSW 2014 Excavated Natural Material (Max average)																							
NSW 2014 General Solid Waste CT1 (No Leaching)	10						10			120					172	10	14			4		86	
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																							
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	40						40			480					688	40	56			16		344	
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																							
NEPM 2013 EIL UR/POS																							
NEPM 2013 ESL UR/POS, Coarse																							
NEPM 2013 ESL UR/POS, Fine																							
NEPM 2013 EILComm./Ind																							
NEPM 2013 ESL Comm./Ind, coarse																							
NEPM 2013 ESL Comm./Ind, fine																							
PFAS NEMP 2.0 Table 3 Ecologcal Indirect Exposure																							
NEPM 2013 HIL, Recreational C																							
PFAS NEMP 2.0 Table 2 Health Public open space																							
HSL C for Direct Contact																							
NEPM 2013 HIL, Commercial/Industrial D																							
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																							
0-1m																							
1-2m																							
2-4m																							
>4m																							
HSL D for Direct Contact																							
PFAS NEMP 2.0 Health Com/Ind																							
NEPM 2013 Management Limits, POS, Coarse Soil																							
NEPM 2013 Management Limits, C/I, Coarse Soil																							

Field ID	Location ID	Sample Date	Easting	Northing	Lab Report																					
BH-B313_0.1	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B313_0.5	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B313_3	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B332_0.1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B332_0.5	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B332_1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B317_0.1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B317_0.5	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B317_1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACM01_300321	SMGW-ACM01_300321	30/03/2021	291409.605	6254780.937	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_0.1	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_0.5	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_2	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B318_0.1	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B318_0.5	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B318_3	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B336_0.1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B336_0.5	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B336_1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B334_0.1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B334_0.5	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B334_1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B321_0.1	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B321_0.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B321_1.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C1: Previous results for soil

																		Solvents				
						1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromomethane	Chlorobenzene	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	tetrachlorophenols	Methyl Ethyl Ketone	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide
						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
LOR						0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5	1	10	0.5	0.5	0.5	0.5	0.5
NSW 2014 Excavated Natural Material (Absolute Max)																									
NSW 2014 Excavated Natural Material (Max average)																									
NSW 2014 General Solid Waste CT1 (No Leaching)						150				2000				8000	40						4000				
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																									
NSW 2014 Restricted Solid Waste CT2 (No Leaching)						600				8000				32000	160						16000				
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																									
NEPM 2013 EIL UR/POS																									
NEPM 2013 ESL UR/POS, Coarse																									
NEPM 2013 ESL UR/POS, Fine																									
NEPM 2013 EILComm./Ind																									
NEPM 2013 ESL Comm./Ind, coarse																									
NEPM 2013 ESL Comm./Ind, fine																									
PFAS NEMP 2.0 Table 3 Ecologcal Indirect Exposure																									
NEPM 2013 HIL, Recreational C																			120						
PFAS NEMP 2.0 Table 2 Health Public open space																									
HSL C for Direct Contact																									
NEPM 2013 HIL, Commercial/Industrial D																			660						
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																									
0-1m																									
1-2m																									
2-4m																									
>4m																									
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																									
0-1m																									
1-2m																									
2-4m																									
>4m																									
HSL D for Direct Contact																									
PFAS NEMP 2.0 Health Com/Ind																									
NEPM 2013 Management Limits, POS, Coarse Soil																									
NEPM 2013 Management Limits, C/I, Coarse Soil																									
Field ID	**Location ID**	**Sample Date**	**Easting**	**Northing**	**Lab Report**																				
BH-B313_0.1	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B313_0.5	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B313_3	SMGW-BH-B313	29/03/2021	291503.632	6255514.163	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B332_0.1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B332_0.5	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B332_1	SMGW-TP-B332	30/03/2021	291435.165	6255024.32	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B317_0.1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B317_0.5	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B317_1	SMGW-BH-B317	31/03/2021	291440.316	6254935.21	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACM01_300321	SMGW-ACM01_300321	30/03/2021	291409.605	6254780.937	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_0.1	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	-	-	-	-	-	-	-	-	<1	<1	<0.5	<0.5	<0.5	<1	<10	-	-	-	-	-
TP-B335_0.5	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B335_2	SMGW-TP-B335	30/03/2021	291368.742	6254671.429	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B318_0.1	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BH-B318_0.5	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
BH-B318_3	SMGW-BH-B318	29/03/2021	291313.476	6254557.843	785869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B336_0.1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	-	-	-	-	-	<1	<1	<0.5	<0.5	<0.5	<1	<10	-	-	-	-	-
TP-B336_0.5	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B336_1	SMGW-TP-B336	29/03/2021	291249.487	6254401.839	785874	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B334_0.1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B334_0.5	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B334_1	SMGW-TP-B334	30/03/2021	291414.161	6252041.722	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B321_0.1	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B321_0.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B321_1.5	SMGW-TP-B321	29/03/2021	291528.578	6249877.36	785874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C2: Previous Results for Soil

	BTEX						MAH					TRH					CRC Care TPH Fractions							Metals							
	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total	Total MAH	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE	Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.2	0.1	0.3	0.5	0.5	0.5	0.5	0.5	20	20	50	50	50	20	50	100	100	100	20	50	2	0.4	5	5	5	0.1	5	5
NSW 2014 Excavated Natural Material (Absolute Max)	0.5	65	25			15										500	20		100					40	1	150	200	100	1	60	300
NSW 2014 Excavated Natural Material (Max Average)	NA	NA	NA			NA										250								20	0.5	75	100	50	0.5	30	150
NSW 2014 General Solid Waste CT1 (No Leaching)	10	288	600			1000					60	650				10000								100	20	100		100	4	40	
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																															
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	40	1152	2400			4000					240	2600				40000								400	80	400		400	16	160	
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																															
NSW TCLP1 Criteria																															
NEPM 2013 EIL UR/POS																								100		190	210	1100		180	490
NEPM 2013 ESL UR/POS, Coarse	50	85	70			180												120	300	2800		180									
NEPM 2013 ESL UR/POS, Fine	65	105	105			45												120	1300	5600		180									
NEPM 2013 EIL Comm./Ind																								160		300	300	1800		300	720
NEPM 2013 ESL Comm./Ind.	75	135	165			180												170	1700	3300		215									
NEPM 2013 ESL Comm/Ind, fine	95	135	135			95												170	2500	6600		215									
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																															
NEPM 2013 HIL, Recreational C																								300	90		17000	600	80	1200	30000
PFAS NEMP 2.0 Table 2 Health Public open space																															
HSL C for Direct Contact	120	18,000	5300			15,000													5300	7400		5100	3800								
NEPM 2013 HIL, Commercial/Industrial D																								3000	900		240000	1500	730	6000	400000
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																															
0-1m	4	NL	NL			NL																310	NL								
1-2m	6	NL	NL			NL																480	NL								
2-4m	9	NL	NL			NL																NL	NL								
>4m	20	NL	NL			NL																NL	NL								
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																															
0-1m	3	NL	NL			230																260	NL								
1-2m	3	NL	NL			NL																370	NL								
2-4m	3	NL	NL			NL																630	NL								
>4m	3	NL	NL			NL																NL	NL								
HSL D for Direct Contact	430	99,000	27,000			81,000													27,000	38,000		26,000	20,000								
PFAS NEMP 2.0 Table 2 Industrial/Commercial																															
NEPM 2013 Management Limits, C/I, Coarse Soil																	700	1000	3500	10000											
NEPM 2013 Management Limits, POS, Coarse Soil																	700	1000	2500	10000											

Field ID	Alternative Name	Sample Date	Easting	Northing	Depth	Report number																										
TP-B361_0.1	SMGW-TP-B361_0.1	13/09/2021	291359.483	6254606.984	0.1	828270	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	23	<0.4	60	12	26	<0.1	7.4	30
TP-B361_0.5	SMGW-TP-B361_0.5	13/09/2021	291359.483	6254606.984	0.5	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	<0.4	46	23	20	-	6.8	23
TP-B361_0.7	SMGW-TP-B361_0.7	13/09/2021	291359.483	6254606.984	0.7	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3	<0.4	14	14	8.2	-	<5	11
TP-B361_1	SMGW-TP-B361_1	13/09/2021	291359.483	6254606.984	1	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1.5	SMGW-TP-B361_1.5	13/09/2021	291359.483	6254606.984	1.5	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.3	<0.4	5.7	11	8.6	-	<5	11
TP-B361_2	SMGW-TP-B361_2	13/09/2021	291359.483	6254606.984	2	828270	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3	-	-	-	-	-	<20	<20	<50	<50	<50	<20	<50	<100	<100	<100	<20	<50	6.3	<0.4	10	19	15	<0.1	<5	18

Table C2: Previous Results for Soil

		Asbestos			Organochlorine Pesticides														
		Asbestos Results	Moisture Content (dried @ 103°C)	pH (aqueous extract)	Other organochlorine pesticides IWRG621	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II
		Comment	%	pH_Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL			1	0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NSW 2014 Excavated Natural Material (Absolute Max)				4.5 to 10														
NSW 2014 Excavated Natural Material (Max Average)				5 to 9														
NSW 2014 General Solid Waste CT1 (No Leaching)																	60	60
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																		
NSW 2014 Restricted Solid Waste CT2 (No Leaching)																	240	240
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																		
NSW TCLP1 Criteria																		
NEPM 2013 EIL UR/POS														180				
NEPM 2013 ESL UR/POS, Coarse																		
NEPM 2013 ESL UR/POS, Fine																		
NEPM 2013 EIL Comm./Ind														640				
NEPM 2013 ESL Comm./Ind.																		
NEPM 2013 ESL Comm/Ind, fine																		
PFAS NEPM 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																		
NEPM 2013 HIL, Recreational C									10		70				400			
PFAS NEMP 2.0 Table 2 Health Public open space																		
HSL C for Direct Contact																		
NEPM 2013 HIL, Commercial/Industrial D									45		530				3600			
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																		
0-1m																		
1-2m																		
2-4m																		
>4m																		
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																		
0-1m																		
1-2m																		
2-4m																		
>4m																		
HSL D for Direct Contact																		
PFAS NEMP 2.0 Table 2 Industrial/Commercial																		
NEPM 2013 Management Limits, C/I, Coarse Soil																		
NEPM 2013 Management Limits, POS, Coarse Soil																		
Field ID	**Alternative Name**	**Sample Date**	**Easting**	**Northing**	**Depth**	**Report nu**													
TP-B361_0.1	SMGW-TP-B361_0.1	13/09/2021	291359.483	6254606.984	0.1	828270	No asbestos detected at the reporting limit of 0.01% w/w.Organic fibre detected.No trace asbestos detected	11	6.3	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP-B361_0.5	SMGW-TP-B361_0.5	13/09/2021	291359.483	6254606.984	0.5	828270	-	21	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_0.7	SMGW-TP-B361_0.7	13/09/2021	291359.483	6254606.984	0.7	828270	-	22	5.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1	SMGW-TP-B361_1	13/09/2021	291359.483	6254606.984	1	828270	-	20	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1.5	SMGW-TP-B361_1.5	13/09/2021	291359.483	6254606.984	1.5	828270	-	18	4.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_2	SMGW-TP-B361_2	13/09/2021	291359.483	6254606.984	2	828270	-	17	4.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C2: Previous Results for Soil

											Organophosphorous Pesticides																					
	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NSW 2014 Excavated Natural Material (Absolute Max)																															
NSW 2014 Excavated Natural Material (Max Average)																															
NSW 2014 General Solid Waste CT1 (No Leaching)	60													4																	
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																															
NSW 2014 Restricted Solid Waste CT2 (No Leaching)	240													16																	
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																															
NSW TCLP1 Criteria																															
NEPM 2013 EIL UR/POS																															
NEPM 2013 ESL UR/POS, Coarse																															
NEPM 2013 ESL UR/POS, Fine																															
NEPM 2013 EIL Comm./Ind																															
NEPM 2013 ESL Comm./Ind.																															
NEPM 2013 ESL Comm/Ind, fine																															
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																															
NEPM 2013 HIL, Recreational C		20				10		10	400	30				250																	
PFAS NEMP 2.0 Table 2 Health Public open space																															
HSL C for Direct Contact																															
NEPM 2013 HIL, Commercial/Industrial D		100				50		80	2500	160				2000																	
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																															
0-1m																															
1-2m																															
2-4m																															
>4m																															
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																															
0-1m																															
1-2m																															
2-4m																															
>4m																															
HSL D for Direct Contact																															
PFAS NEMP 2.0 Table 2 Industrial/Commercial																															
NEPM 2013 Management Limits, C/I, Coarse Soil																															
NEPM 2013 Management Limits, POS, Coarse Soil																															

Field ID	Alternative Name	Sample Date	Easting	Northing	Depth	Report nu																															
TP-B361_0.1	SMGW-TP-B361_0.1	13/09/2021	291359.483	6254606.984	0.1	828270	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
TP-B361_0.5	SMGW-TP-B361_0.5	13/09/2021	291359.483	6254606.984	0.5	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_0.7	SMGW-TP-B361_0.7	13/09/2021	291359.483	6254606.984	0.7	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1	SMGW-TP-B361_1	13/09/2021	291359.483	6254606.984	1	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1.5	SMGW-TP-B361_1.5	13/09/2021	291359.483	6254606.984	1.5	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_2	SMGW-TP-B361_2	13/09/2021	291359.483	6254606.984	2	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C2: Previous Results for Soil

										Herbicides	Insecticides	Pesticides		PAH					PAH												
	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Dinoseb	Tokuthion	Parathion	Pirimiphos-methyl	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene TEQ (Zero LOR)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	20	0.2	0.2	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NSW 2014 Excavated Natural Material (Absolute Max)																										1					
NSW 2014 Excavated Natural Material (Max Average)																										0.5					
NSW 2014 General Solid Waste CT1 (No Leaching)																										0.8					
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																															
NSW 2014 Restricted Solid Waste CT2 (No Leaching)																										3.2					
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																															
NSW TCLP1 Criteria																															
NEPM 2013 EIL UR/POS														170																	
NEPM 2013 ESL UR/POS, Coarse																										0.7					
NEPM 2013 ESL UR/POS, Fine																										0.7					
NEPM 2013 EIL Comm./Ind														370																	
NEPM 2013 ESL Comm./Ind.																										1.4					
NEPM 2013 ESL Comm/Ind, fine																										1.4					
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																															
NEPM 2013 HIL, Recreational C																															
PFAS NEMP 2.0 Table 2 Health Public open space																															
HSL C for Direct Contact																															
NEPM 2013 HIL, Commercial/Industrial D																															
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																															
0-1m														NL																	
1-2m														NL																	
2-4m														NL																	
>4m														NL																	
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																															
0-1m																															
1-2m																															
2-4m																															
>4m																															
HSL D for Direct Contact																															
PFAS NEMP 2.0 Table 2 Industrial/Commercial																															
NEPM 2013 Management Limits, C/I, Coarse Soil																															
NEPM 2013 Management Limits, POS, Coarse Soil																															

Field ID	Alternative Name	Sample Date	Easting	Northing	Depth	Report nui																																	
TP-B361_0.1	SMGW-TP-B361_0.1	13/09/2021	291359.483	6254606.984	0.1	828270	<2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<20	<0.2	<0.2	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B361_0.5	SMGW-TP-B361_0.5	13/09/2021	291359.483	6254606.984	0.5	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_0.7	SMGW-TP-B361_0.7	13/09/2021	291359.483	6254606.984	0.7	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1	SMGW-TP-B361_1	13/09/2021	291359.483	6254606.984	1	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1.5	SMGW-TP-B361_1.5	13/09/2021	291359.483	6254606.984	1.5	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_2	SMGW-TP-B361_2	13/09/2021	291359.483	6254606.984	2	828270	-	-	-	-	-	-	-	-	-	<20	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Table C2: Previous Results for Soil

				Phenols													Polychlorinated Biphenyls													
	Benzo(a)pyrene TEQ (Half LOR)_0	Benzo(a)pyrene TEQ (Full LOR)	PAHs (Sum of total)	Phenols (non-halogenated) IWRG621	Phenols(halogenated) IWRG621	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-chloro-3-methylphenol	4-nitrophenol	Cresol (Total)	Phenol	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs (Sum of total)	2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	8:2 Fluorotelomer sulfonate	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	Perfluorobutane sulfonic acid (PFBS)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	20	1	0.5	5	0.2	1	0.4	5	20	1	5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0005	0.0001	0.0005	0.0005	0.0005	0.0001
NSW 2014 Excavated Natural Material (Absolute Max)			40																											
NSW 2014 Excavated Natural Material (Max Average)			20																											
NSW 2014 General Solid Waste CT1 (No Leaching)			200	288				4000							4000									<50						
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																														
NSW 2014 Restricted Solid Waste CT2 (No Leaching)				1152				16000							16000									<50						
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																														
NSW TCLP1 Criteria																														
NEPM 2013 EIL UR/POS																														
NEPM 2013 ESL UR/POS, Coarse																														
NEPM 2013 ESL UR/POS, Fine																														
NEPM 2013 EIL Comm./Ind																														
NEPM 2013 ESL Comm./Ind.																														
NEPM 2013 ESL Comm/Ind, fine																														
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																														
NEPM 2013 HIL, Recreational C	3		300												4000	40000								1						
PFAS NEMP 2.0 Table 2 Health Public open space																														
HSL C for Direct Contact																														
NEPM 2013 HIL, Commercial/Industrial D	40		4000												25000	240000								7						
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																														
0-1m																														
1-2m																														
2-4m																														
>4m																														
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																														
0-1m																														
1-2m																														
2-4m																														
>4m																														
HSL D for Direct Contact																														
PFAS NEMP 2.0 Table 2 Industrial/Commercial																														
NEPM 2013 Management Limits, C/I, Coarse Soil																														
NEPM 2013 Management Limits, POS, Coarse Soil																														

Field ID	Alternative Name	Sample Date	Easting	Northing	Depth	Report nui																										
TP-B361_0.1	SMGW-TP-B361_0.1	13/09/2021	291359.483	6254606.984	0.1	828270	0.6	1.2	<0.5	<20	<1	<0.5	<5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-
TP-B361_0.5	SMGW-TP-B361_0.5	13/09/2021	291359.483	6254606.984	0.5	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001
TP-B361_0.7	SMGW-TP-B361_0.7	13/09/2021	291359.483	6254606.984	0.7	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001
TP-B361_1	SMGW-TP-B361_1	13/09/2021	291359.483	6254606.984	1	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1.5	SMGW-TP-B361_1.5	13/09/2021	291359.483	6254606.984	1.5	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001
TP-B361_2	SMGW-TP-B361_2	13/09/2021	291359.483	6254606.984	2	828270	0.6	1.2	<0.5	<20	<1	<0.5	<5	<0.2	<1	<0.4	<5	<20	<1	<5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C2: Previous Results for Soil

	Perfluorocarbons																			
	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (FOSA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)	N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	Perfluorobutanoic acid (PFBA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctane sulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Sum of PFAS
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005
NSW 2014 Excavated Natural Material (Absolute Max)																				
NSW 2014 Excavated Natural Material (Max Average)																				
NSW 2014 General Solid Waste CT1 (No Leaching)																				
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																1.8	1.8			
NSW 2014 Restricted Solid Waste CT2 (No Leaching)																				
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																7.2	7.2			
NSW TCLP1 Criteria																				
NEPM 2013 EIL UR/POS																				
NEPM 2013 ESL UR/POS, Coarse																				
NEPM 2013 ESL UR/POS, Fine																				
NEPM 2013 EIL Comm./Ind																				
NEPM 2013 ESL Comm./Ind.																				
NEPM 2013 ESL Comm/Ind, fine																				
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																	0.01			
NEPM 2013 HIL, Recreational C																				
PFAS NEMP 2.0 Table 2 Health Public open space																1	1			
HSL C for Direct Contact																				
NEPM 2013 HIL, Commercial/Industrial D																				
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																				
0-1m																				
1-2m																				
2-4m																				
>4m																				
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																				
0-1m																				
1-2m																				
2-4m																				
>4m																				
HSL D for Direct Contact																				
PFAS NEMP 2.0 Table 2 Industrial/Commercial																				
NEPM 2013 Management Limits, C/I, Coarse Soil																				
NEPM 2013 Management Limits, POS, Coarse Soil																				

Field ID	Alternative Name	Sample Date	Easting	Northing	Depth	Report nu																			
TP-B361_0.1	SMGW-TP-B361_0.1	13/09/2021	291359.483	6254606.984	0.1	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_0.5	SMGW-TP-B361_0.5	13/09/2021	291359.483	6254606.984	0.5	828270	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005
TP-B361_0.7	SMGW-TP-B361_0.7	13/09/2021	291359.483	6254606.984	0.7	828270	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005
TP-B361_1	SMGW-TP-B361_1	13/09/2021	291359.483	6254606.984	1	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1.5	SMGW-TP-B361_1.5	13/09/2021	291359.483	6254606.984	1.5	828270	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005
TP-B361_2	SMGW-TP-B361_2	13/09/2021	291359.483	6254606.984	2	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C2: Previous Results for Soil

					Organic				SVOCs	Chlorinated Hydrocarbons																	
	Perfluorodecanesulfonic acid (PFDS)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)	Perfluorononanesulfonic acid (PFNS)	Perfluoropropanesulfonic acid (PFPrS)	Sum of US EPA PFAS (PFOS + PFOA)*	Sum of enHealth PFAS (PFHxS + PFOS + PFOA)*	EPN	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform
	mg/kg	mg/kg	mg/kg	mg/kg	UG/KG	UG/KG	UG/KG	UG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.0001	0.0001	0.0005	0.0001	0.1	0.1	0.1	0.1	0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NSW 2014 Excavated Natural Material (Absolute Max)																											
NSW 2014 Excavated Natural Material (Max Average)																											
NSW 2014 General Solid Waste CT1 (No Leaching)										200	600	26	24		14		10						10			120
NSW EPA PFAS Waste Class Addendum 2016 - SCC1				18																							
NSW 2014 Restricted Solid Waste CT2 (No Leaching)										800	2400	104	96		56		40						40			480
NSW EPA PFAS Waste Class Addendum 2016 - SCC2				72																							
NSW TCLP1 Criteria																											
NEPM 2013 EIL UR/POS																											
NEPM 2013 ESL UR/POS, Coarse																											
NEPM 2013 ESL UR/POS, Fine																											
NEPM 2013 EIL Comm./Ind																											
NEPM 2013 ESL Comm./Ind.																											
NEPM 2013 ESL Comm/Ind, fine																											
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																											
NEPM 2013 HIL, Recreational C																											
PFAS NEMP 2.0 Table 2 Health Public open space		1		10																							
HSL C for Direct Contact																											
NEPM 2013 HIL, Commercial/Industrial D			900																								
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																											
0-1m																											
1-2m																											
2-4m																											
>4m																											
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																											
0-1m																											
1-2m																											
2-4m																											
>4m																											
HSL D for Direct Contact																											
PFAS NEMP 2.0 Table 2 Industrial/Commercial		20		50																							
NEPM 2013 Management Limits, C/I, Coarse Soil																											
NEPM 2013 Management Limits, POS, Coarse Soil																											

Field ID	Alternative Name	Sample Date	Easting	Northing	Depth	Report nu																										
TP-B361_0.1	SMGW-TP-B361_0.1	13/09/2021	291359.483	6254606.984	0.1	828270	-	-	-	-	-	-	-	-	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP-B361_0.5	SMGW-TP-B361_0.5	13/09/2021	291359.483	6254606.984	0.5	828270	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_0.7	SMGW-TP-B361_0.7	13/09/2021	291359.483	6254606.984	0.7	828270	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1	SMGW-TP-B361_1	13/09/2021	291359.483	6254606.984	1	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1.5	SMGW-TP-B361_1.5	13/09/2021	291359.483	6254606.984	1.5	828270	<0.0001	<0.0001	<0.0005	<0.0001	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_2	SMGW-TP-B361_2	13/09/2021	291359.483	6254606.984	2	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table C2: Previous Results for Soil

												Halogenated Hydrocarbons												Halogenated Phenols							Solvents		
	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Chlorinated hydrocarbons IWRG621	1,2-dibromoethane	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromomethane	Chlorobenzene	Dichlorodifluoromethane	Iodomethane	Trichlorofluoromethane	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	Tetrachlorophenols	Methyl Ethyl Ketone	4-Methyl-2-pentanone	Acetone
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	1	0.5	0.5	0.5	1	10	0.5	0.5	0.5
NSW 2014 Excavated Natural Material (Absolute Max)																																
NSW 2014 Excavated Natural Material (Max Average)																																
NSW 2014 General Solid Waste CT1 (No Leaching)					172	10	14			4			86		150				2000				8000	40						4000		
NSW EPA PFAS Waste Class Addendum 2016 - SCC1																																
NSW 2014 Restricted Solid Waste CT2 (No Leaching)					688	40	56			16			344		600				8000				32000	160						16000		
NSW EPA PFAS Waste Class Addendum 2016 - SCC2																																
NSW TCLP1 Criteria																																
NEPM 2013 EIL UR/POS																																
NEPM 2013 ESL UR/POS, Coarse																																
NEPM 2013 ESL UR/POS, Fine																																
NEPM 2013 EIL Comm./Ind																																
NEPM 2013 ESL Comm./Ind.																																
NEPM 2013 ESL Comm/Ind, fine																																
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses																																
NEPM 2013 HIL, Recreational C																												120				
PFAS NEMP 2.0 Table 2 Health Public open space																																
HSL C for Direct Contact																																
NEPM 2013 HIL, Commercial/Industrial D																												660				
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay																																
0-1m																																
1-2m																																
2-4m																																
>4m																																
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand																																
0-1m																																
1-2m																																
2-4m																																
>4m																																
HSL D for Direct Contact																																
PFAS NEMP 2.0 Table 2 Industrial/Commercial																																
NEPM 2013 Management Limits, C/I, Coarse Soil																																
NEPM 2013 Management Limits, POS, Coarse Soil																																

Field ID	Alternative Name	Sample Date	Easting	Northing	Depth	Report nu																																
TP-B361_0.1	SMGW-TP-B361_0.1	13/09/2021	291359.483	6254606.984	0.1	828270	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1	<0.5	<0.5	<0.5	<1	<10	<0.5	<0.5	<0.5
TP-B361_0.5	SMGW-TP-B361_0.5	13/09/2021	291359.483	6254606.984	0.5	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_0.7	SMGW-TP-B361_0.7	13/09/2021	291359.483	6254606.984	0.7	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1	SMGW-TP-B361_1	13/09/2021	291359.483	6254606.984	1	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_1.5	SMGW-TP-B361_1.5	13/09/2021	291359.483	6254606.984	1.5	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP-B361_2	SMGW-TP-B361_2	13/09/2021	291359.483	6254606.984	2	828270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<0.5	<0.5	<0.5	<1	<10	-	-	-

Table C2: Previous Results for Soil

	Allyl chloride	Carbon disulfide	Vic EPA IWRG 621 OCP (Total)*	Vic EPA IWRG 621 Other CHC (Total)*
	mg/kg	mg/kg	MG/KG	MG/KG
EQL	0.5	0.5	0.1	0.5
NSW 2014 Excavated Natural Material (Absolute Max)				
NSW 2014 Excavated Natural Material (Max Average)				
NSW 2014 General Solid Waste CT1 (No Leaching)				
NSW EPA PFAS Waste Class Addendum 2016 - SCC1				
NSW 2014 Restricted Solid Waste CT2 (No Leaching)				
NSW EPA PFAS Waste Class Addendum 2016 - SCC2				
NSW TCLP1 Criteria				
NEPM 2013 EIL UR/POS				
NEPM 2013 ESL UR/POS, Coarse				
NEPM 2013 ESL UR/POS, Fine				
NEPM 2013 EIL Comm./Ind				
NEPM 2013 ESL Comm./Ind.				
NEPM 2013 ESL Comm/Ind, fine				
PFAS NEMP 2.0 Table 3 Ecological Indirect Exposure - All Land Uses				
NEPM 2013 HIL, Recreational C				
PFAS NEMP 2.0 Table 2 Health Public open space				
HSL C for Direct Contact				
NEPM 2013 HIL, Commercial/Industrial D				
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Clay				
0-1m				
1-2m				
2-4m				
>4m				
NEPM 2013 Soil HSL Commercial/Industrial D, for Vapour Intrusion, Sand				
0-1m				
1-2m				
2-4m				
>4m				
HSL D for Direct Contact				
PFAS NEMP 2.0 Table 2 Industrial/Commercial				
NEPM 2013 Management Limits, C/I, Coarse Soil				
NEPM 2013 Management Limits, POS, Coarse Soil				

Field ID	Alternative Name	Sample Date	Easting	Northing	Depth	Report nu				
TP-B361_0.1	SMGW-TP-B361_0.1	13/09/2021	291359.483	6254606.984	0.1	828270	<0.5	<0.5	<0.1	<0.5
TP-B361_0.5	SMGW-TP-B361_0.5	13/09/2021	291359.483	6254606.984	0.5	828270	-	-	-	-
TP-B361_0.7	SMGW-TP-B361_0.7	13/09/2021	291359.483	6254606.984	0.7	828270	-	-	-	-
TP-B361_1	SMGW-TP-B361_1	13/09/2021	291359.483	6254606.984	1	828270	-	-	-	-
TP-B361_1.5	SMGW-TP-B361_1.5	13/09/2021	291359.483	6254606.984	1.5	828270	-	-	-	-
TP-B361_2	SMGW-TP-B361_2	13/09/2021	291359.483	6254606.984	2	828270	-	-	-	-

Table C3: Previous Resullts for Soil

																	LocCode	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319
																	Sample ID	SMGW-BH-B319_0-0.1	BD1/20201216	BT1/20201216	SMGW-BH-B319_0.1-0.15	SMGW-BH-B319_1.5-1.95	SMGW-BH-B319_2.5-2.95
																	Sample Depth Range	0-0.1	0.1-0.15	0.1-0.15	0.1-0.15	1.5-1.95	2.5-2.95
																	Sample Date	16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020
																	Lab Report Number	ES2045243	ES2045243	ES2045243	ES2045243	ES2045243	ES2045243
			HIL D	**HSL D Sand 0 to <1m**	**HSL D Clay 0 to <1m**	**PFAS NEMP 2.0 Health Comm/Ind**	**HIL C**	**PFAS NEMP 2.0 Health POS**	**EIL Comm/ Ind**	**ESL Comm/ Ind, Coarse**	**ESL Comm/ Ind, Fine**	**EIL POS**	**ESL POS, Coarse**	**ESL POS, Fine**	**Ecological NEMP 2.0**	**Management Limits Comm/ ind coarse**	**Management Limits POS coarse**						
Analyte	**Units**	**EQL**																					
Moisture Content	%	0.1																19.4	15.2	18.2	13.7	15.6	14.4
Other Paramters																							
pH (Lab)	pH_Units	0.1																6.5	-	-	5.6	4.9	-
Ammonia as N																		<20	-	-	<20	<20	-
Cyanide Total	mg/kg	1	1500				240											<1	-	-	<1	<1	-
Asbestos																							
Asbestos (1 = asbestos detected, 0 = no asbestos detected)	g/kg		NAD [3]															0	-	-	-	-	-
Asbestos Fines (1 = asbestos detected, 0 = no asbestos detected)	Fibres	5	NFD															0	-	-	-	-	-
Sample weight (dry)	g	0.1																86.2	-	-	-	-	-
Metals/Metalloids																							
Arsenic	mg/kg	4	3000				300		160			100						10	-	-	5	<5	-
Cadmium	mg/kg	0.4	900				90											<1	-	-	<1	<1	-
Chromium (III+VI)	mg/kg	1	3600				300		320			190						18	-	-	13	7	-
Copper	mg/kg	1	240000				17,000		300			210						19	-	-	18	22	-
Lead	mg/kg	1	1500				600		1800			1100						44	-	-	15	13	-
Mercury	mg/kg	0.1	730				80											<0.1	-	-	<0.1	<0.1	-
Nickel	mg/kg	1	6000				1200		300			180						10	-	-	4	5	-
Zinc	mg/kg	1	400000				30,000		720			490						41	-	-	21	34	-
Total Recoverable Hydrocarbons																							
C6-C10	mg/kg	10		260	4					215	215		180	180		700	700	<10	-	-	<10	<10	-
C6-C10 less BTEX (F1)	mg/kg	10		NL	NL					215	215		180	180				<10	-	-	<10	<10	-
C10-C16	mg/kg	50								170	170		120	120		1000	1000	<50	-	-	<50	<50	-
F2-NAPHTHALENE	mg/kg	50																<50	-	-	<50	<50	-
C16-C34	mg/kg	100								1700	2500		300	1300		3500	2500	<100	-	-	<100	<100	-
C34-C40	mg/kg	100								3300	6600		2800	5600		10000	10000	<100	-	-	<100	<100	-
C10 - C40 (Sum of total)	mg/kg	50																<50	-	-	<50	<50	-
Total Petroleum Hydrocarbons (Waste Classification)																							
C6 - C9	mg/kg	10																<10	-	-	<10	<10	-
C10 - C14	mg/kg	50																<50	-	-	<50	<50	-
C15 - C28	mg/kg	100																<100	-	-	<100	<100	-
C29-C36	mg/kg	100																<100	-	-	<100	<100	-
+C10 - C36 (Sum of total)	mg/kg	50																<50	-	-	<50	<50	-
BTEX																							
Benzene	mg/kg	0.2		3	4					75	95		180	180				<0.2	-	-	<0.2	<0.2	-
Toluene	mg/kg	0.5		NL	NL					135	135		120	120				<0.5	-	-	<0.5	<0.5	-
Ethylbenzene	mg/kg	0.5		NL	NL					165	135		70	105				<0.5	-	-	<0.5	<0.5	-
Xylene (m & p)	mg/kg	0.5																<0.5	-	-	<0.5	<0.5	-
Xylene (o)	mg/kg	0.5																<0.5	-	-	<0.5	<0.5	-
Xylene Total	mg/kg	0.5		230	NL					180	95		105	45				<0.5	-	-	<0.5	<0.5	-
Total BTEX	mg/kg	0.2																<0.2	-	-	<0.2	<0.2	-
Organochlorine Pesticides																							
4,4-DDE	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
a-BHC	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Aldrin	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Aldrin + Dieldrin	mg/kg	0.05	45				10											<0.05	-	-	<0.05	<0.05	-
b-BHC	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
chlordane	mg/kg	0.05	530				70											<0.05	-	-	<0.05	<0.05	-
Chlordane (cis)	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Chlordane (trans)	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
d-BHC	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
DDD	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
DDT	mg/kg	0.2							640 [9]			180						<0.2	-	-	<0.2	<0.2	-
DDT+DDE+DDD	mg/kg	0.05	3600				400											<0.05	-	-	<0.05	<0.05	-
Dieldrin	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Endosulfan	mg/kg	0.05	2000				340											<0.05	-	-	<0.05	<0.05	-
Endosulfan I	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Endosulfan II	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Endosulfan sulphate	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Endrin	mg/kg	0.05	100				20											<0.05	-	-	<0.05	<0.05	-
Endrin aldehyde	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Endrin ketone	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
g-BHC (Lindane)	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Heptachlor	mg/kg	0.05	50				10											<0.05	-	-	<0.05	<0.05	-
Heptachlor epoxide	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Methoxychlor	mg/kg	0.2	2500				400											<0.2	-	-	<0.2	<0.2	-
Organophosphorus Pesticides																							
Azinophos methyl	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Bromophos-ethyl	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Carbophenothion	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Chlorfenvinphos	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Chlorpyrifos	mg/kg	0.05	2000				250											<0.05	-	-	<0.05	<0.05	-
Chlorpyrifos-methyl	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Demeton-S-methyl	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Diazinon	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Dichlorvos	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Dimethoate	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Ethion	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Fenamiphos	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Fenthion	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Malathion	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Methyl parathion	mg/kg	0.2																<0.2	-	-	<0.2	<0.2	-
Monocrotophos	mg/kg	0.2																<0.2	-	-	<0.2	<0.2	-
Parathion	mg/kg	0.2																<0.2	-	-	<0.2	<0.2	-
Pirimphos-ethyl	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Prothiofos	mg/kg	0.05																<0.05	-	-	<0.05	<0.05	-
Polycyclic Aromatic Hydrocarbons																							

Table C3: Previous Resullts for Soil

LocCode															SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319
Sample ID															SMGW-BH-B319_0-0.1	BD1/20201216	BT1/20201216	SMGW-BH-B319_0.1-0.15	SMGW-BH-B319_1.5-1.95	SMGW-BH-B319_2.5-2.95
Sample Depth Range															0-0.1	0.1-0.15	0.1-0.15	0.1-0.15	1.5-1.95	2.5-2.95
Sample Date															16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020
Lab Report Number															ES2045243	ES2045243	ES2045243	ES2045243	ES2045243	ES2045243
			HIL D	**HSL D Sand 0 to <1m**	**HSL D Clay 0 to <1m**	**PFAS NEMP 2.0 Health Comm/Ind**	**HIL C**	**PFAS NEMP 2.0 Health POS**	**EIL Comm/ Ind**	**ESL Comm/ Ind, Coarse**	**ESL Comm/ Ind, Fine**	**EIL POS**	**ESL POS, Coarse**	**ESL POS, Fine**	**Ecological NEMP 2.0**	**Management Limits Comm/ ind coarse**	**Management Limits POS coarse**					
Analyte	**Units**	**EQL**																				
Acenaphthene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Acenaphthylene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Anthracene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Benz(a)anthracene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Benzo(a) pyrene	mg/kg	0.5								1.4	1.4		0.7	0.7			<0.5	-	-	<0.5	<0.5	-
Benzo(a)pyrene TEQ (medium bound)	mg/kg	0.5	40				3										0.6	-	-	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound)	mg/kg	0.5	40				3										1.2	-	-	1.2	1.2	-
Benzo(a)pyrene TEQ (lower bound)	mg/kg	0.5	40				3										<0.5	-	-	<0.5	<0.5	-
Carcinogenic PAHs (as BaP TEQ)	mg/kg		40				3										<1.21	-	-	<1.21	<1.21	-
Benzo(g,h,i)perylene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Benzo[b+j]fluoranthene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Benzo(k)fluoranthene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Chrysene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Dibenz(a,h)anthracene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Fluoranthene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Fluorene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Naphthalene	mg/kg	0.5							370			170					<0.5	-	-	<0.5	<0.5	-
Phenanthrene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
Pyrene	mg/kg	0.5															<0.5	-	-	<0.5	<0.5	-
PAHs (Sum of total)	mg/kg	0.5	4000				300										<0.5	-	-	<0.5	<0.5	-
Phenols																						
Phenolics Total	mg/kg	1															<1	-	-	-	-	-
Volatile Organic Compounds																						
1,2,3-trichlorobenzene	mg/kg	0.5															<0.5	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.5															<0.5	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.5															<0.5	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.5															<0.5	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.5															<0.5	-	-	-	-	-
2-chlorotoluene	mg/kg	0.5															<0.5	-	-	-	-	-
4-chlorotoluene	mg/kg	0.5															<0.5	-	-	-	-	-
Bromobenzene	mg/kg	0.5															<0.5	-	-	-	-	-
Chlorobenzene	mg/kg	0.5															<0.5	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.05															<0.05	-	-	<0.05	<0.05	-
1,2,4-trimethylbenzene	mg/kg	0.5															<0.5	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.5															<0.5	-	-	-	-	-
Isopropylbenzene	mg/kg	0.5															<0.5	-	-	-	-	-
n-butylbenzene	mg/kg	0.5															<0.5	-	-	-	-	-
n-propylbenzene	mg/kg	0.5															<0.5	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.5															<0.5	-	-	-	-	-
sec-butylbenzene	mg/kg	0.5															<0.5	-	-	-	-	-
Styrene	mg/kg	0.5															<0.5	-	-	-	-	-
tert-butylbenzene	mg/kg	0.5															<0.5	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5															<5	-	-	-	-	-
Methyl Ethyl Ketone	mg/kg	5															<5	-	-	-	-	-
4-Methyl-2-pentanone	mg/kg	5															<5	-	-	-	-	-
Carbon disulfide	mg/kg	0.5															<0.5	-	-	-	-	-
Vinyl acetate	mg/kg	5															<5	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.5															<0.5	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.5															<0.5	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.5															<0.5	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.5															<0.5	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.5															<0.5	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.5															<0.5	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.5															<0.5	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.5															<0.5	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.5															<0.5	-	-	-	-	-
1,2-dibromoethane	mg/kg	0.5															<0.5	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.5															<0.5	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.5															<0.5	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.5															<0.5	-	-	-	-	-
2,2-dichloropropane	mg/kg	0.5															<0.5	-	-	-	-	-
Bromodichloromethane	mg/kg	0.5															<0.5	-	-	-	-	-
Bromoform	mg/kg	0.5															<0.5	-	-	-	-	-
Bromomethane	mg/kg	5															<5	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.5															<0.5	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.5															<0.5	-	-	-	-	-
Chloroethane	mg/kg	5															<5	-	-	-	-	-
Chloroform	mg/kg	0.5															<0.5	-	-	-	-	-
Chloromethane	mg/kg	5															<5	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.5															<0.5	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.5															<0.5	-	-	-	-	-
cis-1,4-Dichloro-2-butene	mg/kg	0.5															<0.5	-	-	-	-	-
Dibromomethane	mg/kg	0.5															<0.5	-	-	-	-	-
Dichlorodifluoromethane	mg/kg	5															<5	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.5															<0.5	-	-	-	-	-
Iodomethane	mg/kg	0.5															<0.5	-	-	-	-	-
Pentachloroethane	mg/kg	0.5															<0.5	-	-	-	-	-
Trichloroethene	mg/kg	0.5															<0.5	-	-	-	-	-
Trichlorofluoromethane	mg/kg	5															<5	-	-	-	-	-
Tetrachloroethene	mg/kg	0.5															<0.5	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.5															<0.5	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.5															<0.5	-	-	-	-	-
trans-1,4-Dichloro-2-butene	mg/kg	0.5															<0.5	-	-	-	-	-
Vinyl chloride	mg/kg	5															<5	-	-	-	-	-
Per- and Polyfluoroalkyl Substances																						
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005															<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Table C3: Previous Resullts for Soil

			HIL D	HSL D Sand 0 to <1m	HSL D Clay 0 to <1m	PFAS NEMP 2.0 Health Comm/Ind	HIL C	PFAS NEMP 2.0 Health POS	EIL Comm/ Ind	ESL Comm/ Ind, Coarse	ESL Comm/ Ind, Fine	EIL POS	ESL POS, Coarse	ESL POS, Fine	Ecological NEMP 2.0	Management Limits Comm/ ind coarse	Management Limits POS coarse						
LocCode																		SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319
Sample ID																		SMGW-BH-B319_0-0.1	BD1/20201216	BT1/20201216	SMGW-BH-B319_0.1-0.15	SMGW-BH-B319_1.5-1.95	SMGW-BH-B319_2.5-2.95
Sample Depth Range																		0-0.1	0.1-0.15	0.1-0.15	0.1-0.15	1.5-1.95	2.5-2.95
Sample Date																		16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020
Lab Report Number																		ES2045243	ES2045243	ES2045243	ES2045243	ES2045243	ES2045243
Analyte	**Units**	**EQL**																					
6:2 Fluorotelomer Sulfonate (6:2 FtS)	mg/kg	0.0005																<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005																<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005																<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005																<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	mg/kg	0.0005																<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005																<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE Alcohol)	mg/kg	0.0005																<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002													0.01			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecane sulfonic acid (PFDS)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorobutanoic acid (PFBA)	mg/kg	0.001																<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoate (PFOA)	mg/kg	0.0002				50		10							10			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005																<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Sum of PFAS	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sum of PFHxS and PFOS	mg/kg	0.0002				20		1										<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sum of PFAS (WA DER List)	mg/kg	0.0002																<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Table C4: Previous Results for Waste Classification

										LocCode	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319
										Sample ID	SMGW-BH-B319_0-0.1	BD1/20201216	BT1/20201216	SMGW-BH-B319_0.1-0.15	SMGW-BH-B319_1.5-1.95	SMGW-BH-B319_2.5-2.95
										Sample Depth Range	0-0.1	0.1-0.15	0.1-0.15	0.1-0.15	1.5-1.95	2.5-2.95
										Sample Date	16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020
										Lab Report Number	ES2045243	ES2045243	ES2045243	ES2045243	ES2045243	ES2045243
Analyte	**Units**	**EQL**	NSW EPA 2014 General Solid Waste (CT1)	NSW EPA 2014 General Solid Waste SCC1	TCLP1 General Solid Waste (µg/l or mg/l)^#	NSW EPA 2014 Restricted Solid Waste CT2	NSW EPA 2014 Restricted Solid Waste SCC2	TCLP2 Restricted Solid Waste (µg/l or mg/l)^#	NSW 2014 Excavated Natural Material (Absolute Max)	NSW 2014 Excavated Natural Material (Max Average)						
Moisture Content	%	0.1							-	-	19.4	15.2	18.2	13.7	15.6	14.4
Asbestos																
Asbestos (1 = asbestos detected, 0 = no asbestos detected)	Fibres	5									0	-	-	-	-	-
Asbestos Fines (1 = asbestos detected, 0 = no asbestos detected)	Fibres	5									0	-	-	-	-	-
Sample weight (dry)	--										86.2	-	-	-	-	-
TCLP Parameters																
pH (Initial)	pH_Units	0.1									-	-	-	-	-	-
pH (after HCL)	pH_Units	0.1									-	-	-	-	-	-
Extraction Fluid Number	pH_Units	1							-	-	-	-	-	-	-	-
Final pH									-	-	-	-	-	-	-	-
Other Parameters																
pH (Lab)	pH_Units	0.1							4.5 to 10	5 to 9	6.5	-	-	5.6	4.9	-
Ammonia as N	mg/kg	20									<20	-	-	<20	<20	-
Cyanide Total	mg/kg	1	320	5900	16	1280	23600	64			<1	-	-	<1	<1	-
Metals/Metalloids																
Arsenic	mg/kg	4	100	500	5	400	2000	20	40	20	10	-	-	5	<5	-
Cadmium	mg/kg	0.4	20	100	1	80	400	4	1	0.5	<1	-	-	<1	<1	-
Chromium (III+VI)	mg/kg	1	100 ~	1900 ~	5	400 ~	7600 ~	20	150	75	18	-	-	13	7	-
Copper	mg/kg	1	-	-	-	-	-	-	200	100	19	-	-	18	22	-
Lead	mg/kg	1	100	1500	5	400	6000	20	100	50	44	-	-	15	13	-
Mercury	mg/kg	0.1	4	50	0.2	16	200	0.8	1	0.5	<0.1	-	-	<0.1	<0.1	-
Nickel	mg/kg	1	40	1050	2	160	4200	8	60	30	10	-	-	4	5	-
Zinc	mg/kg	1	-	-	-	-	-	-	300	150	41	-	-	21	34	-
Total Recoverable Hydrocarbons																
C6-C10	mg/kg	10									<10	-	-	<10	<10	-
C6-C10 less BTEX (F1)	mg/kg	10									<10	-	-	<10	<10	-
C10-C16	mg/kg	50									<50	-	-	<50	<50	-
F2-NAPHTHALENE	mg/kg	50									<50	-	-	<50	<50	-
C16-C34	mg/kg	100									<100	-	-	<100	<100	-
C34-C40	mg/kg	100									<100	-	-	<100	<100	-
C10 - C40 (Sum of total)	mg/kg	50									<50	-	-	<50	<50	-
Total Petroleum Hydrocarbons (Waste Classification)																
C6 - C9	mg/kg	10	650	650	N/A	2600	2600	N/A	-	-	<10	-	-	<10	<10	-
C10 - C14	mg/kg	50							-	-	<50	-	-	<50	<50	-
C15 - C28	mg/kg	100							-	-	<100	-	-	<100	<100	-
C29-C36	mg/kg	100							-	-	<100	-	-	<100	<100	-
+C10 - C36 (Sum of total)	mg/kg	50	10000	10000	N/A	40000	40000	N/A	500	250	<50	-	-	<50	<50	-
BTEX																
Benzene	mg/kg	0.2	10	18	0.5	40	72	2	0.5	-	<0.2	-	-	<0.2	<0.2	-
Toluene	mg/kg	0.5	288	518	14.4	1152	2073	57.6	65	-	<0.5	-	-	<0.5	<0.5	-
Ethylbenzene	mg/kg	0.5	600	1080	30	2400	4320	120	25	-	<0.5	-	-	<0.5	<0.5	-
Xylene (m & p)	mg/kg	0.5							-	-	<0.5	-	-	<0.5	<0.5	-
Xylene (o)	mg/kg	0.5							-	-	<0.5	-	-	<0.5	<0.5	-
Xylene Total	mg/kg	0.5	1000	1800	50	4000	7200	200	15	-	<0.5	-	-	<0.5	<0.5	-
Total BTEX	mg/kg	0.2							-	-	<0.2	-	-	<0.2	<0.2	-
Organochlorine Pesticides																
Scheduled chemicals (Waste Classification Guidelines)	mg/kg	-	50	50	N/A	50	50	N/A			<1.35	-	-	<0.85	<0.85	-
4,4-DDE	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
a-BHC	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Aldrin	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Aldrin + Dieldrin	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
b-BHC	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
chlordane	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Chlordane (cis)	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Chlordane (trans)	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
d-BHC	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
DDD	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
DDT	mg/kg	0.1							-	-	<0.2	-	-	<0.2	<0.2	-
DDT+DDE+DDD	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Dieldrin	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Endosulfan	mg/kg	0.05	60	108	3	240	432	12	-	-	<0.05	-	-	<0.05	<0.05	-
Endosulfan I	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Endosulfan II	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Endosulfan sulphate	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Endrin	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Endrin aldehyde	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Endrin ketone	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
g-BHC (Lindane)	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Heptachlor	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Heptachlor epoxide	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-

										LocCode	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319
										Sample ID	SMGW-BH-B319_0-0.1	BD1/20201216	BT1/20201216	SMGW-BH-B319_0.1-0.15	SMGW-BH-B319_1.5-1.95	SMGW-BH-B319_2.5-2.95
										Sample Depth Range	0-0.1	0.1-0.15	0.1-0.15	0.1-0.15	1.5-1.95	2.5-2.95
										Sample Date	16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020
										Lab Report Number	ES2045243	ES2045243	ES2045243	ES2045243	ES2045243	ES2045243
Analyte	**Units**	**EQL**	NSW EPA 2014 General Solid Waste (CT1)	NSW EPA 2014 General Solid Waste SCC1	TCLP1 General Solid Waste (µg/l or mg/l)^#	NSW EPA 2014 Restricted Solid Waste CT2	NSW EPA 2014 Restricted Solid Waste SCC2	TCLP2 Restricted Solid Waste (µg/l or mg/l)^#	NSW 2014 Excavated Natural Material (Absolute Max)	NSW 2014 Excavated Natural Material (Max Average)						
Methoxychlor	mg/kg	0.1							-	-	<0.2	-	-	<0.2	<0.2	-
Organophosphorus Pesticides																
Moderately Harrmful Pesticides (Waste Classification Guidelines)	mg/kg	-	250	250	N/A	1000	1000	N/A	-	-	<0.5	-	-	<0.5	<0.5	-
Azinophos methyl	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Bromophos-ethyl	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Carbophenothion	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Chlorfenvinphos	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Chlorpyrifos	mg/kg	0.05	4	7.5	0.2	16	30	0.8	-	-	<0.05	-	-	<0.05	<0.05	-
Chlorpyrifos-methyl	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Demeton-S-methyl	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Diazinon	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Dichlorvos	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Dimethoate	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Ethion	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Fenamiphos	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Fenthion	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Malathion	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Methyl parathion	mg/kg	0.2							-	-	<0.2	-	-	<0.2	<0.2	-
Monocrotophos	mg/kg	0.2							-	-	<0.2	-	-	<0.2	<0.2	-
Pirimphos-ethyl	mg/kg	0.1							-	-	<0.05	-	-	<0.05	<0.05	-
Parathion	mg/kg	0.05							-	-	<0.2	-	-	<0.2	<0.2	-
Prothiofos	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
Polycyclic Aromatic Hydrocarbons																
Acenaphthene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Acenaphthylene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Anthracene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Benz(a)anthracene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Benzo(a) pyrene	mg/kg	0.05	0.8	10	0.04	3.2	23	0.16	1	0.5	<0.5	-	-	<0.5	<0.5	-
Benzo(a)pyrene TEQ	mg/kg	-							-	-	<1.21	-	-	<1.21	<1.21	-
Benzo(a)pyrene TEQ (half LOR)	mg/kg	0.5							-	-	0.6	-	-	0.6	0.6	-
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5							-	-	1.2	-	-	1.2	1.2	-
Benzo(a)pyrene TEQ (zero)	mg/kg	0.5							-	-	<0.5	-	-	<0.5	<0.5	-
Benzo[b+j]fluoranthene	mg/kg	0.5							-	-	<0.5	-	-	<0.5	<0.5	-
Benzo(g,h,i)perylene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Benzo(k)fluoranthene	mg/kg	0.5							-	-	<0.5	-	-	<0.5	<0.5	-
Carcinogenic PAHs (as BaP TEQ)	mg/kg	-							-	-	<1.21	-	-	<1.21	<1.21	-
Chrysene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Dibenz(a,h)anthracene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Fluoranthene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Fluorene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Naphthalene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Phenanthrene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
Pyrene	mg/kg	0.1							-	-	<0.5	-	-	<0.5	<0.5	-
PAHs (Sum of total)	mg/kg	0.5/0.05							40	20	<0.5	-	-	<0.5	<0.5	-
PAH (total, NSW Waste 2014)	mg/kg	-	200	200	N/A	800	800	N/A	-	-	<7.5	-	-	<7.5	<7.5	-
Phenols																
Phenolics Total	mg/kg	1							-	-	<1	-	-	-	-	-
Volatile Organic Compounds																
1,2,3-trichlorobenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,2,4-trichlorobenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,2-dichlorobenzene	mg/kg	0.5	86	155	4.3	344	620	17.2	-	-	<0.5	-	-	-	-	-
1,3-dichlorobenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,4-dichlorobenzene	mg/kg	0.5	150	270	7.5	600	1080	30	-	-	<0.5	-	-	-	-	-
2-chlorotoluene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
4-chlorotoluene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Bromobenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Chlorobenzene	mg/kg	0.5	2000	3600	100	8000	14400	400	-	-	<0.5	-	-	-	-	-
Hexachlorobenzene	mg/kg	0.05							-	-	<0.05	-	-	<0.05	<0.05	-
cis-1,4-Dichloro-2-butene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Pentachloroethane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
trans-1,4-Dichloro-2-butene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,2,4-trimethylbenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,3,5-trimethylbenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Isopropylbenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
n-butylbenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
n-propylbenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
p-isopropyltoluene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
sec-butylbenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Styrene	mg/kg	0.5	60	108	3	240	432	12	-	-	<0.5	-	-	-	-	-
tert-butylbenzene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
2-hexanone (MBK)	mg/kg	5							-	-	<5	-	-	-	-	-

										LocCode	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319	SMGW-BH-B319
										Sample ID	SMGW-BH-B319_0-0.1	BD1/20201216	BT1/20201216	SMGW-BH-B319_0.1-0.15	SMGW-BH-B319_1.5-1.95	SMGW-BH-B319_2.5-2.95
										Sample Depth Range	0-0.1	0.1-0.15	0.1-0.15	0.1-0.15	1.5-1.95	2.5-2.95
										Sample Date	16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020	16/12/2020
										Lab Report Number	ES2045243	ES2045243	ES2045243	ES2045243	ES2045243	ES2045243
Analyte	**Units**	**EQL**	NSW EPA 2014 General Solid Waste (CT1)	NSW EPA 2014 General Solid Waste SCC1	TCLP1 General Solid Waste (µg/l or mg/l)^#	NSW EPA 2014 Restricted Solid Waste CT2	NSW EPA 2014 Restricted Solid Waste SCC2	TCLP2 Restricted Solid Waste (µg/l or mg/l)^#	NSW 2014 Excavated Natural Material (Absolute Max)	NSW 2014 Excavated Natural Material (Max Average)						
Methyl Ethyl Ketone	mg/kg	5	4000	7200	200	16000	28800	800	-	-	<5	-	-	-	-	-
4-Methyl-2-pentanone	mg/kg	5							-	-	<5	-	-	-	-	-
Carbon disulfide	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Vinyl acetate	mg/kg	5							-	-	<5	-	-	-	-	-
1,1,1,2-tetrachloroethane	mg/kg	0.5	200	360	10	800	1440	40	-	-	<0.5	-	-	-	-	-
1,1,1-trichloroethane	mg/kg	0.5	600	1080	30	2400	4320	120	-	-	<0.5	-	-	-	-	-
1,1,2,2-tetrachloroethane	mg/kg	0.5	26	46.8	1.3	104	187.2	5.2	-	-	<0.5	-	-	-	-	-
1,1,2-trichloroethane	mg/kg	0.5	24	43.2	1.2	96	172.8	4.8	-	-	<0.5	-	-	-	-	-
1,2-dibromoethane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,1-dichloroethane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,1-dichloroethene	mg/kg	0.5	14	25	0.7	56	100	2.8	-	-	<0.5	-	-	-	-	-
1,1-dichloropropene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,2,3-trichloropropane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,2-dibromo-3-chloropropane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,2-dichloroethane	mg/kg	0.5	10	18	0.5	40	72	2	-	-	<0.5	-	-	-	-	-
1,2-dichloropropane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
1,3-dichloropropane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
2,2-dichloropropane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Bromodichloromethane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Bromoform	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Bromomethane	mg/kg	5							-	-	<5	-	-	-	-	-
Carbon tetrachloride	mg/kg	0.5	10	18	0.5	40	72	2	-	-	<0.5	-	-	-	-	-
Chlorodibromomethane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Chloroethane	mg/kg	5							-	-	<5	-	-	-	-	-
Chloroform	mg/kg	0.5	120	216	6	480	864	24	-	-	<0.5	-	-	-	-	-
Chloromethane	mg/kg	5							-	-	<5	-	-	-	-	-
cis-1,2-dichloroethene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
cis-1,3-dichloropropene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Dibromomethane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Dichlorodifluoromethane	mg/kg	5							-	-	<5	-	-	-	-	-
Hexachlorobutadiene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Iodomethane	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Trichloroethene	mg/kg	0.5	10	18	0.5	40	72	2	-	-	<0.5	-	-	-	-	-
Trichlorofluoromethane	mg/kg	5							-	-	<5	-	-	-	-	-
Tetrachloroethene	mg/kg	0.5	14	25.2	0.7	56	100.8	2.8	-	-	<0.5	-	-	-	-	-
trans-1,2-dichloroethene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
trans-1,3-dichloropropene	mg/kg	0.5							-	-	<0.5	-	-	-	-	-
Vinyl chloride	mg/kg	5	4	7.2	0.2	16	28.8	0.8	-	-	<5	-	-	-	-	-
Per- and Polyfluoroalkyl Substances																
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005							-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer Sulfonate (6:2 FtS)	mg/kg	0.0005							-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005							-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005							-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005							-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005							-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE Alcohol)	mg/kg	0.0005							-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE	mg/kg	0.0005							-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecane sulfonic acid (PFDS)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorobutanoic acid (PFBA)	mg/kg	0.001							-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoate (PFOA)	mg/kg	0.0002		18	500		72	2000	-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005							-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Sum of PFAS	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sum of PFHxS and PFOS	mg/kg	0.0002		1.8	50		7.2	200	-	-	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Sum of PFAS (WA DER List)	mg/kg	0.0002							-	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

Table C5: Previous Results for Groundwater

						TRH					CRC Care TRH Fractions										BTEX					
						C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	TPH C10-C14 Fraction after Silica Cleanup	TPH C15-C28 Fraction after Silica Cleanup	TPH C29-C36 Fraction after Silica Cleanup	C10 - C36 Fraction (sum) (SG)	C6-C10	C10-C16	C16-C34	C34-C40	C10 - C40 (Sum of total)	F1: C6-C10 less BTEX	F2: >C10-C16 less NAPHTHALENE	>C10 - C16 Fraction (SG)	>C16 - C34 Fraction (SG)	>C34 - C40 Fraction (SG)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	Xylene Total
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L
LOR						20	50	100	100	100	50	100	100	100	20	50	100	100	100	20	50	50	100	100	1	1	1	2	1	3
Aesthetic - Recreational Criteria (10x)																									10	8000	3000			6000
ADWG Health - Recreational Criteria																										25	3			20
Health screening level D for vapour instrusion, clay, 2 m to <4 m																				NL	NL				30,000	NL	NL			NL
Health screening level D for vapour instrusion, clay, 4 m to <8 m																				NL	NL				30,000	NL	NL			NL
Health screening level D for vapour instrusion, clay, 8 m+																				NL	NL				35,000	NL	NL			NL
Freshwater DGV																									950	180	80	75+200	350	
PFAS NEMP 2.0 Recreational																														
PFAS NEMP 2.0 Table 5 Freshwater 99%																														
S	Field ID	Location ID	Easting	Northing	Sample Date	Lab Report																								
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	<20	<50	**300**	<100	300	-	-	-	-	<20	<50	**300**	<100	**300**	<20	<50	-	-	-	<1	**2**	<1	<2	<1	<3
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	<20	190	<100	<100	**190**	<50	100	<100	100	<20	170	<100	<100	**170**	<20	**170**	<50	<100	<100	<1	**5**	<1	<2	<1	<3
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	<20	110	<100	<100	**110**	<50	<100	<100	<100	<20	90	<100	<100	<100	<20	**90**	<50	<100	<100	<1	<1	<1	<2	<1	<3
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	<20	<50	<100	<100	<100	-	-	-	-	<20	<50	<100	<100	<100	<20	<50	-	-	-	<1	<1	<1	<2	<1	<3
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	<20	<50	**2300**	**300**	**2600**	-	-	-	-	<20	50	**2600**	**200**	**2850**	<20	**50**	-	-	-	<1	**1**	<1	<2	<1	<3

Table C5: Previous Results for Groundwater

							MAH					Metals																					
							Total MAH	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	Styrene	Aluminium	Aluminium (Filtered)	Arsenic	Arsenic (Filtered)	Barium	Barium (Filtered)	Beryllium	Beryllium (Filtered)	Boron	Boron (Filtered)	Cadmium	Cadmium (Filtered)	Calcium	Chromium (hexavalent)	Chromium (III+VI)	Chromium (III+VI) (Filtered)	Cobalt	Cobalt (Filtered)	Copper	Copper (Filtered)
							mg/L	µg/L	µg/L	µg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
LOR							0.003	1	1	1	1	0.01	0.01	0.001	0.001	0.001	0.001	0.001	0.0005	0.02	0.02	0.0001	0.0001	0.5	0.005	0.001	0.0001	0.001	0.001	0.001	0.001
Aesthetic - Recreational Criteria (10x)											300			0.1	0.1	20	20	0.6	0.6	40	40	0.02	0.02		0.5						20	20
ADWG Health - Recreational Criteria											4	0.2	0.2																	1	1
Health screening level D for vapour instrusion, clay, 2 m to <4 m																																
Health screening level D for vapour instrusion, clay, 4 m to <8 m																																
Health screening level D for vapour instrusion, clay, 8 m+																																
Freshwater DGV										30		0.0008	0.0008	0.013	0.013					0.94	0.94	0.0002	0.0002		0.001	0.001	0.001			0.0014	0.0014
PFAS NEMP 2.0 Recreational																																
PFAS NEMP 2.0 Table 5 Freshwater 99%																																
S	Field ID	Location ID	Easting	Northing	Sample Date	Lab Report																										
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	<0.003	<1	<1	<1	<1	1.4	<0.05	0.007	0.008	0.17	0.13	<0.001	<0.001	0.07	0.09	0.0005	0.0005	270	<0.005	0.006	0.002	0.081	0.073	0.007	0.004
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	**0.005**	<1	<1	<1	<1	-	-	0.002	-	-	-	-	-	-	-	0.0003	-	-	-	<0.001	-	0.11	-	0.002	-
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	<0.003	<1	<1	<1	<1	0.06	<0.05	0.003	0.002	0.17	0.17	<0.001	<0.001	0.06	0.06	0.0006	0.0006	420	-	0.01	<0.0001	0.11	0.11	0.008	0.008
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	-	-	-	-	-	<0.05	<0.05	0.001	<0.001	0.18	0.18	<0.001	<0.001	0.05	<0.05	0.0007	0.0007	350	-	0.008	0.008	0.091	0.089	0.001	0.001
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	<0.003	<1	<1	<1	<1	-	-	0.001	0.002	-	-	-	-	-	-	<0.0002	<0.0002	240	-	0.002	0.004	0.005	0.005	0.005	0.006
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	<0.003	<1	<1	<1	<1	0.6	<0.05	0.003	0.002	0.07	0.06	<0.001	<0.001	0.12	0.09	<0.0002	<0.0002	400	-	0.001	<0.0001	0.17	0.14	0.002	<0.001

Table C5: Previous Results for Groundwater

						Metals												Metals										
						Iron	Iron (Filtered)	Lead	Lead (Filtered)	Magnesium	Manganese	Manganese (Filtered)	Mercury	Mercury (Filtered)	Molybdenum	Molybdenum (Filtered)	Nickel	Nickel (Filtered)	Potassium	Selenium	Selenium (Filtered)	Sodium	Strontium	Strontium (Filtered)	Vanadium	Vanadium (Filtered)	Zinc	Zinc (Filtered)	Sulfate Reducing Bacteria	Alkalinity (Bicarbonate as CaCO3)
						mg/L	µg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		mg/L
LOR						0.01	0.01	0.0001	0.001	0.5	0.0001	0.005	0.00001	0.00005	0.001	0.001	0.001	0.001	0.5	0.001	0.001	0.5	0.001	0.001	0.001	0.001	0.0001	0.001		5
Aesthetic - Recreational Criteria (10x)								0.1	0.1		5	5	0.01	0.01	0.5	0.5	0.2	0.2		0.1	0.1								
ADWG Health - Recreational Criteria						0.3	300				0.1	0.1																	
Health screening level D for vapour instrusion, clay, 2 m to <4 m																													
Health screening level D for vapour instrusion, clay, 4 m to <8 m																													
Health screening level D for vapour instrusion, clay, 8 m+																													
Freshwater DGV								0.0034	0.0034		1.9	1.9	0.00006	0.00006	0.034	0.034	0.011	0.011		0.005	0.005				0.006	0.006	0.008	0.008		
PFAS NEMP 2.0 Recreational																													
PFAS NEMP 2.0 Table 5 Freshwater 99%																													
S	**Field ID**	**Location ID**	**Easting**	**Northing**	**Sample Date**	**Lab Report**																							
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	4.7	120	0.004	0.005	720	3.8	3.3	<0.0001	<0.0001	<0.005	<0.005	0.09	0.079	6.8	<0.001	0.003	3700	2.6	2.4	0.026	0.02	0.062	0.05	-	980
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	0.93	-	<0.001	-	-	5.2	-	<0.00001	-	-	-	0.046	-	-	-	-	-	-	-	-	-	0.028	-	-	-
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	0.11	<50	<0.001	<0.001	1400	26	23	<0.0001	<0.0001	<0.005	<0.005	0.045	0.045	11	0.001	<0.001	5000	10	9.8	<0.005	<0.005	0.034	0.037	-	120
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	0.08	70	<0.001	0.001	1400	20	21	<0.0001	<0.0001	<0.005	<0.005	0.041	0.041	8.9	0.005	0.002	5400	10	9.9	<0.005	<0.005	0.03	0.028	-	110
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	1.1	2800	0.001	0.004	690	1.3	1.2	<0.0001	<0.0001	-	-	0.007	0.007	17	-	-	4300	-	-	-	-	0.019	0.021	-	770
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	14	11,000	0.003	<0.001	800	8.6	6.3	<0.0001	<0.0001	<0.005	0.005	0.019	0.016	22	0.002	0.009	5600	6	4.4	<0.005	<0.005	0.012	0.006	-	240

Table C5: Previous Results for Groundwater

| | | | | | | | Inorganics | | | | | | |

Table C5: Previous Results for Groundwater

						PAH															Phenols								
						Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benz(a)anthracene	Chrysene	Benzo(k)fluoranthene	Benzo(b+j)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	1-Chloronaphthalene	2-chloronaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	PAHs (Sum of total)	2,4-dimethylphenol	2,4-dinitrophenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4,6-Dinitro-2-methylphenol	4-chloro-3-methylphenol	4-nitrophenol
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	ug/L	µg/L	ug/L
LOR						0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00001	0.01	0.01	0.01	5	2	2	2	0.01	3	30	3	10	6	30	10	30
Aesthetic - Recreational Criteria (10x)														0.0001															
ADWG Health - Recreational Criteria																													
Health screening level D for vapour instrusion, clay, 2 m to <4 m																													
Health screening level D for vapour instrusion, clay, 4 m to <8 m																													
Health screening level D for vapour instrusion, clay, 8 m+																													
Freshwater DGV						0.6	0.01	1						0.0001									2	45						58
PFAS NEMP 2.0 Recreational																													
PFAS NEMP 2.0 Table 5 Freshwater 99%																													
S	Field ID	Location ID	Easting	Northing	Sample Date	Lab Report																								
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	-	-	-	-	<1	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.01	-	-	-	-	<0.01	-	-	-	-	-	-	-	-
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<5	<5	<5	<5	<1	<3	<30	<3	<10	<6	<30	<10	<30
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.00001	<0.01	<0.01	<0.01	<5	<5	<5	<5	2.8	<3	<30	<3	<10	<6	<30	<10	<30
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<5	<2	<2	<2	<1	<3	<30	<3	<10	<6	<30	<10	<30

Table C5: Previous Results for Groundwater

							Organochlorine Pesticides																							
							Phenol	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Tokuthion
							µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L
LOR							3	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0001	1
Aesthetic - Recreational Criteria (10x)											3		20			90									100	3			3000		
ADWG Health - Recreational Criteria																															
Health screening level D for vapour instrusion, clay, 2 m to <4 m																															
Health screening level D for vapour instrusion, clay, 4 m to <8 m																															
Health screening level D for vapour instrusion, clay, 8 m+																															
Freshwater DGV							320			0.001			0.03			0.006		0.01				0.01			0.2	0.01		0.05	0.005	0.0001	
PFAS NEMP 2.0 Recreational																															
PFAS NEMP 2.0 Table 5 Freshwater 99%																															
S	Field ID	Location ID	Easting	Northing	Sample Date	Lab Report																									
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	-	<0.1	<0.1	<0.1	<0.2	<0.1	<2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.001	<2
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<1
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	<3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<1
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	<3	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0001	<1
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	<3	<0.1	<0.1	<0.1	<0.2	<0.1	<2	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	0.1	0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.001	<2

Table C5: Previous Results for Groundwater

						Organophosphorous Pesticides																						
						Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Monocrotophos	Naled (Dibrom)	Omethoate	Phorate
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR						1	1	1	10	1	10	1	10	1	1	1	1	1	1	1	1	1	1	0.001	1	1	1	1	1	1
Aesthetic - Recreational Criteria (10x)						300	100	20	100					40	50	70	40	40	10	70	100	70	700		7	50	20		10	
ADWG Health - Recreational Criteria																														
Health screening level D for vapour instrusion, clay, 2 m to <4 m																														
Health screening level D for vapour instrusion, clay, 4 m to <8 m																														
Health screening level D for vapour instrusion, clay, 8 m+																														
Freshwater DGV						0.01			0.01					0.01		0.15				0.2			0.05							
PFAS NEMP 2.0 Recreational																														
PFAS NEMP 2.0 Table 5 Freshwater 99%																														
S	**Field ID**	**Location ID**	**Easting**	**Northing**	**Sample Date**	**Lab Report**																								
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	<2	<2	<2	<20	<2	<20	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	<1	<1	<1	<10	<1	<10	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	<1	<1	<1	<10	<1	<10	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	<1	<1	<1	<10	<1	<10	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.001	<1	<1	<1	<1	<1	<1
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	<2	<2	<2	<20	<2	<20	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.002	<2	<2	<2	<2	<2	<2

Table C5: Previous Results for Groundwater

							Herbicides		Pesticides		SVOCs									
						Pyrazophos	Ronnel	Terbufos	Trichloronate	Tetrachlorvinphos	Pronamide	Trifluralin	Parathion	Pirimiphos-methyl	3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	Acetophenone	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Dibenz(a,j)acridine	Dibenzofuran	EPN
						µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L
LOR						1	1	1	1	0.001	5	5	1	10	5	2	2	2	2	2	2	0.005	2	1
Aesthetic - Recreational Criteria (10x)						200		9		1	700	900	200	900										
ADWG Health - Recreational Criteria																								
Health screening level D for vapour instrusion, clay, 2 m to <4 m																								
Health screening level D for vapour instrusion, clay, 4 m to <8 m																								
Health screening level D for vapour instrusion, clay, 8 m+																								
Freshwater DGV												2.6	0.004											
PFAS NEMP 2.0 Recreational																								
PFAS NEMP 2.0 Table 5 Freshwater 99%																								
S	Field ID	Location ID	Easting	Northing	Sample Date	Lab Report																		
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	<2	<2	<2	<2	<0.002	-	-	<2	<20	-	-	-	-	-	-	-	-	<2
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	<1	<1	<1	<1	<0.001	-	-	<1	<10	-	-	-	-	-	-	-	-	-	<1
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	<1	<1	<1	<1	<0.001	<5	<5	<1	<10	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<1
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	<1	<1	<1	<1	<0.001	<5	<5	<1	<10	<5	<5	<5	<5	<5	<5	<5	<0.005	<5	<1
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	<2	<2	<2	<2	<0.002	<5	<5	<2	<20	<5	<2	<2	<2	<2	<2	<2	<0.005	<2	<2

Table C5: Previous Results for Groundwater

						Chlorinated Hydrocarbons																											
						1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Benzyl chloride	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-dichloroethene	cis-1,3-dichloropropene	Dibromomethane	Dichloromethane	Hexachlorobutadiene	Hexachlorocyclopentadiene
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR						1	1	1	1	0.01	1	1	0.01	1	1	5	1	1	1	1	1	1	5	1	0.01	1	1	0.02	2	4
Aesthetic - Recreational Criteria (10x)											300		30							30								40	7	
ADWG Health - Recreational Criteria																														
Health screening level D for vapour instrusion, clay, 2 m to <4 m																														
Health screening level D for vapour instrusion, clay, 4 m to <8 m																														
Health screening level D for vapour instrusion, clay, 8 m+																														
Freshwater DGV							270	400	6500		700		1900	900	1100					240			370					4000		0.05
PFAS NEMP 2.0 Recreational																														
PFAS NEMP 2.0 Table 5 Freshwater 99%																														
S	Field ID	Location ID	Easting	Northing	Sample Date	Lab Report																										
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	<1	<1	<1	<1	<0.01	<1	<1	<0.01	<1	<1	-	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	<0.02	-	-
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	<1	<1	<1	<1	<0.01	<1	<1	<0.01	<1	<1	<5	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	0.09	<5	<5
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	<1	<1	<1	<1	<0.01	<1	<1	<0.01	<1	<1	<5	<1	<1	<1	<1	<1	<1	<5	<1	<0.01	<1	<1	0.11	<5	<5
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<2	<4

Table C5: Previous Results for Groundwater

							Solvents					Halogenated Hydrocarbons												
							Hexachloroethane	Trichloroethene	Tetrachloroethene	trans-1,2-dichloroethene	trans-1,3-dichloropropene	Vinyl chloride	Methyl Ethyl Ketone	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	1,2,3,4-tetrachlorobenzene	1,2,3,5-Tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dibromoethane	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	4-chlorotoluene	Bromobenzene	Bromomethane	Chlorobenzene
							µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR							2	0.01	0.02	1	1	0.05	1	1	1	1	1	5	5	5	2	2	1	1	5	1	0.01	1	1	1	0.01
Aesthetic - Recreational Criteria (10x)									500			3												15,000			400			10	3000
ADWG Health - Recreational Criteria																								1			20				10
Health screening level D for vapour instrusion, clay, 2 m to <4 m																															
Health screening level D for vapour instrusion, clay, 4 m to <8 m																															
Health screening level D for vapour instrusion, clay, 8 m+																															
Freshwater DGV							290		70			100					20	2	3	3	5	85		160	8	260	60				55
PFAS NEMP 2.0 Recreational																															
PFAS NEMP 2.0 Table 5 Freshwater 99%																															
S	**Field ID**	**Location ID**	**Easting**	**Northing**	**Sample Date**	**Lab Report**																									
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	<1	<1	-	<1	<1	<1	<1	<1	<1
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	-	<0.01	<0.02	<1	<1	<0.05	<1	<1	2	<1	<1	-	-	-	-	-	<1	<1	-	<1	<0.01	<1	<1	<1	<0.01
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	<5	<0.01	<0.02	<1	<1	<0.05	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<1	<1	<5	<1	<0.01	<1	<1	<1	<0.01
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	<5	<0.01	<0.02	<1	<1	<0.05	<1	<1	<1	<1	<1	<5	<5	<5	<5	<5	<1	<1	<5	<1	<0.01	<1	<1	<1	<0.01
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<5	<5	<2	<10	<1	<1	<5	<1	<1	<1	<1	<1	<1

Table C5: Previous Results for Groundwater

						Dichlorodifluoromethane	Iodomethane	Pentachlorobenzene	Trichlorofluoromethane	Perfluorocarbons																
						2-(N-methylperfluoro-1-octane sulfonamido)-ethanol (N-MeFOSE)	8:2 Fluorotelomer sulfonate	N-Ethyl perfluorooctane sulfonamide (EtFOSA)	N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE)	N-Methyl perfluorooctane sulfonamide (MeFOSA)	Perfluorobutane sulfonic acid (PFBS)	Perfluorodecanoic acid (PFDA)	Perfluorododecanoic acid (PFDoDA)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonamide (FOSA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluorotridecanoic acid (PFTrDA)	Perfluoroundecanoic acid (PFUnDA)	Sum of PFAS (WA DER List)	10:2 Fluorotelomer sulfonic acid (10:2 FTS)	4:2 Fluorotelomer sulfonic acid (4:2 FTS)
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR						1	1	2	1	0.005	0.001	0.005	0.005	0.005	0.001	0.001	0.001	0.001	0.001	0.001	0.005	0.001	0.001	0.001	0.005	0.001	0.001
Aesthetic - Recreational Criteria (10x)																										
ADWG Health - Recreational Criteria																										
Health screening level D for vapour instrusion, clay, 2 m to <4 m																										
Health screening level D for vapour instrusion, clay, 4 m to <8 m																										
Health screening level D for vapour instrusion, clay, 8 m+																										
Freshwater DGV								1.5																		
PFAS NEMP 2.0 Recreational																										
PFAS NEMP 2.0 Table 5 Freshwater 99%																										
S	**Field ID**	**Location ID**	**Easting**	**Northing**	**Sample Date**	**Lab Report**																				
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	<1	<1	-	<1	<0.05	<0.001	<0.05	<0.05	<0.05	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	<1	<1	<5	<1	<0.05	<0.001	<0.05	<0.05	<0.05	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	<1	<1	<5	<1	<0.05	<0.001	<0.05	<0.05	<0.05	<0.001	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.005	<0.001	<0.001
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	<1	<1	<2	<1	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001

Table C5: Previous Results for Groundwater

						Perfluorocarbons														Phthalates					
						N-Ethyl perfluorooctane sulfonamidoacetic acid (EtFOSAA)	N-Methyl perfluorooctane sulfonamidoacetic acid (MeFOSAA)	Perfluorobutanoic acid (PFBA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluorohexane sulfonic acid (PFHxS)	Perfluorooctane sulfonic acid (PFOS)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Sum of PFAS	Perfluorodecanesulfonic acid (PFDS)	Sum of PFHxS and PFOS	6:2 Fluorotelomer Sulfonate (6:2 FtS)	Perfluorooctanoate (PFOA)	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	ug/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
LOR						0.005	0.005	0.005	0.001	0.001	0.0001	0.001	0.001	0.005	0.001	0.001	0.005	0.001	5	2	2	2	2	2
Aesthetic - Recreational Criteria (10x)																			100					
ADWG Health - Recreational Criteria																								
Health screening level D for vapour instrusion, clay, 2 m to <4 m																								
Health screening level D for vapour instrusion, clay, 4 m to <8 m																								
Health screening level D for vapour instrusion, clay, 8 m+																								
Freshwater DGV																			1		1000	3700	10	
PFAS NEMP 2.0 Recreational																2		10						
PFAS NEMP 2.0 Table 5 Freshwater 99%											0.00023							19						
S	Field ID	Location ID	Easting	Northing	Sample Date	Lab Report																			
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	12/02/2021	773835	<0.05	<0.05	<0.05	<0.001	<0.001	**0.0002**	<0.001	<0.01	<0.005	<0.001	<0.001	<0.005	<0.01	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/02/2021	774628	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B312	SMGW-BH-B312	291561.6375	6255941.579	17/03/2021	781240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	10/05/2021	795486	<0.05	<0.05	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.01	<0.005	<0.001	<0.001	<0.005	<0.01	<5	<5	<5	<5	**12**	<5
	BH-B313	SMGW-BH-B313	291503.632	6255514.163	2/06/2021	800506	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	BH-B317	SMGW-BH-B317	291440.316	6254935.21	2/06/2021	800506	<0.05	<0.05	<0.05	<0.001	<0.001	<0.0001	<0.001	<0.01	<0.005	<0.001	<0.001	<0.005	<0.01	<5	<5	<5	<5	<5	<5
	BH-B320	SMGW-BH-B320	291041.3772	6254011.732	15/04/2021	788043	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001	<20	<2	<2	<2	<2	<2

Table C6: Previous results for groundwater

						19122621	19122621
						ES2107414	ES2119784
						SMGW-BH-B319	SMGW-BH-B319
						SMGW-BH-B319	SMGW-BH-B319
						2/03/2021	26/05/2021
	Unit	EQL	DGV - Freshwater	SMW ADWG 2011 Health (x10)	ADWG - aesthetic		
Electrical Conductivity @ 25°C	µS/cm	1				28,300	26,300
pH (Lab)	pH_Units	0				7.50	6.70
Total Dissolved Solids @180°C	mg/L	5				20,000	22,000
Total Dissolved Solids @180°C (filtered)	mg/L	5				-	-
Sodium (filtered)	mg/L	0.1				4,920	4,740
Potassium (filtered)	mg/L	0.1				32	31
Calcium (filtered)	mg/L	0.1				96	95
Magnesium (filtered)	mg/L	0.1				1,420	1,340
Chloride	mg/L	1				10,800	9,210
Sulphate (as SO4) (filtered)	mg/L	1			250	-	2,850
Sulfate as SO4 - Turbidimetric (filtered)	mg/L	1			250	2,850	-
Bicarbonate Alkalinity (as CaCO3)	mg/L	1				235	215
Carbonate Alkalinity (as CaCO3)	mg/L	1				<1	<1
Hydroxide Alkalinity (as CaCO3)	mg/L	1				<1	<1
Total Alkalinity (as CaCO3)	mg/L	1				235	215
Nitrate (as N)	mg/L	0.005				<0.01	<0.01
Nitrite (as N)	mg/L	0.005				<0.01	<0.01
Ammonia (as N)	mg/L	0.005	0.9			0.90	0.69
Total Kjeldahl Nitrogen (as N)	mg/L	0.05				1.5	1.3
Nitrogen (Total)	mg/L	0.05				1.5	1.3
Fluoride	mg/L	0.1		15		0.4	0.4
Reactive Phosphorus (as P)	mg/L	0.005				<0.01	<0.01
Total Phosphorus (as P)	mg/L	0.01				<0.05	<0.05
Total Suspended Solids	mg/L	5				124	48
Total Anions	meq/L	0.01				369	323
Total Cations	meq/L	0.01				336	322
Ionic Balance (Lab)	%	0.01				4.57	0.22
Hardness (as CaCO3)	µg/L	1,000				-	5,760,000
Hardness (as CaCO3) (filtered)	µg/L	1,000				6,090,000	-
Nitrate + Nitrite (as N)	mg/L	0.01				<0.01	<0.01
Sulfate Reducing Bacteria	cfu/mL					-	
Sulphate Reducing Bacteria Population Estimate	pac/mL	1				27,000	325
Methane	µg/L	5				<10	-
10:2 Fluorotelomer sulfonic acid	µg/L	0.01				<0.05	-
4:2 Fluorotelomer sulfonic acid	µg/L	0.0005				<0.05	-
8:2 Fluorotelomer sulfonate	µg/L	0.0005				<0.05	-
N-Et-FOSA	µg/L	0.0025				<0.05	-

Table C6: Previous results for groundwater (continued)

										19122621	19122621
										ES2107414	ES2119784
										SMGW-BH-B319	SMGW-BH-B319
										SMGW-BH-B319	SMGW-BH-B319
										2/03/2021	26/05/2021
	Unit	EQL	Freshwater DGV	NEMP 2.0 freshwater guideline	SMW ADWG 2011 Health (x10)	NEMP 2.0 Recreational	SMW NEPM 2013 Comm/Ind HSL D GW for Vapour Intrusion, Clay 2-<4m	SMW NEPM 2013 Comm/Ind HSL D GW for Vapour Intrusion, Clay 4-<8m	SMW NEPM 2013 Comm/Ind HSL D GW for Vapour Intrusion, Clay 8m+		
N-Et-FOSE	µg/L	0.0025								<0.05	-
N-Me-FOSA	µg/L	0.0025								<0.05	-
N-Me-FOSE	µg/L	0.0025								<0.05	-
Perfluorobutanoic acid (PFBA)	µg/L	0.0005								<0.1	-
Perfluoroheptane sulfonic acid	µg/L	0.0002								<0.02	-
Perfluoro-n-pentanoic acid (PFPeA)	µg/L	0.0005								<0.02	-
Perfluoropentane sulfonic acid	µg/L	0.001								<0.02	-
Perfluoro-1-dodecanesulfonate	µg/L	0.0005								-	-
Perfluorononanesulfonic acid (PFNS)	ng/l	0.5								-	-
PFDcS	µg/L	0.0005								<0.02	-
N-methyl-perfluorooctanesulfonamidoacetic acid	µg/L	0.0025								<0.02	
Sum of PFHxS and PFOS (lab reported)	µg/L	0.0002				2.0				<0.01	-
Sum of US EPA PFAS (PFOS + PFOA)	µg/L	0.01								-	-
Sum of WA DER PFAS (n=10)	µg/L	0.01								<0.01	-
Sum of PFASs (n=28)	µg/L	0.01								<0.01	-
Perfluorobutanesulfonic acid (PFBS)	µg/L	0.001								<0.02	-
Perfluorodecanesulfonic acid (PFDS)	µg/L	0.02								-	-
Perfluorodecanoic acid (PFDA)	µg/L	0.001								<0.02	-
Perfluorododecanoic acid (PFDoA)	µg/L	0.001								<0.02	-
Perfluoroheptanoic acid (PFHpA)	µg/L	0.0005								<0.02	-
Perfluorooctanesulfonic acid (PFOS)3	µg/L	0.0002		0.00023						<0.01	-
Perfluorooctanoate (PFOA)	µg/L	0.0005		19		10				<0.01	-
Perfluorohexanesulfonic acid (PFHxS)	µg/L	0.0002								<0.02	-
Perfluorononanoic acid (PFNA)	µg/L	0.001								<0.02	-
Perfluorohexanoic acid (PFHxA)	µg/L	0.0005								<0.02	-
6:2 Fluorotelomer Sulfonate (6:2 FtS)	µg/L	0.0005								<0.05	-
N-ethyl-perfluorooctanesulfonamidoacetic acid	µg/L	0.0025								<0.02	-
Perfluorooctanesulfonamide (PFOSA)	µg/L	0.002								<0.02	-
Perfluorotetradecanoic acid (PFTeDA)	µg/L	0.001								<0.05	-
Perfluorotridecanoic acid (PFTrDA)	µg/L	0.001								<0.02	-
Perfluoroundecanoic acid (PFUnA)	µg/L	0.001								<0.02	-
TRH C10 - C14 SG Cleanup	mg/L	0.05								<0.05	-
TRH C15 - C28 SG Cleanup	mg/L	0.1								<0.1	-
TRH C29 - C36 SG Cleanup	mg/L	0.05								<0.05	-
TRH C10 - C36 (Sum, Lab Reported) SG Cleanup	mg/L	0.05								<0.05	-
TRH >C10 - C16 SG Cleanup F2	mg/L	0.1								<0.1	-
TRH >C10 - C16 SG Cleanup Less Naphthalene F2	mg/L	0.1								<0.1	
TRH >C16 - C34 SG Cleanup F3	mg/L	0.1								<0.1	-
TRH >C34 - C40 SG Cleanup F4	mg/L	0.1								<0.1	-
TRH C10 - C40 (Sum, Lab Rptd) SG Cleanup	mg/L	0.1								<0.1	-
TRH C6 - C10 Fraction F1	mg/L	0.01								<0.02	-
TRH C6 - C10 Fraction Less BTEX F1	mg/L	0.01					NL	NL	NL	<0.02	-
TRH >C10 - C16 Fraction F2	mg/L	0.05								<0.1	-
TRH >C10 - C16 Fraction Less Naphthalene (F2)	mg/L	0.05					NL	NL	NL	<0.1	-
TRH >C16 - C34 Fraction F3	mg/L	0.1								0.23	-
TRH >C34 - C40 Fraction F4	mg/L	0.1								<0.1	-
TRH+C10 - C40 (Sum of total) (Lab Reported)	mg/L	0.1								0.23	-
TRH C6 - C9 Fraction	mg/L	0.01								<0.02	-
TRH C10 - C14 Fraction	mg/L	0.05								<0.05	-
TRH C15 - C28 Fraction	mg/L	0.1								0.15	-
TRH C29 - C36 Fraction	mg/L	0.05								0.11	-
TRH+C10 - C36 (Sum of total) (Lab Reported)	mg/L	0.05								0.26	-
Benzene	µg/L	0.5	950		10		30,000	30,000	35,000	<1	-
Toluene	µg/L	0.5	180		8,000	25	NL	NL	NL	<2	-
Ethylbenzene	µg/L	0.5	80		3,000	3	NL	NL	NL	<2	-
Xylenes (m & p)	µg/L	1	5							<2	-
Xylene (o)	µg/L	0.5	350							<2	-
Xylenes (Sum of total) (Lab Reported)	µg/L	1.5			6,000	20	NL	NL	NL	<2	-
Total BTEX	µg/L	1								<1	-
Aluminium	µg/L	5	0.8		-	200				**650**	**350**
Aluminium (filtered)	µg/L	5	0.8		-	200				**300**	**40**
Barium	µg/L	1			20,000					48	51
Barium (filtered)	µg/L	1			20,000					45	43
Beryllium	µg/L	0.5			600					9	4
Beryllium (filtered)	µg/L	0.5			600					8	4
Boron	µg/L	5	940		40,000					<50	<50
Boron (filtered)	µg/L	5	940		40,000					<50	<50
Cobalt	µg/L	1	1							**825**	**1,180**
Cobalt (filtered)	µg/L	1	1							**785**	**1,110**
Iron	mg/L	0.005			-	0.3				0.34	3.56
Iron (filtered)	mg/L	0.005			-	0.3				0.07	2.45
Manganese	µg/L	1	1900		5,000	100				9,990	14,400
Manganese (filtered)	µg/L	1	1900		5,000	100				9,730	13,500
Molybdenum	µg/L	1	34		500					<1	<1
Molybdenum (filtered)	µg/L	1	34		500					<1	<1
Selenium	µg/L	1	5		100					<10	<10
Selenium (filtered)	µg/L	1	5		100					<10	<10
Strontium	µg/L	1								3,790	3,380
Strontium (filtered)	µg/L	1								3,720	3,220
Vanadium	µg/L	1	6							<10	<10
Vanadium (filtered)	µg/L	1	6							<10	<10
Arsenic	µg/L	1	13		100					2	1
Arsenic (filtered)	µg/L	1	13		100					1	<1
Cadmium	µg/L	0.1	0.2		20					**1.4**	0.1
Cadmium (filtered)	µg/L	0.1	0.2		20					**1.4**	<0.1
Chromium	µg/L	1	1.0		500					1	1
Chromium (filtered)	µg/L	1	1.0		500					<1	<1
Copper	µg/L	1	1.4		20,000					16	3
Copper (filtered)	µg/L	1	1.4		20,000					14	2

Table C6: Previous results for groundwater (continued)

						19122621	19122621
						ES2107414	ES2119784
						SMGW-BH-B319	SMGW-BH-B319
						SMGW-BH-B319	SMGW-BH-B319
						2/03/2021	26/05/2021
	Unit	EQL	DGV freshwater 2018	SMW ADWG Health (x10)	ADWG aesthetic		
Lead	µg/L	1	3.4	100		2	<1
Lead (filtered)	µg/L	1	3.4	100		<1	<1
Mercury	µg/L	0.05	0.06	10		<0.1	<0.1
Mercury (filtered)	µg/L	0.05	0.06	10		<0.1	<0.1
Nickel	µg/L	1	11	200		426	566
Nickel (filtered)	µg/L	1	11	200		414	533
Zinc	µg/L	1	8			492	117
Zinc (filtered)	µg/L	1	8			482	<5
p,p-DDE	mg/L	0.0001				<0.002	-
2,4-DDT	µg/L	0.1				-	-
a-BHC	µg/L	0.1				<2	-
Aldrin	µg/L	0.1	0.001			<2	-
Dieldrin	µg/L	0.1	0.01			<2	-
Aldrin & Dieldrin (Sum of total) (Lab Reported)	µg/L	0.5		3		<4	-
b-BHC	µg/L	0.1				<2	-
cis-Chlordane	µg/L	0.1				-	-
gamma-Chlordane	µg/L	0.1				-	-
trans-Chlordane	µg/L	0.2				-	-
Chlordane (Sum of total)	µg/L	0.5	0.03	20		-	
d-BHC	µg/L	0.1				<2	-
DDD	µg/L	0.1				<2	-
DDE	µg/L	0.2				-	-
DDT	µg/L	0.1	0.006	90		<4	-
DDT+DDE+DDD (Sum of total) (Lab Reported)	µg/L	0.5				<4	-
Endosulfan	µg/L	0.2	0.03	200		-	-
Endosulfan I	µg/L	0.1				<2	-
Endosulfan II	µg/L	0.1				<2	-
Endosulfan sulphate	µg/L	0.1				<2	-
Endrin	µg/L	0.1	0.01			<2	
Endrin aldehyde	µg/L	0.1				-	-
Endrin ketone	µg/L	0.1				-	-
g-BHC	µg/L	0.1	0.2	100		<2	-
Heptachlor	µg/L	0.1	0.01	3		<2	-
Heptachlor epoxide	µg/L	0.1				<2	-
Hexachlorobenzene	µg/L	0.1	0.05			<4	-
Isodrin	µg/L	0.1				-	-
Methoxychlor	µg/L	0.1	0.005	3,000		-	-
Mirex	µg/L	0.1				-	-
o,p-DDD	µg/L	0.1				-	-
o,p-DDE	µg/L	0.1				-	-
trans-Nonachlor	µg/L	0.1				-	-
Azinphos-methyl	µg/L	0.2	0.01	300		-	-
Bromophos-ethyl	µg/L	0.2		100		-	-
Carbophenothion	µg/L	0.5				-	-
Chlorfenvinphos	µg/L	0.5		20		<2	-
Chlorfenvinphos E	µg/L	0.5				-	-
Chlorpyriphos	µg/L	0.2	0.01	100		<2	-
Chlorpyriphos-methyl	µg/L	0.2				<2	-
cis-Chlorfenvinphos	µg/L	5				-	-
Coumaphos	µg/L	0.5				-	-
Demeton-s-methyl	µg/L	0.5				-	-
Diazinon	µg/L	0.2	0.01	40		<2	-
Dichlorvos	µg/L	0.2		50		<2	-
Dimethoate	µg/L	0.2	0.15	70		<2	-
Disulfoton	µg/L	0.5		40		-	-
EPN	µg/L	0.5				-	-
Ethion	µg/L	0.2		40		<2	-
Ethoprop	µg/L	0.5		10		-	-
Fenamiphos	µg/L	0.5		5		-	-
Fenitrothion	µg/L	0.2		70		-	-
Fenthion	µg/L	0.5		70		<2	-
Malathion	µg/L	0.2	0.05	700		<2	-
Methidathion	µg/L	0.5		60		-	-
Parathion-methyl	µg/L	0.5		7		-	-
Mevinphos	µg/L	1		50		-	-
Monocrotophos	µg/L	2		20		-	-
o,o,o-Triethylphosphorothioate	µg/L	0.5				-	-
Parathion	µg/L	0.2	0.004	200		-	-
Phorate	µg/L	0.5				-	-
Pirimphos-ethyl	µg/L	0.5		5		<2	-
Prothiofos	µg/L	0.5				<2	-
Ronnel	µg/L	0.2				-	-
Stirophos	µg/L	0.5				-	-
Benzo(a)pyrene (TEQs)	µg/L	5				-	-
Benzo(b+j) & Benzo(k)fluoranthene	µg/L	2				<4	-
Acenaphthene	µg/L	0.1				<1.0	-
Acenaphthylene	µg/L	0.1				<1.0	-
Anthracene	µg/L	0.1	0.01			<1.0	-
Benz(a)anthracene	µg/L	0.1				<1.0	-
Benzo(a)pyrene	µg/L	0.1	0.1	0.1		<0.5	-
Benzo(a)pyrene TEQ (lower bound)*	µg/L	0.5				<0.5	-
Benzo(b)&(k)fluoranthene	µg/L	0.2				-	-
Benzo(b)&(j)fluoranthene	µg/L	0.1				<1.0	-
Benzo(g,h,i)perylene	µg/L	0.1				<1.0	-
Benzo(k)fluoranthene	µg/L	0.1				<1.0	-
Chrysene	µg/L	0.1				<1.0	-
Dibenz(a,h)anthracene	µg/L	0.1				<1.0	-
Fluoranthene	µg/L	0.1	1			<1.0	-
Fluorene	µg/L	0.1				<1.0	-

Table C6: Previous results for groundwater (continued)

						19122621	19122621
						ES2107414	ES2119784
						SMGW-BH-B319	SMGW-BH-B319
						SMGW-BH-B319	SMGW-BH-B319
						2/03/2021	26/05/2021
	Unit	EQL	DGV Freshwater	SMW ADWG 2011 Health (x10)	ADWG Aesthetic		
Indeno(1,2,3-c,d)pyrene	µg/L	0.1				<1.0	-
Naphthalene	µg/L	0.1	16			<1.0	-
Phenanthrene	µg/L	0.1	0.6			<1.0	-
Pyrene	µg/L	0.1				<1.0	-
PAH (Sum of Common 16 PAHs - Lab Reported)	µg/L	0.5				<0.5	-
2-Methylnaphthalene	µg/L	0.1				<2	-
2,4,5-Trichlorophenol	µg/L	0.5				<2	-
2,4,6-Trichlorophenol	µg/L	0.5	3	200	2	<2	-
2,4-Dichlorophenol	µg/L	0.5	120	2,000	0.3	<2	-
2,6-Dichlorophenol	µg/L	0.5	34			<2	-
2-Chlorophenol	µg/L	0.5	340	3,000	0.1	<2	-
4-Chloro-3-methylphenol	µg/L	1				<2	-
Pentachlorophenol	µg/L	0.5	3.6	100		<4	-
2,4-Dimethylphenol	µg/L	0.5	2			<2	-
2-Methylphenol	µg/L	0.5				<2	-
2-Nitrophenol	µg/L	0.5				<2	-
3- & 4- Methylphenol	µg/L	1				<4	-
Phenol	µg/L	0.5	320			<2	-
n-Nitrosomethylethylamine	µg/L	2				<2	-
n-Nitrosodiethylamine	µg/L	1				<2	-
N-Nitrosodi-n-butylamine	µg/L	1				<2	-
N-Nitrosodi-n-propylamine	µg/L	1				<2	-
1-Naphthylamine	µg/L	2				<2	-
n-Nitrosodiphenylamine & Diphenylamine	µg/L	4				<4	-
2-Nitroaniline	µg/L	1				<4	-
3-Nitroaniline	µg/L	1				<4	-
4-Chloroaniline	µg/L	1				<2	-
2-methyl-5-nitroaniline	µg/L	1				<2	-
4-Nitroaniline	µg/L	1				<2	-
Aniline	µg/L	2	8			<2	-
Nitrobenzene	µg/L	1	550			<2	-
Pentachloronitrobenzene	µg/L	1		300		<2	-
1,3,5-Trinitrobenzene	µg/L	2	4			<2	-
2,4-Dinitrotoluene	µg/L	1	16			<4	-
2,6-Dinitrotoluene	µg/L	1				<4	-
Pentachlorobenzene	µg/L	0.5	1.5			<2	-
Pronamide	µg/L	2		700		<2	-
2-Chloronaphthalene	µg/L	2				<2	-
3-Methylcholanthrene	µg/L	0.5				<2	-
7,12-Dimethylbenz(a)anthracene	µg/L	0.5				<2	-
Carbazole	µg/L	2				<2	-
Chlorobenzilate	µg/L	2				<2	-
Bis(2-ethylhexyl) phthalate	µg/L	10	1	100		<10	-
Butylbenzyl phthalate	µg/L	1				<2	-
Diethyl phthalate	µg/L	2	1000			<2	-
Dimethyl phthalate	µg/L	1	3700			<2	-
Di-n-butyl phthalate	µg/L	2	10			<2	-
Di-n-octyl phthalate	µg/L	1				<2	-
2-(Acetylamino) fluorene	µg/L	0.5				<2	-
2-Picoline	µg/L	2				<2	-
3,3-Dichlorobenzidine	µg/L	2				<2	-
4-(Dimethylamino) azobenzene	µg/L	1				<2	-
4-Aminobiphenyl	µg/L	1				<2	-
4-Bromophenyl phenyl ether	µg/L	1				<2	-

Table C6: Previous results for groundwater (continued)

						19122621	19122621
						ES2107414	ES2119784
						SMGW-BH-B319	SMGW-BH-B319
						SMGW-BH-B319	SMGW-BH-B319
						2/03/2021	26/05/2021
	Unit	EQL	DGV Freshwater	SMW ADWG 2011 Health (x10)	ADWG Aesthetic		
4-Chlorophenyl phenyl ether	µg/L	1				<2	-
4-Nitroquinoline-n-oxide	µg/L	2				<2	-
Acetophenone	µg/L	1				<2	-
Azobenzene	µg/L	2				<2	-
Bis(2-chloroethoxy) methane	µg/L	1				<2	-
Bis(2-chloroethyl) ether	µg/L	1				<2	-
Dibenzofuran	µg/L	1				<2	-
Hexachlorocyclopentadiene	µg/L	2				<10	-
Hexachloropropene	µg/L	0.5				<2	-
Methapyrilene	µg/L	2				<2	-
n-Nitrosomorpholine	µg/L	1				<2	-
N-Nitrosopiperidine	µg/L	1				<2	-
n-Nitrosopyrrolidine	µg/L	1				<4	-
Phenacetin	µg/L	1				<2	-
1,4-Dichlorobenzene	µg/L	0.3	60	400	20	<2	-
4-Chlorotoluene	µg/L	0.5				<5	-
1,2,3-Trichlorobenzene	µg/L	0.5	3			<5	-
1,2,4-Trichlorobenzene	µg/L	0.5	20			<2	-
1,2-Dichlorobenzene	µg/L	0.5	160	15,000	1	<2	-
1,3-Dichlorobenzene	µg/L	0.5	260			<2	-
2-Chlorotoluene	µg/L	0.5				<5	-
Bromobenzene	µg/L	0.5				<5	-
Chlorobenzene	µg/L	0.5	55	3,000	10	<5	-
1,2,4-trimethylbenzene	µg/L	0.5				<5	-
1,3,5-Trimethylbenzene	µg/L	0.5				<5	-
Isopropylbenzene	µg/L	0.5	30			<5	-
n-Butylbenzene	µg/L	0.5				<5	-
n-Propylbenzene	µg/L	0.5				<5	-
p-Isopropyltoluene	µg/L	0.5				<5	-
sec-Butylbenzene	µg/L	0.5				<5	-
Styrene	µg/L	0.5		300	4	<5	-
tert-Butylbenzene	µg/L	0.5				<5	-
Methyl Ethyl Ketone	µg/L	10				<50	-
2-Hexanone	µg/L	5				<50	-
Methyl iso-butyl ketone	µg/L	5				<50	-
Isophorone	µg/L	1				<2	-
Vinyl acetate	µg/L	10				<50	-
1,1,1,2-Tetrachloroethane	µg/L	0.5				<5	-
1,1,2,2-Tetrachloroethane	µg/L	0.5	400			<5	-
1,1,1-Trichloroethane	µg/L	0.5	270			<5	-
1,1,2-Trichloroethane	µg/L	0.5	6,500			<5	-
1,2,3-Trichloropropane	µg/L	0.5				<5	-
1,2-Dibromo-3-chloropropane	µg/L	0.5				<5	-
1,2-Dibromoethane	µg/L	0.5		10		<5	-
1,1-Dichloroethane	µg/L	0.5				<5	-
1,2-Dichloroethane	µg/L	0.5	1,900	30		<5	-
1,1-Dichloroethene	µg/L	0.5	700	300		<5	-
cis-1,2-Dichloroethene	µg/L	0.5				<5	-
trans-1,2-dichloroethene	µg/L	0.5				<5	-
1,2-Dichloropropane	µg/L	0.5	900			<5	-
1,3-Dichloropropane	µg/L	0.5	1,100			<5	-
2,2-Dichloropropane	µg/L	0.5				<5	-
1,1-Dichloropropene	µg/L	0.5				<5	-
cis-1,3-Dichloropropene	µg/L	0.5				<5	-
trans-1,3-dichloropropene	µg/L	0.5				<5	-
cis-1,4-Dichloro-2-butene	µg/L	1				<5	-
trans-1,4-Dichloro-2-butene	µg/L	1				<5	-
Bromodichloromethane	µg/L	0.5				<5	-
Bromoform	µg/L	0.5				<5	-
Bromomethane	µg/L	10		10		<50	-
Carbon disulfide	µg/L	2	20			<5	-
Carbon tetrachloride	µg/L	0.5	240	30		<5	-
Chlorodibromomethane	µg/L	0.5				<5	-
Chloroethane	µg/L	5				<50	-
Chloroform	µg/L	0.5	370			<5	-
Chloromethane	µg/L	5				<50	-
Dibromomethane	µg/L	0.5				<5	-
Dichlorodifluoromethane	µg/L	5				<50	-
Hexachlorobutadiene	µg/L	0.5		7		<2	-
Hexachloroethane	µg/L	0.5				<2	-
Iodomethane	µg/L	5				<5	-
Pentachloroethane	µg/L	0.5	80			<5	-
Trichloroethene	µg/L	0.5	330			<5	-
Tetrachloroethene	µg/L	0.5	70	500		<5	-
Trichlorofluoromethane	µg/L	1				<50	-
Vinyl chloride	µg/L	0.3	100	3		<50	-

POST ACTIVITY REPORT

REPORT

UNEXPLODED ORDNANCE FIELD VALIDATION SURVEY PATONS LANE DEFENCE ESTABLISHMENT ORCHARD HILLS NSW

V1.02

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Attachments:

1 Equipment Specifications

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1.0 INTRODUCTION

G-tek Australia Pty Limited (G-tek) has been contracted to conduct a 10% unexploded ordnance (UXO) Field Validation Survey (FVS) to determine the nature and extent of any UXO contamination within a selected/nominated corridor within Defence Establishment Orchard Hills, NSW, proposed for use as part of the Sydney Metro – Western Sydney Airport development. The requested 21.5hectare corridor is indicated in Red in Figure 1 below.



Figure 1 – The Site

The Site is located within the South-Eastern boundary of a Department of Defence Controlled Area designated as Defence Establishment Orchard Hills (Figure 2 below).

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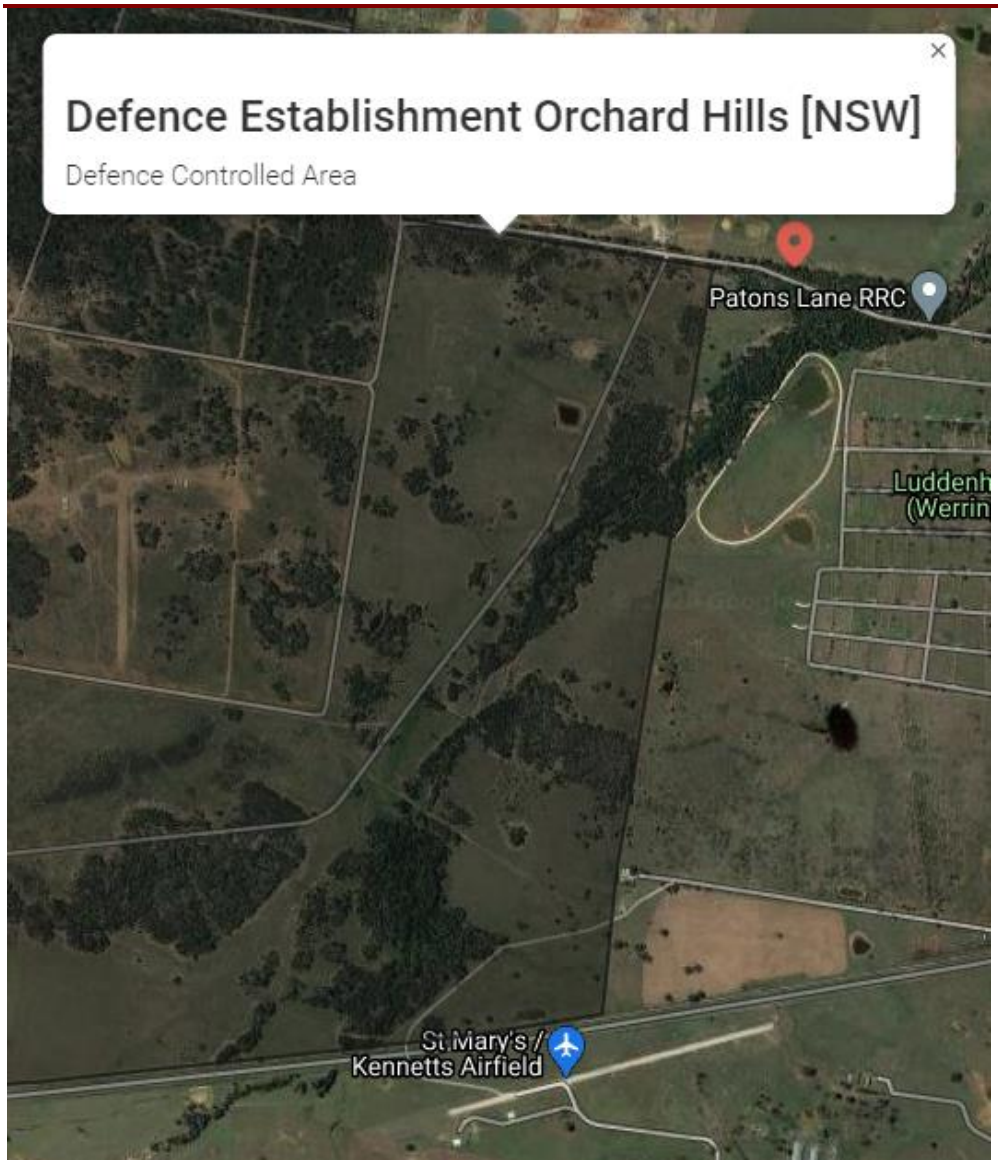


Figure 2 – The Site as located within DEOH

Defence Establishment Orchard Hills (DEOH) is a tri-service munitions storage base originally established as the Kingswood Storage Depot during World War Two (WW2) for the processing and storge of United States ammunition stocks. Control of the area was passed to the Royal Australian Navy (RAN) in May 1945 and the site was used for the storage of RAN, Royal Navy (RN) and Royal Australian Air Force (RAAF) ammunition. Additional land was purchased in the 1950's, primarily as a buffer to expand the safe ordnance storage capacity of the site.

2.0 AUTHORITY TO UNDERTAKE THE TASK

G-tek Australia's authority to undertake this task is Professional Services Contract 00013/12003 - Sydney Metro – Western Sydney Airport, Unexploded Ordnance Services for Department of Defence at Patons Lane.

3.0 OBJECTIVE

The objectives of this task were:

1. To safely conduct a 10% UXO Field Validation Survey (FVS) within the nominated corridor, and
2. Provide a Post Activity Report (PAR) detailing the outcomes.

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4.0 NATURE OF REPORT

This PAR details the conduct of the works, the results obtained, conclusions and recommendations. All relevant documentation is included as part of this report.

5.0 PREVIOUS INVESTIGATIONS OF THE SITE

G-tek has undertaken previous Desk Top Studies of the DEOH site, and a variety of UXO support and clearance works within DEOH, but not within this corridor. As part of the current contact, G-tek has provided Priority 1 and Priority 2 UXO Avoidance (Safeguarding) support to Sydney Metro environmental test activities within this corridor. These activities are reported separately and do not form part of this Report.

6.0 DATES OF CONDUCT

Field Validation Survey was conducted between16 and18 February 2021.

7.0 CONTRACTOR DETAILS

The contracting firm is G-tek Australia Pty Limited (G-tek) ABN 47 099 519 034; G-tek Australia Pty Limited (G-tek) is a Member of the Department of Defence Infrastructure Panel – Environment, Heritage and Estate Engineering (DIP_EHEE) 2020-2025 in Service Categories, Unexploded Ordnance Management and Advice, Unexploded Ordnance Survey and Safeguarding, and Unexploded Ordnance Remediation, is qualified and experienced at the type of assessment/remediation required for this task.

G-tek Australia operates to Quality, Environment and Occupational Health and Safety operating procedures and instructions developed under ISO9001 and ISO14000 principals and accepted by the United Nations (UN) as conforming to International Mine Action standards (IMAS), and by the Department of Defence as part of the acceptance criteria for DIP_EHEE membership.

7.1 Personnel

The following staff were directly involved in this task:

Project Director /UXO Technician	Greg Guthrie
Project Support/Field Operator	Paul O'Donnell

8.0 CLIENT DETAILS

G-tek Australia Pty Limited's client for this Project is:

Sydney Metro

Level 43, 680 George Street,

Sydney, NSW, 2000

9.0 SITE CHARACTERISTICS

The requested Corridor site is approximately 1,650metres (m) long from the North, where it commences at Patons Lane, to the South, there it terminates at the Sydney water pipeline; the width of the Corridor varies from approximately 100m in the North, approximately 2000m in the centre and 450m at the South.

The vegetation within the Corridor varies from open grassland in the North, Centre and South broken up by areas of medium to thick forested areas.

Some limited infrastructure, remnants of previous habitation and farming, remain within the Corridor, generally within the centre forested area.

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Figure 3 – Remnant Habitation Infrastructure



Figure 4 – Remnant Farming Infrastructure

10.0 FIELD VALIDATION SURVEY

10% FVS within the Corridor was conducted by G-tek operators carrying out both visual and instrumented search of nominally 1.0m wide lanes while traversing the Corridor East-West/West-East in parallel transects approximately 10m apart. Each operator was equipped with a GPS to both track the areas searched and to record any ordnance related "finds".

Instrumented component of the search was conducted using Minelab F3 /F3UXO Detectors. The Minelab can detect both ferrous and non-ferrous materials and present an aural cue to the operator in the presence of metal. Each aural cue was investigated by the operator using hand tools to identify the source of the cue. After positive identification, the identified item was removed and the location was then re-checked to ensure that the identified item was not "masking" additional material, and search of the current transect continued.

Equipment Specifications are included at Attachment 1 to this Report.

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Figure 5 – FVS in Progress, Centre Open Grassland

This process was repeated until 10% FVS had been completed across 100% of the requested Corridor; GPS tracking of transects completed is included at Figure 6 below.

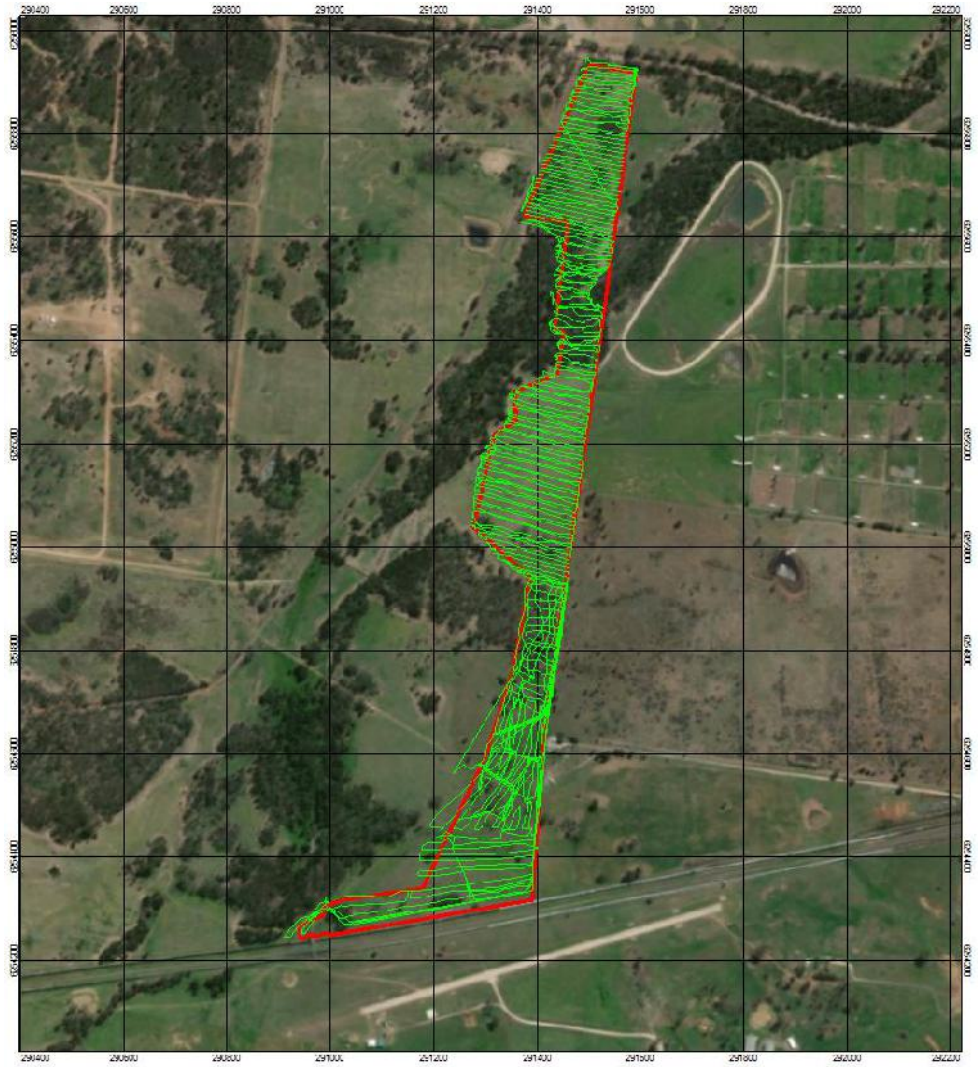


Figure 6 – FVS GPS Transect Tracking

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11.0 LIMITATIONS AND EXCLUSIONS

While FVS coverage was attempted across the entire designated area, three (3) areas of the Corridor were fenced off from the Site and were not able to be accessed. Excluded areas included a creek line and a rectangular fenced enclosure (around a tree) in the North and a triangular area in the South, part of the water pipeline infrastructure.

These exclusion areas were comparatively small and it is considered that they did not impact on the overall coverage achieved or UXO potential within the site to be appropriately assessed.



Figure 7 – Southern Fenced Area and Water Pipeline

12.0 HEALTH AND SAFETY

A Safe Work Method Statement (SMWS) was prepared, reviewed and agreed upon prior to the conduct of field activities. Daily safety briefs were conducted with the emphasis on COVID-19 precautions, heat and fatigue management, hydration, weather conditions, and wildlife, particularly upon snake activity within the FVS area.

No health or safety incidents were recorded during the conduct of these works.

13.0 OUTCOMES

10% unexploded ordnance (UXO) Field Validation Survey (FVS) was conducted of the requested Patons Lane Corridor as indicated in Green in Figure 7 below; areas fenced off and unable to be accessed are also include in Figure 7 in Purple.

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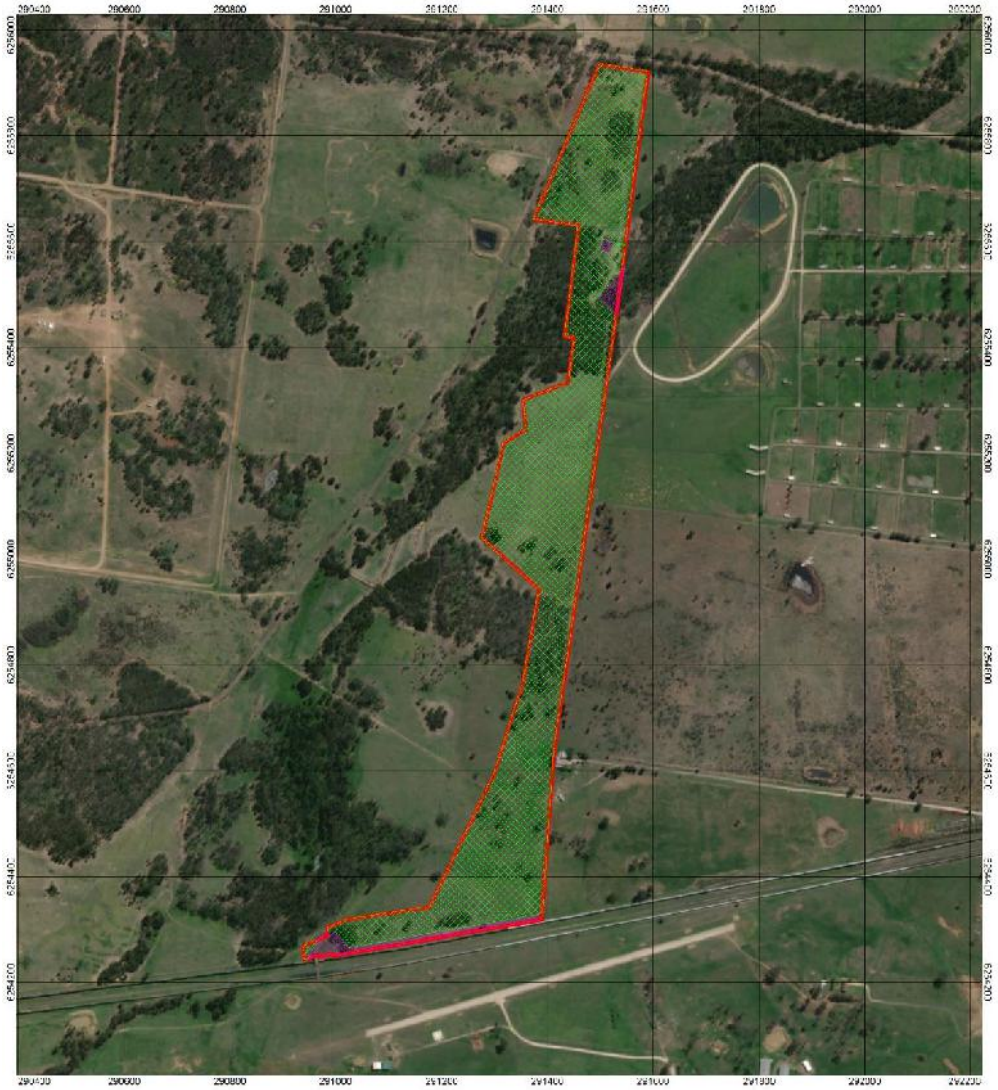


Figure 8 – 10% Field Validation Survey Area (Green), Exclusion Areas (Purple)

No unexploded ordnance (UXO) or explosive ordnance (EO) related material were identified during this FVS.

Various items of scrap remnant from previous habitation and farming activities were identified within the Corridor.

14.0 CONCLUSIONS

Based on the FVS conducted it is concluded that this Corridor has not been used for the use or storage of explosive ordnance or related material.

15.0 RECOMMENDATIONS

It is recommended that any required Sydney Metro activities with the Patons Lane Corridor be conducted without further unexploded ordnance works or support.

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ATTACHMENT 1: EQUIPMENT SPECIFICATIONS

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MINELAB F3 METAL DETECTOR



TECHNICAL SPECIFICATIONS

Operating Length	760mm - 1500mm
Search Head	200mm circular
Operating Weight	3.2kg
Operating Weight (Battery Pack Detached)	2.3kg
Battery Pack with Batteries	0.9kg
Packed Weight (Hard Case)	10.5kg [850 x 450 x 170]
Technology	Pulse Induction Multi Period Sensing - BiPOLAR
Audio Output	Internal Speaker
	Earset (Options: 1. Speaker ON / 2. Speaker OFF)
Water Resistance	IP67
Batteries	Alkaline D cells (4x1.5V - Lr20) Rechargeable NiCad or NiMH D cells)
Data Output	RS232
Operating Temperature	-30°C to +60°C / -22°F to + 140°F
Design Standard	MIL STD 810 F

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MINELAB F3 UXO METAL DETECTOR



TECHNICAL and PHYSICAL SPECIFICATIONS

Operating Length	Maximum	1500 mm / 59.4 ins
	Minimum	760 mm / 30 ins
Operating Weight	Complete	4.1 kg / 9 lbs
	Complete (Battery Pack Detached)	3.2 kg / 7 lbs
Battery Pack with Batteries		0.9 kg / 2 lbs
Packed Weight (Hard Case)		17.7 kg / 39 lbs
Transmission		Multi Period Sensing - Bipolar
Audio Output		Internal Speaker
		Ear set (Options: 1. Speaker ON / 2. Speaker OFF)
Waterproof		IP67 (Depth 3m)
Batteries		Alkaline D cells (4x1.5V - LR20) [Rechargeable NiCad or NiMH D cells]
Data Output		RS232
Operating Temperature		-30C to +60C / -22F to +140F
Design Standard		MIL STD 810 F
F-Series Charger (optional)		Intelligent Fast Charger

The F3 and F3 UXO metal detectors have a transmit frequency of 1.25 kHz +/-3% PRF
The Pulse repetition frequency is 1.25kHz (is Pulse Induction so has a wide bandwidth)
Noise cancel can change the transmit frequency by 3%
The radiated power of this transmit frequency will be less than a micro watt.

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North Sydney, NSW, 2060

WORKS AREA REVIEW

PROJECT: **22129CPBU, Defence Establishment Orchard Hills**

REVIEW No: **22129_001**

DATE: **08 December 2022**

G-tek Australia Pty Limited (G-tek) has completed the requested unexploded ordnance (UXO) documentation and on-site visual review of the proposed Sydney Metro easement off Patons Lane, within Defence Establishment Orchard Hills (DEOH), New South Wales, shown as the hatched area within plan attached at Figure 1.

G-tek Australia Pty Limited is a Member of the Department of Defence Infrastructure Panel, Environment, Heritage and Estate Engineering, 2020-25, accredited to panel streams Unexploded Ordnance Management and Advice, Unexploded Ordnance Survey and Safety Services and Unexploded Ordnance Remediation.

REVIEW AREA: Sydney Metro Easement, DEOH

Documentation Review:

G-tek Australia has conducted a review of a previous Unexploded Ordnance (UXO) Field Validation Survey (FVS) relating to this Site as a precursor to a physical review of the Site to validate the Conclusions and Recommendations of that Survey.

Report reviewed was “Unexploded Ordnance Field Validation Survey, Patons Lane, Defence Establishment Orchard Hills V1_02” *[G-tek Australia Pty Limited 20142SYME, dated 26 March 2021]*.

The Conclusions and Recommendations of that Survey were:

“14.0 CONCLUSIONS

Based on the FVS conducted it is concluded that this Corridor has not been used for the use or storage of explosive ordnance or related material.

15.0 RECOMMENDATIONS

It is recommended that any required Sydney Metro activities with the Patons Lane Corridor be conducted without further unexploded ordnance works or support.”

Site Validation Review:

A G-tek Australia UXO Technician attended the Sydney Metro Easement Site at DEOH on Thursday 8 December 2022 to review current site conditions to validate the Conclusions and Recommendations of the UXO Field Validation Survey report by observing/noting any changes to the Site which may have been caused by explosive ordnance storage or use activities in the period between the date of the Report (26 March 2021) and the Site review date (08 December 2022). The UXO Technician had been physically involved with the conduct of the reported Survey and is familiar with the Site conditions at that time.

Outcomes

No changes to Site conditions caused by explosive ordnance storage or use from the time of the previous Survey were identified during this review.

From a UXO perspective, it is considered that the Conclusions and Recommendations of "Unexploded Ordnance Field Validation Survey, Patons Lane, Defence Establishment Orchard Hills V1_02" *[G-tek Australia Pty Limited 20142SYME, dated 26 March 2021]* remain valid and the Sydney Metro Easement as outlined on the attached plan (Figure 1) is suitable for the proposed development works to be safely conducted.

Raised By:



Greg Guthrie MIExpE
Chief Operating Officer

Released By:



Dr Peter Clark
Senior Geophysicist

This report was commissioned for the purpose of detailing the activities undertaken by G-tek on the Client's site and the results of those activities (The Purpose). G-tek accepts no responsibility or liability for any use of this report or any reliance upon this report by any person, other than the use of the whole of this report by the Client consistent with the Purpose. G-tek accepts no responsibility or liability to any person who relies upon a part of this report. This report must at all times be considered in its entirety.

PROJECT: **22129CPBU, Defence Estate Orchard Hills**

REVIEW No: **22129_001**

REVIEW AREA: Sydney Metro Easement, DEOH

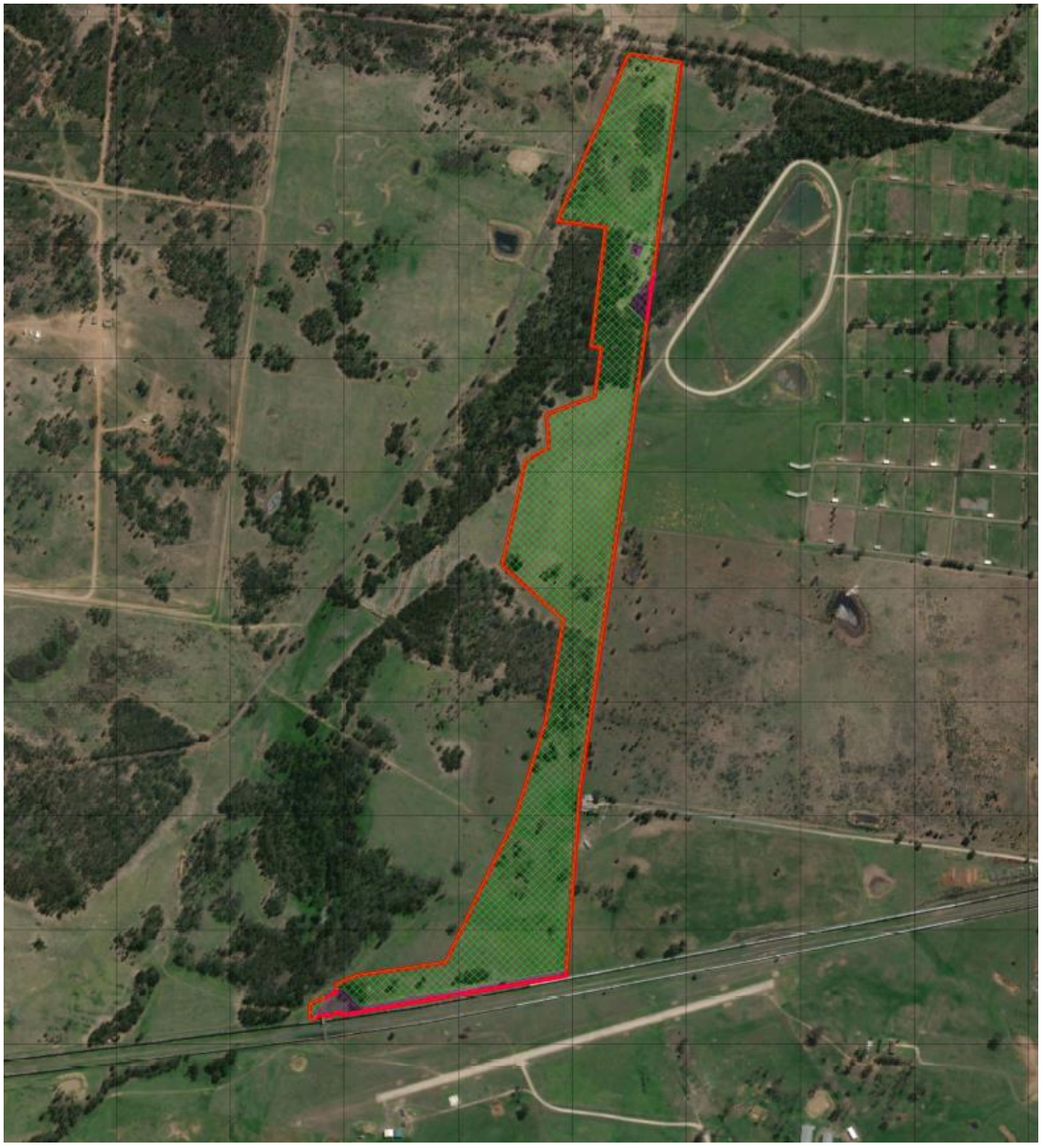


Figure 1 – Sydney Metro Easement DEOH Review Area (hatched).

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Patons Lane Subsurface Gas November 2019					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.8	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	14.5	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.2	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	6.9	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.7	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	10.2	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.7	
BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	1.9	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	30.4	
BH12B - EPA	Quarterly	Methane	% v/v	0	

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monitoring point 14	Quarterly	Carbon Dioxide	% v/v	10.4	
BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	12.3	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.3	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.9	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	7.3	

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Patons Lane Subsurface Gas February 2020					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.6	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.3	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	5.1	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	5.9	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	7.1	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	2	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	9.4	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.5	
BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	7.7	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	24.8	

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BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	0.3	
BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3.9	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3.2	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	7.3	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	9.1	

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Patons Lane Subsurface Gas May 2020					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	0.4	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	11	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0.2	
	Quarterly	Carbon Dioxide	% v/v	5.4	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.7	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3.3	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	2.4	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	15.1	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	1.2	
BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	2.3	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	19.9	

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BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3	
BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	8.2	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0.2	
	Quarterly	Carbon Dioxide	% v/v	3.4	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	7.2	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	5.5	

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Patons Lane Subsurface Gas August 2020					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.1	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	8	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0	Bore lid was open and bore cap removed
	Quarterly	Carbon Dioxide	% v/v	0.1	
BH6 (retest) - EPA monitoring point 6	Quarterly	Methane	% v/v	0	Retest 24 hours later
	Quarterly	Carbon Dioxide	% v/v	1.3	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	8.2	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	6.6	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3.8	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.4	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	1.5	
BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	11.6	

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BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0	Bore lid was open and bore cap removed
	Quarterly	Carbon Dioxide	% v/v	0	
BH12A (retest) - EPA monitoring point 13	Quarterly	Methane	% v/v	0.1	Retest 24 hours later
	Quarterly	Carbon Dioxide	% v/v	0.2	
BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	1.4	
	Quarterly	Carbon Dioxide	% v/v	3.4	
BH12B (retest) - EPA monitoring point 14	Quarterly	Methane	% v/v	1.4	Retest due to elevated methane concentrations
	Quarterly	Carbon Dioxide	% v/v	3.6	
BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.7	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	2	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	2.7	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	10.8	

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Patons Lane Subsurface Gas November 2020					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.2	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	11.3	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	2.5	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3.2	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3.4	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3.1	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	13.2	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	3.2	
BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	9.6	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.3	
BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	1.2	
	Quarterly	Carbon Dioxide	% v/v	6.7	

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BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	4.3	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	2.0	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	7.4	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	6.3	

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Patons Lane Subsurface Gas February 2021					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.8	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	14.5	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	7.1	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	8.4	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	2.5	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	2.4	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	18.8	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	2.5	
BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	9.0	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	3.4	
BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.9	

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BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.6	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	2.4	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	5.3	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	4.9	

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Patons Lane Subsurface Gas May 2021					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.1	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	16.2	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	4.2	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	9.2	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	4.9	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.9	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	8.2	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	2.0	
BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	10.1	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	4.0	
BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	8.2	

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BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.2	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	1.2	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	6.6	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	7.6	

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Patons Lane Subsurface Gas August 2020					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.0	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	13.7	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	6.2	
BH6 (retest) - EPA monitoring point 6	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	12.6	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	1.6	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	2.8	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	7.9	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	1.6	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.0	
BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	9.1	
BH12A - EPA	Quarterly	Methane	% v/v	0.0	

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monitoring point 13	Quarterly	Carbon Dioxide	% v/v	5.0	
BH12A (retest) - EPA monitoring point 13	Quarterly	Methane	% v/v	7.8	
	Quarterly	Carbon Dioxide	% v/v	7.2	
BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	0.0	Retest on 1 September 2021
	Quarterly	Carbon Dioxide	% v/v	27.8	
BH12B (retest) - EPA monitoring point 14	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	3.7	
BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	1.0	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.9	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0.0	Retest on 1 September 2021
	Quarterly	Carbon Dioxide	% v/v	63.3	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	4.7	

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Patons Lane Subsurface Gas November 2021					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.3	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	11.2	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	8.5	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	10.1	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.9	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	7.2	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	19.1	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.3	

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BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	14.2	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.7	
BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	1.9	
	Quarterly	Carbon Dioxide	% v/v	10.6	
BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	0.6	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	2.4	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	5.3	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0.0	
	Quarterly	Carbon Dioxide	% v/v	4.9	

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Patons Lane Subsurface Gas February/March 2022					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.5	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	13.3	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.1	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	11.6	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	11.8	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	2.8	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	6.3	

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BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	12.3	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	5.7	
BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	5	
BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.8	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.6	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.9	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	10.8	

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Patons Lane Subsurface Gas May/June 2022					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.2	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	16.1	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.1	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	1	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	14.3	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	2.5	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	8.3	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3.4	

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BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	14.8	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	2.5	
BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	0	Retest performed due to pump failure.
	Quarterly	Carbon Dioxide	% v/v	9.3	
BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.5	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.5	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	1.6	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	5.6	

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Patons Lane Subsurface Gas Aug 2022					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	13.3	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	14.2	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	9.1	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3.4	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	8.2	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.5	

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BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	6.5	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	5.8	
BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	8	
BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	1.4	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	3.8	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	11.2	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	24.7	

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Patons Lane Subsurface Gas Nov 2022					
Sampling Point	**Monitoring Frequency**	**Pollutant**	**Unit**	**Measurement**	**Comments**
BH3 - EPA monitoring point 4	Quarterly	Methane	% v/v	0.1	
	Quarterly	Carbon Dioxide	% v/v	0	
BH5 - EPA monitoring point 5	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	17	
BH6 - EPA monitoring point 6	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.1	
BH9A - EPA monitoring point 7	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	12.6	
BH9B - EPA monitoring point 8	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	6	
BH10A - EPA monitoring point 9	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	4.5	
BH10B - EPA monitoring point 10	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	7.1	
BH11A - EPA monitoring point 11	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	7.8	

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BH11B - EPA monitoring point 12	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	0.4	
BH12A - EPA monitoring point 13	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	6.1	
BH12B - EPA monitoring point 14	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	5.5	
BH13A - EPA monitoring point 15	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	6.8	
BH13B - EPA monitoring point 16	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	1.7	
BH14A - EPA monitoring point 17	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	17.5	
BH14B - EPA monitoring point 18	Quarterly	Methane	% v/v	0	
	Quarterly	Carbon Dioxide	% v/v	12.4	

BH14A - EPL Monitoring Point 17												
Monitoring Frequency	**Pollutant**	**Unit**	**Feb-20**	**May-20**	**Aug-20**	**Nov-20**	**Feb-21**	**May-21**	**Aug-21**	**Nov-21**	**Feb/Mar-22**	**May/Jun-22**
Quarterly	Ammonia (as N)	mg/L	0.48	0.46	1.4	0.3	0.37	0.6	0.3	0.37	0.48	0.79
	Bicarbonate Alkalinity (as CaCO3)	mg/L	1400	1400	1100	1200	1100	1200	988	1100	573	716
	Calcium	mg/L	240	250	270	250	240	380	236	240	177	157
	Carbonate Alkalinity (as CaCO3)	mg/L	10	10	10	10	10	10	1	10	1	1
	Chloride	mg/L	8400	6900	8700	7600	7000	6900	6960	7000	6990	7140
	Hydroxide Alkalinity (as CaCO3)	mg/L	20	20	20	20	20	20	1	20	1	1
	Magnesium	mg/L	790	780	800	940	780	1100	678	780	716	645
	Nitrate & Nitrite (as N)	mg/L	0.05	0.05	0.05	0.08	0.05	0.05	0.03	0.05	0.01	0.01
	Nitrate (as N)	mg/L	0.02	0.04	0.05	0.08	0.02	0.02	0.03	0.02	0.01	0.01
	Nitrite (as N)	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.01
	Phosphate total (as P)	mg/L	0.05	0.05	0.89	0.02	0.01	0.08	0.05	0.01	0.05	0.28
	Potassium	mg/L	26	30	35	31	26	38	26	26	22	24
	Sodium	mg/L	3700	3300	3500	4400	3600	4800	3260	3600	3840	3330
	Sulphate (as SO4)	mg/L	790	680	680	600	800	680	657	800	711	754
	Total Alkalinity (as CaCO3)	mg/L	1400	1400	1100	1200	1100	1200	988	1100	573	716
	Total Dissolved Solids	mg/L	16000	7300	12000	15000	12000	14000	14100	12000	15300	13700
	Total Organic Carbon	mg/L	30	5	120	5	6	5	3	6	21	12
	pH	pH	6.37	6.42	6.61	6.6	6.6	6.6	5.9	6.6	6.4	6.4
	Redox	mV	25.8	51.8	-180.5	21.8	24.7	-6.1	108.7	24.7	-6.6	-110.0
	Standing Water Level	mAHD	40.018	39.608	40.088	40.2	40.1	40.4	40.1	40.1	40.7	41.1
	Temperature	°C	20.6	20.6	18.5	19.9	20.3	19.6	19.3	20.3	20.4	18.9

BH14A - EPL Monitoring Point 17												
Monitoring Frequency	**Pollutant**	**Unit**	**Aug-22**	**Nov-22**								
Quarterly	Ammonia (as N)	mg/L	0.31	0.33								
	Bicarbonate Alkalinity (as CaCO3)	mg/L	809	998								
	Calcium	mg/L	187	208								
	Carbonate Alkalinity (as CaCO3)	mg/L	1	1								
	Chloride	mg/L	7640	6600								
	Hydroxide Alkalinity (as CaCO3)	mg/L	1	1								
	Magnesium	mg/L	758	637								
	Nitrate & Nitrite (as N)	mg/L	0.01	0.02								
	Nitrate (as N)	mg/L	0.01	0.02								
	Nitrite (as N)	mg/L	0.01	0.01								
	Phosphate total (as P)	mg/L	0.2	0.06								
	Potassium	mg/L	20	22								
	Sodium	mg/L	3880	3370								
	Sulphate (as SO4)	mg/L	757	772								
	Total Alkalinity (as CaCO3)	mg/L	809	998								
	Total Dissolved Solids	mg/L	14100	14100								
	Total Organic Carbon	mg/L	17	4								
	pH	pH	6.4	6.7								
	Redox	mV	5.9	-5.4								
	Standing Water Level	mAHD	40.9	40.9								
	Temperature	°C	17.3	19.1								

BH14A - EPL Monitoring Point 17					
Monitoring Frequency	**Pollutant**	**Unit**	**Aug-20**	**Aug-21**	**Aug-22**
Yearly	Aluminium	mg/L	0.05	0.26	0.01
	Arsenic	mg/L	0.001	0.001	0.001
	Barium	mg/L	0.08	0.043	0.088
	Benzene	mg/L	0.001	0.001	1
	Benzo(a)pyrene	mg/L	0.001	0.0005	0.5
	Cadmium	mg/L	0.0002	0.0001	0.0001
	Chromium (hexavalent)	mg/L	0.005	0.01	0.01
	Chromium (total)	mg/L	0.001	0.001	0.001
	Cobalt	mg/L	0.003	0.002	0.169
	Copper	mg/L	0.058	0.04	0.006
	Ethyl benzene	mg/L	0.001	0.002	2
	Fluoride	mg/L	0.5	0.2	0.4
	Lead	mg/L	0.001	0.001	0.001
	Manganese	mg/L	0.42	0.458	6.16
	Mercury	mg/L	0.0001	0.0001	0.0001
	Nickel	mg/L	0.048	0.018	0.09
	Organochlorine pesticides	mg/L	0.01	0.002	2
	Organophosphate pesticides	mg/L	0.02	0.002	2
	PAHs	mg/L	0.001	0.001	1
	PCBs	mg/L	0.001	0.001	1
	Phenols	mg/L	0.1	0.002	2
	Selenium	mg/L	0.001	0.01	0.01
	Toluene	mg/L	0.001	0.002	2
	Total Petroleum hydrocarbons	mg/L	0.3	0.05	100
	Xylene	mg/L	0.003	0.002	2
	Zinc	mg/L	0.13	0.029	0.078

	BH14B - EPL Monitoring Point 18											
Monitoring Frequency	**Pollutant**	**Unit**	**Feb-20**	**May-20**	**Aug-20**	**Nov-20**	**Feb-21**	**May-21**	**Aug-21**	**Nov-21**	**Feb/Mar-22**	**May/Jun-22**
Quarterly	Ammonia (as N)	mg/L	0.01	0.04	0.03	0.04	0.05	0.02	0.1	0.05	0.03	0.04
	Bicarbonate Alkalinity (as CaCO3)	mg/L	630	480	380	570	240	93	518	240	207	221
	Calcium	mg/L	120	110	92	130	79	86	115	79	67	54
	Carbonate Alkalinity (as CaCO3)	mg/L	10	10	10	10	10	10	1	10	1	1
	Chloride	mg/L	10000	9600	8800	11000	8800	10000	8910	8800	8220	8270
	Hydroxide Alkalinity (as CaCO3)	mg/L	20	20	20	20	20	20	1	20	1	1
	Magnesium	mg/L	760	730	4.3	850	690	940	718	690	793	725
	Nitrate & Nitrite (as N)	mg/L	0.21	0.1	0.05	0.05	0.05	0.05	0.01	0.05	0.02	0.08
	Nitrate (as N)	mg/L	0.21	0.1	0.03	0.02	0.02	0.02	0.01	0.02	0.02	0.08
	Nitrite (as N)	mg/L	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.01	0.01
	Phosphate total (as P)	mg/L	0.05	0.05	0.02	0.02	0.04	0.05	0.18	0.04	0.05	0.06
	Potassium	mg/L	5.9	6.3	5	12.5	5.3	6.7	5	5.3	5	3
	Sodium	mg/L	5300	4600	660	5100	4600	5600	4370	4600	4590	4030
	Sulphate (as SO4)	mg/L	850	870	3800	600	740	510	700	740	617	652
	Total Alkalinity (as CaCO3)	mg/L	630	480	380	570	240	93	518	240	207	221
	Total Dissolved Solids	mg/L	16000	9500	14000	18000	17000	11000	18000	17000	17400	15500
	Total Organic Carbon	mg/L	6.2	26	58	5	5	5	4	5	6	11
	pH	pH	5.99	5.95	6.17	6.1	5.9	5.4	5.7	5.9	5.8	5.9
	Redox	mV	56	92.1	-32.6	45.3	46.7	206.8	162.3	46.7	5.1	-1.8
	Standing Water Level	mAHD	38.943	38.673	38.603	39.4	38.9	40.0	40.0	38.9	39.7	40.7
	Temperature	°C	22.2	22.7	18.6	19.7	20.5	19.9	17.5	20.5	22.4	17.4

	BH14B - EPL Monitoring Point 18											
Monitoring Frequency	**Pollutant**	**Unit**	**Aug-22**	**Nov-22**								
Quarterly	Ammonia (as N)	mg/L	0.01	0.1								
	Bicarbonate Alkalinity (as CaCO3)	mg/L	456	516								
	Calcium	mg/L	111	118								
	Carbonate Alkalinity (as CaCO3)	mg/L	1	1								
	Chloride	mg/L	9210	9040								
	Hydroxide Alkalinity (as CaCO3)	mg/L	1	1								
	Magnesium	mg/L	747	786								
	Nitrate & Nitrite (as N)	mg/L	0.01	0.02								
	Nitrate (as N)	mg/L	0.01	0.01								
	Nitrite (as N)	mg/L	0.01	0.01								
	Phosphate total (as P)	mg/L	0.05	0.06								
	Potassium	mg/L	5	5								
	Sodium	mg/L	45440	4570								
	Sulphate (as SO4)	mg/L	770	784								
	Total Alkalinity (as CaCO3)	mg/L	456	516								
	Total Dissolved Solids	mg/L	16300	20900								
	Total Organic Carbon	mg/L	14	3								
	pH	pH	6.1	6.5								
	Redox	mV	57.2	48.0								
	Standing Water Level	mAHD	38.8	39.9								
	Temperature	°C	17.5	23.4								

BH14B - EPL Monitoring Point 18					
Monitoring Frequency	**Pollutant**	**Unit**	**Aug-20**	**Aug-21**	**Aug-22**
Yearly	Aluminium	mg/L	0.05	5.53	0.01
	Arsenic	mg/L	0.001	0.002	0.001
	Barium	mg/L	0.1	0.072	0.057
	Benzene	mg/L	0.001	0.001	1
	Benzo(a)pyrene	mg/L	0.001	0.0005	0.5
	Cadmium	mg/L	0.0005	0.0002	0.0002
	Chromium (hexavalent)	mg/L	0.005	0.01	0.01
	Chromium (total)	mg/L	0.001	0.009	0.001
	Cobalt	mg/L	0.12	0.117	0.136
	Copper	mg/L	0.071	0.067	0.004
	Ethyl benzene	mg/L	0.001	0.002	2
	Fluoride	mg/L	0.6	0.7	0.6
	Lead	mg/L	0.004	0.009	0.001
	Manganese	mg/L	570	4.75	6.5
	Mercury	mg/L	0.0001	0.0001	0.0001
	Nickel	mg/L	0.08	0.163	
	Organochlorine pesticides	mg/L	0.01	0.002	0.093
	Organophosphate pesticides	mg/L	0.02	0.002	2
	PAHs	mg/L	0.001	0.001	2
	PCBs	mg/L	0.001	0.001	1
	Phenols	mg/L	0.1	0.002	1
	Selenium	mg/L	0.002	0.01	2
	Toluene	mg/L	0.001	0.002	0.01
	Total Petroleum hydrocarbons	mg/L	0.1	0.05	2
	Xylene	mg/L	0.003	0.002	100
	Zinc	mg/L	0.15	0.801	2

Appendix D

Data Quality Objectives

Data Quality Objectives

DSI for AEC 36, 37 and 38, Patons Lane & Stockdale Road, Orchard Hills and Luddenham Road, Luddenham

SCAW Package for SMWSA

As shown in the table below, 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 problem to be addressed is that the extent and nature of potential contamination at the site is unknown and it is unclear whether the site is suitable for the proposed uses. The objective of the DSI is to determine the contamination status of the site with respect to the proposed land use and, if contamination is confirmed, to make recommendations for further investigations and / or remediation to render the site suitable for the proposed uses. In addition, soil from the site may potentially be reused elsewhere within SCAW and the data obtained in the DSI, therefore, may also be used for this purpose. A preliminary conceptual site model (CSM) has been prepared for the proposed development. The proposed project team consists of experienced environmental engineers and scientists.
2: Identify the decisions / goal of the study	The site history has identified possible contaminating previous uses which are identified in the preliminary CSM. The SAC for potential contaminants are provided in the DSI. The decision is to establish whether or not the results fall below the SAC or whether or not the 95% upper confidence limit of the sample population falls below the SAC. On this basis, an assessment of the site's suitability from a contamination perspective and whether (or not) further assessment and / or remediation will be derived.
3: Identify the information inputs	Inputs to the investigation will be the results of analysis of samples to measure the concentrations of potential contaminants at the site using NATA accredited laboratories and methods, where possible. The SAC for each of the potential contaminants are provided in the RAP. A photoionization detector (PID) is used on-site to screen soils for volatile contaminants. PID readings will be used to inform sample selection for laboratory analysis.
4: Define the study boundaries	The site is identified in the DSI. The lateral boundaries of the investigation area are shown on Drawings AEC37/38-01 and AEC36-01 to AEC36-04 Appendix A.

Step	Summary
5: Develop the analytical approach (or decision rule)	The decision rule is to compare all analytical results with SAC. Initial comparisons will be with individual results then, where required and if possible, 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. 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).
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 the DSI. Adequately experienced environmental scientists / engineers are chosen to conduct field work and sample analysis interpretation.

Appendix E

Laboratory Certificates and Chain of Custody

Appendix F

Site Assessment Criteria

Site Assessment Criteria for Soil for AEC 36, 37 and 38

Surface & Civil Alignment Works (SCAW) Package for Sydney Metro - Western Sydney Airport (SMWSA)

1.0 Introduction

It is understood that the two general future land uses associated at the site will comprise:

- The rail corridor. The rail corridor will include the rail line, embankments / noise barriers, a stabling yard and maintenance facility and stations; and
- Passive open space. These are areas immediately adjacent to the rail corridor that may be used for bike / commuter paths. It is assumed that there is an absence of buildings in areas of passive open space.

The following references were consulted for deriving 'Tier 1' SAC for soil for the two above-listed land uses:

- 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); and
- HEPA, *PFAS National Environmental Management Plan* (NEMP) (HEPA, 2020).

2.0 Human Health-based Criteria

Human health-based SAC for soil and the associated future land uses are listed in Tables 1 to 6. Tier 1 criteria comprise:

- Health Investigation Levels (HIL) for a broad range of metals and organics (Table 1). HIL are applicable for assessing human health risk via all relevant pathways of exposure;
- Health Screening Levels (HSL) for vapour intrusion for selected petroleum hydrocarbons and fractions (Tables 2 and 3). These are applicable for assessing human health via the inhalation pathway. HSL are dependent on soil type and depth. HSL D are applicable to soil / areas to be covered by buildings (e.g., stations, offices and enclosed sheds);
- HSL for direct contact for selected petroleum hydrocarbons and fractions (Table 4). These are applicable for assessing human health via the direct contact pathway;
- Health investigation levels (HIL) for per- and poly-fluoroalkyl substances (PFAS) (Table 5). At the time of preparing this document, screening values were available only for perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexane sulfonate (PFHxS); and
- Health screening levels for asbestos (Table 6).

For HSL for vapour intrusion, HSL for sand and clay soils are shown as these are the predominant soil types at the site.

Table 1: Health Investigation Levels (Tier 1) from NEPM

Contaminant	HIL C for Passive Open Space (mg/kg)	HIL D for Rail Corridor (mg/kg)
Metals and Inorganics		
Arsenic	300	3000
Cadmium	90	900
Chromium (VI)	300	3600
Copper	17 000	240 000
Lead	600	1500
Mercury (inorganic)	80	730
Nickel	1200	6000
Zinc	30 000	400 000
Cyanide (free)	240	1500
Polycyclic Aromatic Hydrocarbons (PAH)		
Benzo(a)pyrene TEQ	3	40
Total PAH	300	4000
Phenols		
Phenol	40 000	240 000
Pentachlorophenol	120	660
Cresols	4000	25 000
Organochlorine Pesticides (OCP)		
DDT+DDE+DDD	400	3600
Aldrin and dieldrin	10	45
Chlordane	70	530
Endosulfan	340	2000
Endrin	20	100
Heptachlor	10	50
HCB	10	80
Methoxychlor	400	2500
Toxaphene	30	160
Organophosphorus Pesticides (OPP)		
Chlorpyrifos	250	2000
Polychlorinated Biphenyls (PCB)		
PCB	1	7

Table 2: Health Screening Levels (Tier 1) for Vapour Intrusion for Passive Open Space from NEPM

Contaminant	HSL C (mg/kg)	HSL C (mg/kg)	HSL C (mg/kg)	HSL C (mg/kg)
SAND	**0 m to <1 m**	**1 m to <2 m**	**2 m to <4 m**	**4 m+**
Benzene	NL	NL	NL	NL
Toluene	NL	NL	NL	NL
Ethylbenzene	NL	NL	NL	NL
Xylenes	NL	NL	NL	NL
Naphthalene	NL	NL	NL	NL
TPH C6-C10 less BTEX	NL	NL	NL	NL
TPH >C_{10}-C_{16} less naphthalene	NL	NL	NL	NL
CLAY	**0 m to <1 m**	**1 m to <2 m**	**2 m to <4 m**	**4 m+**
Benzene	NL	NL	NL	NL
Toluene	NL	NL	NL	NL
Ethylbenzene	NL	NL	NL	NL
Xylenes	NL	NL	NL	NL
Naphthalene	NL	NL	NL	NL
TPH C6-C10 less BTEX	NL	NL	NL	NL
TPH >C10-C16 less naphthalene	NL	NL	NL	NL

Notes: TPH is total petroleum hydrocarbons

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

Table 3: Health Screening Levels (Tier 1) for Vapour Intrusion for Rail Corridor from NEPM

Contaminant	HSL D (mg/kg)	HSL D (mg/kg)	HSL D (mg/kg)	HSL D (mg/kg)
SAND	**0 m to <1 m**	**1 m to <2 m**	**2 m to <4 m**	**4 m+**
Benzene	3	3	3	3
Toluene	NL	NL	NL	NL
Ethylbenzene	NL	NL	NL	NL
Xylenes	230	NL	NL	NL
Naphthalene	NL	NL	NL	NL
TPH C6-C10 less BTEX	260	370	630	NL
TPH >C10-C16 less naphthalene	NL	NL	NL	NL
CLAY	**0 m to <1 m**	**1 m to <2 m**	**2 m to <4 m**	**4 m+**
Benzene	4	6	9	20

Contaminant	HSL D (mg/kg)	HSL D (mg/kg)	HSL D (mg/kg)	HSL D (mg/kg)
Toluene	NL	NL	NL	NL
Ethylbenzene	NL	NL	NL	NL
Xylenes	NL	NL	NL	NL
Naphthalene	NL	NL	NL	NL
TPH C6-C10 less BTEX	310	480	NL	NL
TPH >C10-C16 less naphthalene	NL	NL	NL	NL

Notes: TPH is total petroleum hydrocarbons

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

Table 4: Health Screening Levels (Tier 1) for Direct Contact from CRC CARE (2011)

Contaminant	HSL C for Passive Open Space (mg/kg)	HSL D for Rail Corridor (mg/kg)
Benzene	120	430
Toluene	18 000	99 000
Ethylbenzene	5300	27 000
Xylenes	15 000	81 000
Naphthalene	1900	11 000
TPH C6-C10 less BTEX	5100	26 000
TPH >C10-C16 less naphthalene	3800	20 000
TPH >C16-C34	5300	27 000
TPH >C34-C40	7400	38 000

Notes: TPH is total petroleum hydrocarbons.

Table 5: Health Investigation Levels (Tier 1) for PFAS from NEMP

Contaminant	HIL C for Passive Open Space (mg/kg)	HIL D for Rail Corridor (mg/kg)
PFOS and PFHxS *	1	20
PFOA	10	50

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

Table 6: Health Screening Levels (Tier 1) for Asbestos from NEPM

Form of Asbestos	Health Screening Level C for Passive Open Space	Health Screening Level D for Rail Corridor
Bonded asbestos containing materials (ACM)	0.02%	0.05%
Fibrous asbestos (FA) and asbestos fines (AF) (friable asbestos)	0.001%	0.001%
All forms of asbestos	No visible asbestos for surface soil	No visible asbestos for surface soil

Notes: FA comprises friable asbestos material and includes severely weathered cement sheet, insulation products and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).
AF includes free fibres, small fibre bundles and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve.
Surface soils defined as top 10 cm.

3.0 Ecological Criteria

Ecological SAC for soil and the associated future use are listed are listed in Tables 7 to 9. Tier 1 criteria comprise:

- Ecological Investigation Levels (EIL) for arsenic, copper, chromium (III), nickel, lead, zinc, DDT and naphthalene (Table 7). These are derived using the interactive (excel) calculation spreadsheet on the NEPM toolbox website and are used to assess contamination with respect to terrestrial ecosystems. Site specific inputs (including soil parameters) are required to calculate EIL. EIL typically apply to the top 2 m of soil;
- Ecological Screening Levels (ESL) for selected petroleum hydrocarbon compounds and fractions, and benzo(a)pyrene, and are used to assess contamination with respect to terrestrial ecosystems (Table 8). ESL are dependent on soil type and typically apply to the top 2 m of soil; and
- Ecological Soil Guideline Values (EGV) for PFAS (Table 9). At the time of preparing this document, screening values were available only for PFOS and PFOA.

EIL were determined using the NEPC Ecological Investigation Level Spreadsheet based on the following inputs:

- A pH of 6.3 which is the average pH for analysed soil samples in this investigation (see laboratory certificates) and analysed soil samples in previous investigations;
- A Cation Exchange Capacity (CEC) of 10.3 meq/100g which is the average CEC for analysed soil samples in this investigation (see laboratory certificates);
- Contamination is assumed to be ‘aged’ based on site history;
- A (default) organic carbon content value of 1% has been used as a default value;
- A clay content of 1% has been used as a conservative value given the soil profile encountered during the investigation; and
- The state is NSW and the traffic volume is ‘low’.

Sand and clay soils were encountered during the investigation and, so, ESL for coarse and fine soils have been adopted.

Table 7: Ecological Investigation Levels (Tier 1) from NEPM toolbox

Contaminant	Public Open Space EIL for Passive Open Space (mg/kg)	Commercial and Industrial EIL for Rail Corridor (mg/kg)
Metals		
Arsenic	100	160
Copper	210	300
Nickel	180	300
Chromium III	190	320
Lead	1100	1800
Zinc	490	720
PAH		
Naphthalene	170	370
OCP		
DDT	180	640

Table 8: Ecological Screening Levels (Tier 1) from NEPM

Contaminant	Soil Type	Public Open Space ESL for Passive Open Space (mg/kg)	Commercial and Industrial ESL for Rail Corridor (mg/kg)
Benzene	Coarse	50	75
	Fine	65	95
Toluene	Coarse	85	135
	Fine	105	135
Ethylbenzene	Coarse	70	165
	Fine	105	135
Xylenes	Coarse	105	180
	Fine	45	95
TPH C6-C10 less BTEX	Coarse/ Fine	180*	215*
TPH >C10-C16	Coarse/ Fine	120*	170*
TPH >C16-C34	Coarse	300	1700
	Fine	1300	2500
TPH >C34-C40	Coarse	2800	3300
	Fine	5600	6600

Contaminant	Soil Type	Public Open Space ESL for Passive Open Space (mg/kg)	Commercial and Industrial ESL for Rail Corridor (mg/kg)
Benzo(a)pyrene	Coarse / Fine	0.7	1.4

Notes: ESL are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability
TPH is total petroleum hydrocarbons

Table 9: Ecological Soil Guideline Values (Tier 1) from NEMP for all Land Uses

Contaminant	Direct Exposure (mg/kg)	Indirect Exposure (mg/kg)
PFOS	1	0.01
PFOA	10	NC

Notes: NC no criterion
Direct exposure ecological soil guideline applies specifically to protection of organisms that live within, or in close contact with soil, such as earthworms and plants.
The indirect exposure ecological soil guideline accounts for the various pathways through which organisms can be exposed whether or not they are in direct contact with PFAS contaminated soil (i.e. exposure through the food chain). For intensively developed sites with no secondary consumers and minimal potential for indirect ecological exposure, a higher criterion of up to 0.14 mg/kg may be appropriate.

4.0 Management Limits

In addition to appropriate consideration and application of the human health and ecological criteria, there are additional considerations which reflect the nature and properties of petroleum hydrocarbons, including:

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

Management limits are shown in Table 10. Clay (fine soil) and sand (coarse soil) were encountered during the investigation, so, management limits for fine and coarse soils have been adopted.

Table 10: Management Limits for TPH from NEPM (mg/kg)

Contaminant	Soil Type	Public Open Space Management Limits for Passive Open Space (mg/kg)	Commercial and Industrial Management Limit for Rail Corridor (mg/kg)
TPH C6-C10	Coarse	700	700
	Fine	800	800
TRH >C10-C16	Coarse	1000	1000
	Fine	1000	1000
TPH >C16-C34	Coarse	2500	3500
	Fine	3500	5000
TPH >C34-C40	Coarse	10 000	10 000
	Fine	10 000	10 000

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Site Assessment Criteria for Groundwater & Surface Water for AEC 36, 37 & 38

Surface & Civil Alignment Works (SCAW) Package for Sydney Metro - Western Sydney Airport (SMWSA)

1.0 Groundwater and Surface Water

The following references were consulted for deriving 'Tier 1' SAC for groundwater and surface water:

- 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).
- ANZG *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZG, 2018).
- NHMRC *Guidelines for Managing Risks In Recreational Water* (NHMRC, 2008).
- NHMRC, NRMMC *Australian Drinking Water Guidelines 6 2011, Version 3.7* (NHMRC, NRMMC, 2022).
- ANZECC *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC, 2000).

2.0 Ecological Criteria

SAC for the protection of aquatic freshwater ecosystems which may receive groundwater from the site include:

- Default guideline values (DGV) recommended for the protection of slightly to moderately disturbed freshwater ecosystems (or otherwise for an unknown level of protection) from ANZG (2018) (Table 1); and
- Freshwater water quality guidelines from NEMP (Table 2). At the time of preparing this document, guideline values were available only for PFOA and PFOS. Guidelines are for 99% species protection to account for bioaccumulation in a slightly-to-moderately impacted system.

It is noted that livestock at surrounding farmland could potentially be a receptor to discharged groundwater (as surface water) that was sourced from the site, however, water quality guidelines for livestock in ANZECC (2000) are generally less conservative than the DGV (Table 1) and have not been listed herein.

Table 1: Default Guideline Values for Protection of Aquatic Ecosystems from ANZG (2018)

Contaminant	Fresh Water DGV (µg/L)
Metals	
Aluminium	0.8 for pH<6.5 55 for pH>6.5
Arsenic (III)	24
Arsenic (V)	13
Boron	940
Cadmium	0.2*
Chromium (III)	3.3*
Chromium (VI)	1.0
Copper	1.4
Cobalt	1
Lead	3.4*
Manganese	1900
Mercury (inorganic)	0.06
Molybdenum	34
Nickel	11*
Selenium (total)	5
Vanadium	6
Zinc	8*
Aromatic Hydrocarbons (including BTEX)	
Benzene	950
Ethylbenzene	80
Toluene	180
m-Xylene	75
o-Xylene	350
p-Xylene	200
Isopropylbenzene	30
PAH	
Anthracene	0.01
Benzo(a)pyrene	0.1
Fluoranthene	1
Naphthalene	16
Phenanthrene	0.6
Phenols and Halogenated Phenols	
2,4-dinitrophenol	45

Contaminant	Fresh Water DGV (µg/L)
2,4-dimethylphenol	2
4-nitrophenol	58
Phenol	320
2,3,4,6-tetrachlorophenol	10
2,3,5,6-tetrachlorophenol	0.2
2,4,6-trichlorophenol	3
2,4-dichlorophenol	120
2,6-dichlorophenol	34
2-chlorophenol	340
Pentachlorophenol	3.6
OCP	
Aldrin	0.001
Chlordane	0.03
DDT	0.006
Dicofol	0.5
Dieldrin	0.01
Endosulfan	0.03
Endrin	0.01
Heptachlor	0.01
Lindane	0.2
Methoxychlor	0.005
Mirex	0.04
Toxaphene	0.1
Hexachlorobenzene	0.05
OPP	
Azinphos methyl	0.01
Chlorpyrifos	0.01
Diazinon	0.01
Dimethoate	0.15
Fenitrothion	0.2
Malathion	0.05
Parathion	0.004
Profenofos	0.02
Temephos	0.05
PCB	
Aroclor 1242	0.3

Contaminant	Fresh Water DGV (µg/L)
Aroclor 1254	0.01
Phthalates	
Diethylphthalate	1000
Dimethyl phthalate	3700
Di-n-butyl phthalate	10
Di(2-ethylhexyl)phthalate	1
Ammonia	
Ammonia (as total ammonia nitrogen)	900
Other organics	
Aniline	8
2,4-Dinitrotoluene	16
Nitrobenzene	550
1,1,2-trichloroethane	6500
1,1-dichloroethene	700
1,2-dichloroethane	1900
1,2-dichloropropane	900
1,3-dichloropropane	1100
Carbon tetrachloride	240
Chloroform	370
Dichloromethane	4000
Hexachloroethane	290
Tetrachloroethene	70
Vinyl chloride	100
Carbon disulfide	20
1,2,3,4-tetrachlorobenzene	2
1,2,3,5-Tetrachlorobenzene	3
1,2,3-trichlorobenzene	3
1,2,4,5-tetrachlorobenzene	5
1,2,4-trichlorobenzene	85
1,2-dichlorobenzene	160
1,3,5-Trichlorobenzene	8
1,3-dichlorobenzene	260
1,4-dichlorobenzene	60
Chlorobenzene	55
Trifluralin	2.6
1,1,1-Trichloroethane	270

Contaminant	Fresh Water DGV (µg/L)
1,1,2,2-Tetrachloroethane	400
1,3,5-Trinitrobenzene	4
Pentachlorobenzene	1.5
Pentachloroethane	80
Trichloroethene	330

Notes: * Can be modified for hardness

Table 2: Water Quality Guidelines from NEMP

Contaminant	Freshwater Water Quality Guidelines (µg/L)
PFOS	0.00023 *
PFOA	19

Notes: * Guideline value around laboratory limit of reporting offered by commercial laboratories.

3.0 Human Health and Aesthetic Criteria

Human health-based SAC include:

- Health Screening Levels (HSL) for vapour intrusion for selected petroleum hydrocarbons and fractions (Tables 3 and 4). These are applicable for assessing human health via the inhalation pathway. HSL are dependent on soil type and depth. HSL D are applicable for areas to be covered by buildings (e.g., stations, offices and enclosed sheds). HSL shown Tables 3 and 4 are for clay given that clay is the predominant soil type. Where the groundwater depth is less than 2 m below the final ground levels, the laboratory PQL will be used as an initial screening value;
- Health-based guidelines for recreational waters (Table 5). These are health-based criteria from NHMRC, NRMMC (2022) multiplied by 10 (to account for lower human consumption of recreational waters compared to drinking water); and
- Recreational water quality guideline values (Table 6) from NEMP.

Given that groundwater in the area is not used for drinking or domestic purposes (according to groundwater bore registered with Water NSW), health-based drinking water guidelines have not been adopted as SAC.

For the consideration of aesthetics of recreational waters, aesthetic guideline values from NHMRC, NRMMC (2022) have been included in Table 5.

Table 3: Groundwater Health Screening Levels for Vapour Intrusion from NEPM for Passive Open Space

Contaminant	HSL C (µg/L)	HSL C (µg/L)	HSL C (µg/L)
CLAY	**2 m to <4 m**	**4 m to <8 m**	**8 m+**
Benzene	NL	NL	NL
Toluene	NL	NL	NL
Ethylbenzene	NL	NL	NL
Xylenes	NL	NL	NL
Naphthalene	NL	NL	NL
TPH C6-C10 minus BTEX	NL	NL	NL
TPH >C10-C16 minus naphthalene	NL	NL	NL

Notes: The solubility limit is defined as the groundwater concentration at which the water cannot dissolve any more of an individual chemical based on a petroleum mixture. The soil vapour that is in equilibrium with the groundwater will be at its maximum. If the derived groundwater HSL exceeds the water solubility limit, 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'.

Table 4: Groundwater Health Screening Levels for Vapour Intrusion from NEPM for Rail Corridor

Contaminant	HSL D (µg/L)	HSL D (µg/L)	HSL D (µg/L)
CLAY	**2 m to <4 m**	**4 m to <8 m**	**8 m+**
Benzene	30 000	30 000	35 000
Toluene	NL	NL	NL
Ethylbenzene	NL	NL	NL
Xylenes	NL	NL	NL
Naphthalene	NL	NL	NL
TPH C6-C10 minus BTEX	NL	NL	NL
TPH >C10-C16 minus naphthalene	NL	NL	NL

Notes: The solubility limit is defined as the groundwater concentration at which the water cannot dissolve any more of an individual chemical based on a petroleum mixture. The soil vapour that is in equilibrium with the groundwater will be at its maximum. If the derived groundwater HSL exceeds the water solubility limit, 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'.

Table 5: Guidelines for Protection of Recreational Waters from NHMRC (2008) and NHMRC, NRMMC (2022)

Contaminant	Health-based Guideline Value (µg/L)	Aesthetic Guideline Value (µg/L)
Metals		
Aluminium	-	200

Contaminant	Health-based Guideline Value (µg/L)	Aesthetic Guideline Value (µg/L)
Arsenic	100	-
Barium	20 000	-
Beryllium	600	-
Boron	40 000	-
Cadmium	20	-
Chromium (VI)	500	-
Copper	20 000	1000
Iron	-	300
Lead	100	-
Manganese	5000	100
Mercury	10	-
Molybdenum	500	-
Nickel	200	-
Selenium	100	-
Zinc	-	3000
BTEX		
Benzene	10	-
Toluene	8000	25
Ethylbenzene	3000	3
Xylene (total)	6000	20
PAH		
Benzo(a)pyrene	0.1	-
OCP		
Aldrin + Dieldrin	3	-
Chlordane	20	-
DDT	90	-
Lindane	100	-
Heptachlor	3	-
Methoxychlor	3000	-
Endosulfan	20	-
OPP		
Azinphos methyl	300	-
Sulprofos	100	
Bromophos-ethyl	100	-
Chlorfenvinphos	20	-
Chlorpyrifos	100	-

Contaminant	Health-based Guideline Value (µg/L)	Aesthetic Guideline Value (µg/L)
Diazinon	40	-
Dichlorvos	50	-
Dimethoate	70	-
Disulfoton	40	-
Ethion	40	-
Ethoprophos	10	-
Fenitrothion	70	-
Fensulfothion	100	-
Fenthion	70	-
Malathion	700	-
Methyl parathion	7	-
Mevinphos (Phosdrin)	50	-
Monocrotophos	20	-
Omethoate	10	-
Pyrazophos	200	-
Terbufos	9	-
Tetrachlorvinphos	1000	-
Fenamiphos	5	
Other Pesticides		
Pronamide	700	-
Trifluralin	900	-
Parathion	200	-
Pirimiphos-methyl	900	-
Pirimiphos-ethyl	5	
Halogenated Phenols		
2,4,6-trichlorophenol	200	2
2,4-dichlorophenol	2000	0.3
2-chlorophenol	3000	0.1
Pentachlorophenol	100	-
Phthalates		
Bis(2-ethylhexyl) phthalate	100	-
Other Organics		
1,1-dichloroethene	300	-
1,2-dichloroethane	30	-
Carbon tetrachloride	30	-
Dichloromethane	40	-

Contaminant	Health-based Guideline Value (µg/L)	Aesthetic Guideline Value (µg/L)
Hexachlorobutadiene	7	-
Pentachloronitrobenzene	300	-
Tetrachloroethene	500	-
Vinyl chloride	3	-
1,2-dichlorobenzene	15 000	1
1,3-dichlorobenzene	-	20
1,4-dichlorobenzene	400	0.3
Bromomethane	10	-
Chlorobenzene	3000	10
Styrene	300	4
1,2-Dichloroethene	600	-
1,3-Dichloropropene	1000	-
Trichlorobenzenes (total)	300	5
Trihalomethanes	2500	-
Other Inorganics		
Sulfate	-	250000
Fluoride	15000	-

Table 6: Recreational Water Quality Guideline Values From NEMP

Contaminant	Recreational Water Quality Guideline Values (µg/L)
Sum of PFOS and PFHxS	2
PFOA	10

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Appendix G

Test Pit Logs and Borehole Logs

EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP01
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 290951.1, N: 6254259.1 (56 MGA2020)	SURFACE ELEVATION : 45.80 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, trace rootlets	M			FILL 0.00: PID<5
			0.30m ES 0.40m				0.20m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD1/20221213 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	St	×	0.80: HP =160 kPa 0.80: PID<5
				1.0			0.90m EXCAVATION AEC36TP01 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP02
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 290962.5, N: 6254276.5 (56 MGA2020)	SURFACE ELEVATION : 45.80 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING				MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, trace rootlets	M			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD2/20221213 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	0.90m EXCAVATION AEC36TP02 TERMINATED AT 0.90 m Target depth	w<PL	St	×	0.80: HP =170 kPa 0.80: PID<5
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE, E, F, H, VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP03
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 290989.7, N: 6254289.9 (56 MGA2020)	SURFACE ELEVATION : 45.90 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, trace rootlets	M			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	St to VSt	×	0.80: HP =210 kPa 0.80: PID<5
				1.0			0.90m EXCAVATION AEC36TP03 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP04
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291000.7, N: 6254268.3 (56 MGA2020)	SURFACE ELEVATION : 46.60 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETROMETER (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m ES 0.20m 0.60m ES 0.70m	0.0			0.05m FILL: silty SAND: brown, fine to medium grained sand, trace rootlets	M			FILL 0.00: PID<5 Field Replicate BD9/20221213 taken at 0.0-0.1m
				0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St		RESIDUAL SOIL 0.10: HP =160 kPa 0.10: PID<5 0.60: HP =180 kPa 0.60: PID<5
				1.0			1.00m EXCAVATION AEC36TP04 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP05
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291007.0, N: 6254291.1 (56 MGA2020)	SURFACE ELEVATION : 46.40 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, trace roots, rootlets	D			FILL 0.00: PID<5
			0.20m				0.15m				
			ES 0.30m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St	×	Field Replicate BD10/20221213 taken at 0.0-0.1m RESIDUAL SOIL 0.20: HP =200 kPa 0.20: PID<5
			0.70m ES 0.80m				0.90m			×	0.70: HP =180 kPa 0.70: PID<5
				1.0			EXCAVATION AEC36TP05 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP06
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291024.2, N: 6254272.6 (56 MGA2020)	SURFACE ELEVATION : 47.30 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m 0.20m ES 0.30m	0.0			0.05m FILL: silty SAND: brown, fine to medium grained sand, trace roots, rootlets	M			FILL 0.00: PID<5 Field Replicate BD3/20221213 taken at 0.0-0.1m
						CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel 0.40m	w<PL	VSt	X	RESIDUAL SOIL 0.20: HP =220 kPa 0.20: PID<5
				0.5			EXCAVATION AEC36TP06 TERMINATED AT 0.40 m Refusal Tree roots present				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP07
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291052.4, N: 6254315.2 (56 MGA2020)	SURFACE ELEVATION : 46.90 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

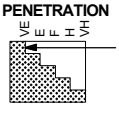
VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, trace rootlets	D			FILL 0.00: PID<5
			0.40m ES 0.50m	0.5		CI-CH	0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	VSt	×	RESIDUAL SOIL 0.40: HP =260 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			1.00m EXCAVATION AEC36TP07 TERMINATED AT 1.00 m Target depth			×	0.90: HP =210 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

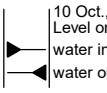


PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION


WATER


SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP08
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291055.7, N: 6254279.0 (56 MGA2020)	SURFACE ELEVATION : 47.60 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD4/20221213 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			1.00m EXCAVATION AEC36TP08 TERMINATED AT 1.00 m Target depth			×	0.90: HP =210 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP09
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291074.2, N: 6254303.0 (56 MGA2020)	SURFACE ELEVATION : 47.60 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, with fine gravel, trace rootlets	D			FILL 0.00: PID<5
			0.20m				0.15m				
			ES 0.30m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St	×	Field Replicate BD5/20221213 taken at 0.0-0.1m RESIDUAL SOIL 0.20: HP =180 kPa 0.20: PID<5
			0.70m ES 0.80m				0.90m			×	0.70: HP =160 kPa 0.70: PID<5
				1.0			EXCAVATION AEC36TP09 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP10
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291082.2, N: 6254331.4 (56 MGA2020)	SURFACE ELEVATION : 47.10 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	M			FILL 0.00: PID<5
			0.20m	0.15m							
			ES 0.30m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St	×	RESIDUAL SOIL 0.20: PID<5 0.30: HP =180 kPa
			0.70m								
			ES 0.80m							×	0.70: PID<5 0.80: HP =160 kPa
				0.90m			EXCAVATION AEC36TP10 TERMINATED AT 0.90 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP11
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291097.9, N: 6254285.3 (56 MGA2020)	SURFACE ELEVATION : 48.40 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m 0.20m ES 0.30m 0.70m ES 0.80m	0.0 0.5		CI-CH	0.15m FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel 0.80m EXCAVATION AEC36TP11 TERMINATED AT 0.80 m Target depth	D w<PL	VSt	X X	FILL 0.00: PID<5 Field Replicate BD6/20221213 taken at 0.0-0.1m RESIDUAL SOIL 0.20: HP =260 kPa 0.20: PID<5 0.70: HP =250 kPa 0.70: PID<5
				1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP12
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291095.8, N: 6254305.7 (56 MGA2020)	SURFACE ELEVATION : 47.80 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETROMETER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			X	Field Replicate BD7/20221213 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =230 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	VSt		
				1.00m			EXCAVATION AEC36TP12 TERMINATED AT 1.00 m Target depth			X	0.80: HP =240 kPa 0.80: PID<5
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP13
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291118.6, N: 6254324.2 (56 MGA2020)	SURFACE ELEVATION : 47.70 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =220 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	VSt	×	0.80: HP =230 kPa 0.80: PID<5
				1.0			0.90m EXCAVATION AEC36TP13 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE / E / F / H / VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP14
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291130.2, N: 6254296.0 (56 MGA2020)	SURFACE ELEVATION : 48.60 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD8/20221213 taken at 0.0-0.1m
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				RESIDUAL SOIL 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	St to VSt		0.80: PID<5
				0.90m			EXCAVATION AEC36TP14 TERMINATED AT 0.90 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP15
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291139.9, N: 6254334.1 (56 MGA2020)	SURFACE ELEVATION : 47.80 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				Field Replicate BD11/20221213 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	St to VSt		0.80: HP =160 kPa 0.80: PID<5
				1.0			0.90m EXCAVATION AEC36TP15 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP16
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291155.8, N: 6254311.8 (56 MGA2020)	SURFACE ELEVATION : 48.70 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	M			FILL 0.00: PID<5 Field Replicate BD1/20221214 taken at 0.0-0.1m
			0.40m				0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.40: HP =240 kPa 0.40: PID<5
			ES 0.50m	0.5		CI-CH		w<PL	VSt		
			0.80m							×	0.80: HP =210 kPa 0.80: PID<5
			ES 0.90m				0.90m EXCAVATION AEC36TP16 TERMINATED AT 0.90 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP17
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291169.5, N: 6254340.5 (56 MGA2020)	SURFACE ELEVATION : 48.10 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	M			FILL 0.00: PID<5
			0.30m ES 0.40m				0.20m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			X	Field Replicate BD2/20221214 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =240 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	VSt	X	0.80: HP =240 kPa 0.80: PID<5
				1.0			0.90m EXCAVATION AEC36TP17 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE / E / F / H / VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP18
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291179.8, N: 6254301.6 (56 MGA2020)	SURFACE ELEVATION : 49.20 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	M			FILL 0.00: PID<5
			0.30m ES 0.40m				0.20m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			X	RESIDUAL SOIL 0.30: HP =190 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	St	X	0.80: HP =190 kPa 0.80: PID<5
				1.0			0.90m EXCAVATION AEC36TP18 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP19
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291192.3, N: 6254323.9 (56 MGA2020)	SURFACE ELEVATION : 48.70 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0							FILL 0.00: PID<5
			0.20m				FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	M			
			ES 0.30m				0.15m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD3/20221214 taken at 0.0-0.1m RESIDUAL SOIL 0.20: HP =190 kPa 0.20: PID<5
			0.70m ES 0.80m	0.5		CI-CH		w<PL	St to VSt	×	0.70: HP =210 kPa 0.70: PID<5
				1.0			0.90m EXCAVATION AEC36TP19 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP20
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291200.6, N: 6254344.7 (56 MGA2020)	SURFACE ELEVATION : 48.20 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	M			FILL 0.00: PID<5
			0.20m				0.15m				
			ES 0.30m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	VSt	×	Field Replicate BD4/20221214 taken at 0.0-0.1m RESIDUAL SOIL 0.20: HP =220 kPa 0.20: PID<5
			0.70m ES 0.80m				0.90m				0.70: PID<5
				1.0			EXCAVATION AEC36TP20 TERMINATED AT 0.90 m Target depth			×	0.90: HP =210 kPa
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP21
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291218.8, N: 6254312.3 (56 MGA2020)	SURFACE ELEVATION : 49.30 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

PENETRATION (VE / E / F / H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.10m FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	M			FILL 0.00: PID<5
			0.20m				Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			100 200 300 400	RESIDUAL SOIL 0.20: HP =190 kPa 0.20: PID<5
			ES 0.30m	0.5		CI-CH		w<PL	St		
			0.70m ES 0.80m								0.70: HP =180 kPa 0.70: PID<5
							0.90m EXCAVATION AEC36TP21 TERMINATED AT 0.90 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP22
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291229.1, N: 6254334.1 (56 MGA2020)	SURFACE ELEVATION : 48.80 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETROMETER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD5/20221214 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =220 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	VSt	×	0.80: HP =240 kPa 0.80: PID<5
				1.0			0.90m EXCAVATION AEC36TP22 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP23

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

FILE / JOB NO : 204814.01
SHEET : 1 OF 1

POSITION : E: 291253.0, N: 6254313.8 (56 MGA2020)	SURFACE ELEVATION : 49.30 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

PENETRATION (VE / E / F / H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				BD6/20221214 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =260 kPa 0.30: PID<5
			0.70m ES 0.80m	0.5		CI-CH		w<PL	VSt		0.70: HP =240 kPa 0.70: PID<5
							0.80m EXCAVATION AEC36TP23 TERMINATED AT 0.80 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP24
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291263.8, N: 6254347.1 (56 MGA2020)	SURFACE ELEVATION : 48.30 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

DEPTH (m)	SAMPLES & FIELD TESTS	GROUND WATER LEVELS	SUPPORT	PENETRATION (VE, E, F, H)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100, 200, 300, 400)	STRUCTURE & Other Observations
0.0	ES 0.10m	Not Observed					FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
0.30											
0.40	0.40m ES 0.50m					CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =180 kPa 0.40: PID<5
0.5											
0.90	0.90m ES 1.00m									×	0.90: HP =210 kPa 0.90: PID<5
1.00							EXCAVATION AEC36TP24 TERMINATED AT 1.00 m Target depth				
1.0											
1.5											
2.0											
2.5											
3.0											
3.5											
4.0											
4.5											
5.0											



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP25
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291282.6, N: 6254321.6 (56 MGA2020)	SURFACE ELEVATION : 49.00 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.15m FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
			0.20m								Field Replicate BD7/20221214 taken at 0.0-0.1m
			ES 0.30m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St		RESIDUAL SOIL 0.20: HP =200 kPa 0.20: PID<5
			0.70m								0.70: HP =190 kPa 0.70: PID<5
			ES 0.80m				0.80m EXCAVATION AEC36TP25 TERMINATED AT 0.80 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP26
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291291.5, N: 6254351.7 (56 MGA2020)	SURFACE ELEVATION : 48.10 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.20m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD8/20221214 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
				0.5		CI-CH	At 0.6m: mottled pale grey	w<PL	St		
			0.80m ES 0.90m				0.90m			×	0.80: HP =160 kPa 0.80: PID<5
				1.0			EXCAVATION AEC36TP26 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP27

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Luddenham Road - Luddenham

POSITION : E: 291323.8, N: 6254330.1 (56 MGA2020)	SURFACE ELEVATION : 48.80 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =190 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	St	×	0.80: HP =180 kPa 0.80: PID<5
				0.90m			EXCAVATION AEC36TP27 TERMINATED AT 0.90 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

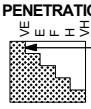


PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION



WATER



SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP28
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291323.8, N: 6254357.0 (56 MGA2020)	SURFACE ELEVATION : 48.20 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD9/20221214 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m 0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =190 kPa 0.40: PID<5
			0.90m ES 1.00m	1.00m 1.0			EXCAVATION AEC36TP28 TERMINATED AT 1.00 m Target depth			×	0.90: HP =210 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP29
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291354.3, N: 6254336.6 (56 MGA2020)	SURFACE ELEVATION : 48.70 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD10/20221214 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m 0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.00m 1.0			EXCAVATION AEC36TP29 TERMINATED AT 1.00 m Target depth			×	0.90: HP =230 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP30
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291347.7, N: 6254362.7 (56 MGA2020)	SURFACE ELEVATION : 48.20 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.15m FILL: silty SAND: brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
			0.20m				Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.20: HP =200 kPa 0.20: PID<5
			ES 0.30m	0.5		CI-CH		w<PL	VSt		
			0.70m							×	0.70: HP =230 kPa 0.70: PID<5
			ES 0.80m				0.80m EXCAVATION AEC36TP30 TERMINATED AT 0.80 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP31
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291387.0, N: 6254338.9 (56 MGA2020)	SURFACE ELEVATION : 48.90 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: sandy SILT: medium to high plasticity, pale grey-brown, fine to medium sand, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD11/20221214 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	0.35m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =220 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			1.00m EXCAVATION AEC36TP31 TERMINATED AT 1.00 m Target depth			×	0.90: HP =190 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP32
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291380.0, N: 6254362.8 (56 MGA2020)	SURFACE ELEVATION : 48.40 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25			CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				Field Replicate BD12/20221214 taken at 0.0-0.1m
				0.5		CI-CH		w<PL	VSt		RESIDUAL SOIL 0.30: HP =210 kPa 0.30: PID<5
			0.80m ES 0.90m	0.90			EXCAVATION AEC36TP32 TERMINATED AT 0.90 m Target depth				0.80: HP =260 kPa 0.80: PID<5
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP33
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291203.8, N: 6254375.5 (56 MGA2020)	SURFACE ELEVATION : 47.40 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m				
			0.70m ES 0.80m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St to VSt	×	RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
							0.80m			×	0.70: HP =190 kPa 0.70: PID<5
							EXCAVATION AEC36TP33 TERMINATED AT 0.80 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP34
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291236.5, N: 6254378.4 (56 MGA2020)	SURFACE ELEVATION : 47.40 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
			0.80m 0.80m ES	0.5		CI-CH		w<PL	St to VSt	×	0.80: HP =200 kPa 0.80: PID<5
				1.0			0.90m EXCAVATION AEC36TP34 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP35
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291276.8, N: 6254380.7 (56 MGA2020)	SURFACE ELEVATION : 47.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =220 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	St to VSt	×	0.80: HP =180 kPa 0.80: PID<5
				0.90m			EXCAVATION AEC36TP35 TERMINATED AT 0.90 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP36
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291316.6, N: 6254387.9 (56 MGA2020)	SURFACE ELEVATION : 47.60 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 14/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD13/20221214 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel and decomposed wood			×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH		w<PL	St to VSt	×	0.90: HP =160 kPa 0.90: PID<5
				1.00m			EXCAVATION AEC36TP36 TERMINATED AT 1.00 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP37
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291352.3, N: 6254396.2 (56 MGA2020)	SURFACE ELEVATION : 47.80 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey, fine to medium grained sand, low to medium plasticity silt, trace rootlets	M			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD1/20221219 taken at 0.0-0.1m
				0.5		CI-CH		w~PL	St		RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
			0.80m ES 0.90m	0.90m			At 0.8m: mottled pale grey			×	0.80: HP =170 kPa 0.80: PID<5
				1.0			EXCAVATION AEC36TP37 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP38
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291376.8, N: 6254398.5 (56 MGA2020)	SURFACE ELEVATION : 48.10 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey, fine to medium grained sand, low to medium silt, trace rootlets	M			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD2/20221219 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =190 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.7m: mottled pale grey	w~PL	St	×	0.80: HP =170 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP38 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP39
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291222.0, N: 6254405.9 (56 MGA2020)	SURFACE ELEVATION : 46.80 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey, fine to medium grained sand, low to medium silt, trace rootlets	M			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =240 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.7m: mottled pale grey	w~PL	St to VSt	×	0.80: HP =190 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP39 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP40
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291277.9, N: 6254404.4 (56 MGA2020)	SURFACE ELEVATION : 47.20 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey-brown, fine to medium grained sand, low to medium silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel, trace roots			×	Field Replicate BD3/20221219 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =190 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St		
				0.90			EXCAVATION AEC36TP40 TERMINATED AT 0.90 m Target depth			×	0.80: HP =180 kPa 0.80: PID<5
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP41
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291319.2, N: 6254411.0 (56 MGA2020)	SURFACE ELEVATION : 47.50 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD4/20221219 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m 0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St	×	RESIDUAL SOIL 0.40: HP =170 kPa 0.40: PID<5
			0.90m ES 1.00m	1.00m 1.0			EXCAVATION AEC36TP41 TERMINATED AT 1.00 m Target depth			×	0.90: HP =180 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP42
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291351.0, N: 6254426.3 (56 MGA2020)	SURFACE ELEVATION : 47.70 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.40m ES 0.50m	0.35m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =210 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH				×	0.90: HP =200 kPa 0.90: PID<5
				1.00m			EXCAVATION AEC36TP42 TERMINATED AT 1.00 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP43
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291385.9, N: 6254426.9 (56 MGA2020)	SURFACE ELEVATION : 48.00 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD5/20221219 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =170 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St	×	0.80: HP =180 kPa 0.80: PID<5
				1.00			EXCAVATION AEC36TP43 TERMINATED AT 1.00 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP44
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291238.9, N: 6254436.3 (56 MGA2020)	SURFACE ELEVATION : 46.80 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD6/20221219 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =190 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			1.00m EXCAVATION AEC36TP44 TERMINATED AT 1.00 m Target depth			×	0.90: HP =200 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP45
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291265.1, N: 6254427.8 (56 MGA2020)	SURFACE ELEVATION : 47.00 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =190 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St to VSt	×	0.80: HP =190 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP45 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP46
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291292.4, N: 6254436.0 (56 MGA2020)	SURFACE ELEVATION : 47.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				Field Replicate BD7/20221219 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =220 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St to VSt		0.80: HP =190 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP46 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP47
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291326.7, N: 6254444.5 (56 MGA2020)	SURFACE ELEVATION : 47.70 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.20m	0.15m							
			ES 0.30m	0.5			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St to VSt	×	Field Replicate BD8/20221219 taken at 0.0-0.1m RESIDUAL SOIL 0.20: HP =190 kPa 0.20: PID<5
			0.70m ES 0.80m			CI-CH				×	0.70: HP =180 kPa 0.70: PID<5
				0.90m			EXCAVATION AEC36TP47 TERMINATED AT 0.90 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP48
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291356.6, N: 6254461.1 (56 MGA2020)	SURFACE ELEVATION : 48.60 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 200 300 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace fine gravel and rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.6m: pale grey mottled orange-brown	w<PL	St to VSt	×	0.80: HP =210 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP48 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP49
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291392.7, N: 6254472.5 (56 MGA2020)	SURFACE ELEVATION : 49.50 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD9/20221219 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.7m: pale grey mottled red-brown	w<PL	St to VSt	×	0.80: HP =160 kPa 0.80: PID<5
				1.0			EXCAVATION AEC36TP49 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP50
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291252.9, N: 6254469.4 (56 MGA2020)	SURFACE ELEVATION : 46.70 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETRO-METER (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD10/20221219 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH		w<PL	St to VSt	×	0.90: HP =180 kPa 0.90: PID<5
				1.20m			EXCAVATION AEC36TP50 TERMINATED AT 1.20 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP51
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291288.0, N: 6254473.9 (56 MGA2020)	SURFACE ELEVATION : 47.10 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.15m FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.20m ES 0.30m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St to VSt	×	RESIDUAL SOIL 0.20: HP =200 kPa 0.20: PID<5
			0.70m ES 0.80m				0.90m			×	0.70: HP =190 kPa 0.70: PID<5
				1.0			EXCAVATION AEC36TP51 TERMINATED AT 0.90 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP52
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291317.4, N: 6254484.4 (56 MGA2020)	SURFACE ELEVATION : 48.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD11/20221219 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =190 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			At 0.8m: purple-grey mottled red-brown			×	0.90: HP =200 kPa 0.90: PID<5
				1.5			1.10m EXCAVATION AEC36TP52 TERMINATED AT 1.10 m Target depth				
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP53
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291350.2, N: 6254486.0 (56 MGA2020)	SURFACE ELEVATION : 49.00 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel and roots			×	RESIDUAL SOIL 0.30: HP =190 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.7m: pale grey mottled red-brown	w<PL	St to VSt	×	0.80: HP =160 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP53 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP54
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291376.2, N: 6254505.8 (56 MGA2020)	SURFACE ELEVATION : 50.00 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 19/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5 Field Replicate BD1/20221220 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH	At 0.6m: pale grey mottled red-brown	w~PL	St to VSt	×	0.90: HP =180 kPa 0.90: PID<5
				1.10m			EXCAVATION AEC36TP54 TERMINATED AT 1.10 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP55
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291385.8, N: 6254494.4 (56 MGA2020)	SURFACE ELEVATION : 50.20 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5 Field Replicate BD2/20221220 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel and roots At 0.7m: pale grey mottled red-brown	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			EXCAVATION AEC36TP55 TERMINATED AT 1.00 m Target depth			×	0.90: HP =190 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP56
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291282.4, N: 6254506.1 (56 MGA2020)	SURFACE ELEVATION : 46.90 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER kPa (100 200 300 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.10m FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.20m				Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				RESIDUAL SOIL 0.20: HP =160 kPa 0.20: PID<5
			ES 0.30m	0.5		CI-CH		w<PL	St		
			0.70m ES 0.80m				0.90m EXCAVATION AEC36TP56 TERMINATED AT 0.90 m Target depth				0.70: HP =170 kPa 0.70: PID<5
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP57
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291317.5, N: 6254518.6 (56 MGA2020)	SURFACE ELEVATION : 48.60 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St to VSt	×	Field Replicate BD3/20221220 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =210 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH				×	0.80: HP =200 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP57 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP58
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291355.1, N: 6254521.6 (56 MGA2020)	SURFACE ELEVATION : 49.50 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING				MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETROMETER kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, orange-brown, trace fine to medium ironstone gravel				Field Replicate BD4/20221220 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St to VSt		0.80: HP =170 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP58 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP59
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291397.9, N: 6254532.9 (56 MGA2020)	SURFACE ELEVATION : 50.90 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.15m FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.20m ES 0.30m				Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.20: HP =220 kPa 0.20: PID<5
			0.70m ES 0.80m	0.5		CI-CH	At 0.45m: pale grey mottled red-brown	w~PL	St to VSt	×	0.70: HP =180 kPa 0.70: PID<5
				1.0			1.00m EXCAVATION AEC36TP59 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP60
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291292.1, N: 6254544.3 (56 MGA2020)	SURFACE ELEVATION : 47.60 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, with fine to medium ironstone gravel	w~PL	St to VSt	200	Field Replicate BD5/20221220 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH					0.80: HP =180 kPa 0.80: PID<5
				1.0			1.00m EXCAVATION AEC36TP60 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP61
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291333.3, N: 6254543.8 (56 MGA2020)	SURFACE ELEVATION : 49.00 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD6/20221220 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =190 kPa 0.30: PID<5
				0.5		CI-CH	At 0.6m: pale grey mottled red-brown	w~PL	St to VSt		
			0.80m ES 0.90m				0.90m EXCAVATION AEC36TP61 TERMINATED AT 0.90 m Target depth			×	0.80: HP =170 kPa 0.80: PID<5
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP62
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291365.3, N: 6254545.3 (56 MGA2020)	SURFACE ELEVATION : 50.10 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m								
			0.40m ES 0.50m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	X	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			At 0.8m: pale grey mottled red-brown			X	0.90: HP =180 kPa 0.90: PID<5
							1.00m EXCAVATION AEC36TP62 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE, E, F, H, VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP63
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291400.6, N: 6254562.9 (56 MGA2020)	SURFACE ELEVATION : 51.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.15m FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5
			0.20m								Field Replicate BD7/20221220 taken at 0.0-0.1m
			ES 0.30m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.20: HP =200 kPa 0.20: PID<5
			0.70m ES 0.80m				1.00m At 0.9m: pale grey mottled red-brown			×	0.70: HP =200 kPa 0.70: PID<5
				1.0			EXCAVATION AEC36TP63 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP64
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291317.2, N: 6254580.3 (56 MGA2020)	SURFACE ELEVATION : 48.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING					MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5 Field Replicate BD8/20221220 taken at 0.0-0.1m
			0.50m ES 0.60m	0.5		CI-CH	0.40m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt		RESIDUAL SOIL 0.50: HP =240 kPa 0.50: PID<5
			0.90m ES 1.00m	1.0			At 0.8m: pale grey mottled red-brown 1.00m EXCAVATION AEC36TP64 TERMINATED AT 1.00 m Target depth				0.90: HP =190 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP65
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291343.0, N: 6254580.6 (56 MGA2020)	SURFACE ELEVATION : 49.20 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.40m ES 0.50m	0.30m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =190 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH	At 0.8m: pale grey mottled orange-brown			×	0.90: HP =190 kPa 0.90: PID<5
				1.10m			EXCAVATION AEC36TP65 TERMINATED AT 1.10 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP66
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291379.8, N: 6254576.4 (56 MGA2020)	SURFACE ELEVATION : 50.60 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5 Field Replicate BD9/20221220 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	0.35m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			1.00m EXCAVATION AEC36TP66 TERMINATED AT 1.00 m Target depth			×	0.90: HP =200 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP67

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Luddenham Road - Luddenham

POSITION : E: 291400.2, N: 6254608.5 (56 MGA2020)	SURFACE ELEVATION : 51.20 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and red-brown clay (reworked natural)	D			FILL 0.00: PID<5 Field Replicate BD10/20221220 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel and roots	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =220 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			1.20m EXCAVATION AEC36TP67 TERMINATED AT 1.20 m Target depth			×	0.90: HP =190 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION



WATER



SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP68
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291335.9, N: 6254622.7 (56 MGA2020)	SURFACE ELEVATION : 49.00 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
							0.20m				
			0.40m ES 0.50m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	0.40: HP =200 kPa	RESIDUAL SOIL 0.40: PID<5
							At 0.7m: pale grey mottled red-brown				
			0.90m ES 1.00m	1.0			1.00m EXCAVATION AEC36TP68 TERMINATED AT 1.00 m Target depth			0.90: HP =200 kPa	0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP69
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291365.7, N: 6254641.9 (56 MGA2020)	SURFACE ELEVATION : 49.70 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	Field Replicate BD11/20221220 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =190 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.75m: pale grey mottled orange-brown			×	0.80: HP =190 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP69 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP70

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Luddenham Road - Luddenham

POSITION : E: 291341.0, N: 6254654.5 (56 MGA2020)	SURFACE ELEVATION : 48.80 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD12/20221220 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =220 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St to VSt	×	0.80: HP =180 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP70 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD

- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT

- T Timbering

PENETRATION

VE E F H VH — No Resistance

WATER

10 Oct., 73 Water Level on Date shown

water inflow

water outflow

SAMPLES & FIELD TESTS

- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION

Based on Unified Classification System

MOISTURE

- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP71
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291407.7, N: 6254634.2 (56 MGA2020)	SURFACE ELEVATION : 51.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 20/12/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets At 0-0.1m: fibrous sheet	D			FILL 0.00: PID<5
							0.30m				
			0.40m ES 0.50m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	VSt	× 220	RESIDUAL SOIL 0.40: HP =220 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			1.00m EXCAVATION AEC36TP71 TERMINATED AT 1.00 m Target depth			× 240	0.90: HP =240 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

RC

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP72
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291408.4, N: 6254665.4 (56 MGA2020)	SURFACE ELEVATION : 50.80 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel At 0.2m: grading to light brown	M			FILL 0.00: PID<5 Field Replicate BD1/20230112 taken at 0.0-0.1m
			0.50m ES 0.60m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel At 0.8m: mottled pale grey	w~PL	St to VSt	×	RESIDUAL SOIL 0.50: HP =200 kPa 0.50: PID<5
			1.00m ES 1.10m	1.0			EXCAVATION AEC36TP72 TERMINATED AT 1.10 m Target depth			×	1.00: HP =170 kPa 1.00: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP73
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291352.9, N: 6254695.2 (56 MGA2020)	SURFACE ELEVATION : 48.20 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	M			FILL 0.00: PID<5 Field Replicate BD2/20230112 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m 0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel At 0.7m: mottled pale grey	w<PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0						×	0.90: HP =200 kPa 0.90: PID<5
				1.10m			EXCAVATION AEC36TP73 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP74
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291378.7, N: 6254687.6 (56 MGA2020)	SURFACE ELEVATION : 49.10 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to coarse gravel	M			FILL 0.00: PID<5
			0.40m ES 0.50m	0.30m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel and decomposed wood			×	RESIDUAL SOIL 0.40: HP =180 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5		CI-CH	At 0.7m: pale grey mottled red-brown	w<PL	St to VSt	×	0.90: HP =200 kPa 0.90: PID<5
				1.0			1.10m EXCAVATION AEC36TP74 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP75
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291367.8, N: 6254716.8 (56 MGA2020)	SURFACE ELEVATION : 48.10 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticty silt, trace rootlets and fine gravel	M			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel and decomposed wood				Field Replicate BD3/20230112 taken at 0.0-0.1m RESIDUAL SOIL 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St to VSt		
				1.0			At 0.8m: mottled pale grey 1.20m				0.80: PID<5
				1.5			EXCAVATION AEC36TP75 TERMINATED AT 1.20 m Target depth				
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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RMS LIB 40.3.14 .GLB Log RTA EXCAVATION AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:44 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA76
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291407.9, N: 6254719.9 (56 MGA2020) SURFACE ELEVATION : 49.00 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		H	Not Observed	ES 0.10m	0.0 49.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D		FILL 0.00: PID<5 Field Replicate BD1/20230118 taken at 0.0-0.1m
				0.40m ES 0.50m				0.30m			
					0.5 48.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown with pale grey, trace fine to medium ironstone gravel	w<PL	St to VSt	RESIDUAL SOIL 0.40: PID<5
								0.70m			
								BOREHOLE AEC36HA76 TERMINATED AT 0.70 m Refusal Ironstone band present			
					1.0 48.0						
					1.5 47.5						
					2.0 47.0						
					2.5 46.5						
					3.0 46.0						
					3.5 45.5						
					4.0 45.0						
					4.5 44.5						
					5.0 44.0						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:26 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA77
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291361.6, N: 6254755.8 (56 MGA2020) SURFACE ELEVATION : 46.60 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 46.6			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D		FILL 0.00: PID<5 Field Replicate BD2/20230118 taken at 0.0-0.1m
				0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			RESIDUAL SOIL 0.30: PID<5
				0.80m ES 0.90m	0.5 46.1		CI-CH	At 0.7m: mottled pale grey	w~PL	F to St	0.80: PID<5
					1.0 45.6			1.00m BOREHOLE AEC36HA77 TERMINATED AT 1.00 m Target depth			
					1.5 45.1						
					2.0 44.6						
					2.5 44.1						
					3.0 43.6						
					3.5 43.1						
					4.0 42.6						
					4.5 42.1						
					5.0 41.6						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:26 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA78
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291421.4, N: 6254750.1 (56 MGA2020) SURFACE ELEVATION : 48.20 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 48.2			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D		FILL 0.00: PID<5
				0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			RESIDUAL SOIL 0.30: PID<5
				0.80m ES 0.90m	0.5 47.7		CI-CH	At 0.7m: mottled pale grey	w~PL	F to St	0.80: PID<5
					1.0 47.2			0.90m BOREHOLE AEC36HA78 TERMINATED AT 0.90 m Target depth			
					1.5 46.7						
					2.0 46.2						
					2.5 45.7						
					3.0 45.2						
					3.5 44.7						
					4.0 44.2						
					4.5 43.7						
					5.0 43.2						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:26 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA79
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291403.5, N: 6254782.0 (56 MGA2020) SURFACE ELEVATION : 46.90 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/1/23 DATE COMPLETED : 18/1/23 DATE LOGGED : 18/1/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		H	Not Observed	ES 0.10m	0.0 46.9			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D		FILL 0.00: Sample of fibre-cement 'PACM2' collected from ground surface 0.00: PID<5
				0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	F to St	Field Replicate BD3/20230118 taken at 0.0-0.1m RESIDUAL SOIL 0.30: PID<5
					0.5 46.4 0.50m		CI-CH	BOREHOLE AEC36HA79 TERMINATED AT 0.50 m Refusal Tree roots present Test location estimated from site features and surface elevation extracted from LiDAR data			
					1.0 45.9						
					1.5 45.4						
					2.0 44.9						
					2.5 44.4						
					3.0 43.9						
					3.5 43.4						
					4.0 42.9						
					4.5 42.4						
					5.0 41.9						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 22/Feb/2023 10:48 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA80
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291427.5, N: 6254786.5 (56 MGA2020) SURFACE ELEVATION : 47.30 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 47.3			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D		FILL 0.00: PID<5 Field Replicate BD4/20230118 taken at 0.0-0.1m
				0.40m ES 0.50m	0.35m			Silty CLAY: red-brown, trace fine to medium ironstone gravel			RESIDUAL SOIL 0.40: PID<5
				0.90m ES 1.00m	0.5 46.8		CI-CH		w<PL	F	0.90: PID<5
					1.0 46.3						
					1.20m			BOREHOLE AEC36HA80 TERMINATED AT 1.20 m Target depth			
					1.5 45.8						
					2.0 45.3						
					2.5 44.8						
					3.0 44.3						
					3.5 43.8						
					4.0 43.3						
					4.5 42.8						
					5.0 42.3						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:27 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA81
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291398.8, N: 6254809.8 (56 MGA2020) SURFACE ELEVATION : 46.10 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 46.1			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D		FILL 0.00: PID<5
				0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			RESIDUAL SOIL 0.30: PID<5
				0.80m ES 0.90m	0.5 45.6		CI-CH		w<PL	F to St	0.80: PID<5
					1.0 45.1			1.00m BOREHOLE AEC36HA81 TERMINATED AT 1.00 m Target depth			
					1.5 44.6						
					2.0 44.1						
					2.5 43.6						
					3.0 43.1						
					3.5 42.6						
					4.0 42.1						
					4.5 41.6						
					5.0 41.1						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:58 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA82
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291430.4, N: 6254823.7 (56 MGA2020) SURFACE ELEVATION : 46.40 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 20/01/23 DATE COMPLETED : 20/01/23 DATE LOGGED : 20/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 46.4			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	M		FILL 0.00: PID<5 Field Replicate BD1/20230120 taken at 0.0-0.1m
				0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			RESIDUAL SOIL 0.30: PID<5
				0.80m ES 0.90m	0.5 45.9		CI-CH		w~PL	F to St	0.80: PID<5
					1.00m 1.0 45.4			BOREHOLE AEC36HA82 TERMINATED AT 1.00 m Target depth			
					1.5 44.9						
					2.0 44.4						
					2.5 43.9						
					3.0 43.4						
					3.5 42.9						
					4.0 42.4						
					4.5 41.9						
					5.0 41.4						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:27 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA83
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291404.4, N: 6254841.3 (56 MGA2020) SURFACE ELEVATION : 45.10 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 20/01/23 DATE COMPLETED : 20/01/23 DATE LOGGED : 20/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 45.1			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	M		FILL 0.00: PID<5 Field Replicate BD2/20230120 taken at 0.0-0.1m
				0.30m ES 0.40m				0.20m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			RESIDUAL SOIL 0.30: PID<5
				0.80m ES 0.90m	0.5 44.6		CI-CH		w~PL	F to St	0.80: PID<5
								0.90m BOREHOLE AEC36HA83 TERMINATED AT 0.90 m Target depth			
					1.0 44.1						
					1.5 43.6						
					2.0 43.1						
					2.5 42.6						
					3.0 42.1						
					3.5 41.6						
					4.0 41.1						
					4.5 40.6						
					5.0 40.1						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:27 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA84
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291434.8, N: 6254855.0 (56 MGA2020) SURFACE ELEVATION : 45.70 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 20/01/23 DATE COMPLETED : 20/01/23 DATE LOGGED : 20/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 45.7			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	M		FILL 0.00: PID<5
				0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, orange-brown, trace fine to medium ironstone gravel			RESIDUAL SOIL 0.30: PID<5
				0.80m ES 0.90m	0.5 45.2		CI-CH		w~PL	F to St	0.80: PID<5
					1.0 44.7			1.00m BOREHOLE AEC36HA84 TERMINATED AT 1.00 m Target depth			
					1.5 44.2						
					2.0 43.7						
					2.5 43.2						
					3.0 42.7						
					3.5 42.2						
					4.0 41.7						
					4.5 41.2						
					5.0 40.7						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:27 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA85
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291409.8, N: 6254874.2 (56 MGA2020) SURFACE ELEVATION : 44.70 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 20/01/23 DATE COMPLETED : 20/01/23 DATE LOGGED : 20/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		H	Not Observed	ES 0.10m	0.0 44.7			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and timber	M		FILL 0.00: PID<5 Field Replicate BD3/20230120 taken at 0.0-0.1m
				0.40m ES 0.50m				0.30m Silty CLAY: medium to high plasticity, orange-brown, trace fine to medium ironstone gravel	w~PL	F	RESIDUAL SOIL 0.40: PID<5
					0.5 44.2		CI-CH	0.70m BOREHOLE AEC36HA85 TERMINATED AT 0.70 m Refusal Tree roots present			
					1.0 43.7						
					1.5 43.2						
					2.0 42.7						
					2.5 42.2						
					3.0 41.7						
					3.5 41.2						
					4.0 40.7						
					4.5 40.2						
					5.0 39.7						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:27 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA86
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291441.4, N: 6254886.1 (56 MGA2020) SURFACE ELEVATION : 45.40 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 20/01/23 DATE COMPLETED : 20/01/23 DATE LOGGED : 20/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 45.4			FILL: silty SAND: fine to medium grained sand, low to medium plasticity silt, trace rootlets	M		FILL 0.00: PID<5 Field Replicate BD4/20230120 taken at 0.0-0.1m
				0.30m ES 0.40m	0.25m						
					0.5 44.9		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	F to St	RESIDUAL SOIL 0.30: PID<5
				0.80m ES 0.90m	1.00m						0.80: PID<5
					1.0 44.4			BOREHOLE AEC36HA86 TERMINATED AT 1.00 m Target depth			
					1.5 43.9						
					2.0 43.4						
					2.5 42.9						
					3.0 42.4						
					3.5 41.9						
					4.0 41.4						
					4.5 40.9						
					5.0 40.4						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:27 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA87
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291415.2, N: 6254906.0 (56 MGA2020) SURFACE ELEVATION : 44.20 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 20/01/23 DATE COMPLETED : 20/01/23 DATE LOGGED : 20/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 44.2			FILL: silty SAND: fine to medium grained sand, low to medium plasticity silt, trace rootlets	M		FILL 0.00: PID<5
				0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			RESIDUAL SOIL 0.30: PID<5
				0.80m ES 0.90m	0.5 43.7		CI-CH		w~PL	F to St	0.80: PID<5
					1.0 43.2			0.90m BOREHOLE AEC36HA87 TERMINATED AT 0.90 m Target depth			
					1.5 42.7						
					2.0 42.2						
					2.5 41.7						
					3.0 41.2						
					3.5 40.7						
					4.0 40.2						
					4.5 39.7						
					5.0 39.2						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP88
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291447.3, N: 6254926.8 (56 MGA2020)	SURFACE ELEVATION : 44.70 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
							0.30m				
			0.40m ES 0.50m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	X	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			At 0.8m: pale grey mottled red-brown			X	0.90: HP =180 kPa 0.90: PID<5
							1.10m EXCAVATION AEC36TP88 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP89
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291417.9, N: 6254944.5 (56 MGA2020)	SURFACE ELEVATION : 43.70 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD7/20230113 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =220 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St to VSt		
				1.0			At 0.8m: mottled pale grey 1.10m			×	0.80: HP =200 kPa 0.80: PID<5
							EXCAVATION AEC36TP89 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP90
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291422.0, N: 6254970.6 (56 MGA2020)	SURFACE ELEVATION : 43.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD8/20230113 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =220 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St to VSt	×	0.80: HP =200 kPa 0.80: PID<5
				1.0			1.10m EXCAVATION AEC36TP90 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP91
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291449.9, N: 6254977.9 (56 MGA2020)	SURFACE ELEVATION : 43.70 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.7m: mottled pale grey	w~PL	St to VSt	×	0.80: HP =180 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP91 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP92
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291422.9, N: 6254988.7 (56 MGA2020)	SURFACE ELEVATION : 43.10 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5 Field Replicate BD9/20230113 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =190 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH	At 0.8m: mottled pale grey			×	0.90: HP =180 kPa 0.90: PID<5
				1.10m			EXCAVATION AEC36TP92 TERMINATED AT 1.10 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP93
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291459.5, N: 6255012.1 (56 MGA2020)	SURFACE ELEVATION : 43.10 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING				MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets, fine to medium gravel and timber	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD4/20230112 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =160 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.7m: mottled pale grey	w~PL	St	×	0.80: HP =180 kPa 0.80: PID<5
				1.0							
				1.10m			EXCAVATION AEC36TP93 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP94
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291464.0, N: 6255041.3 (56 MGA2020)	SURFACE ELEVATION : 42.60 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	M			FILL 0.00: PID<5
			0.40m ES 0.50m	0.35m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.40: HP =180 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH	At 0.8m: mottled pale grey	w~PL	St	×	0.90: HP =160 kPa 0.90: PID<5
				1.30m			EXCAVATION AEC36TP94 TERMINATED AT 1.30 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP95
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291431.9, N: 6255064.5 (56 MGA2020)	SURFACE ELEVATION : 42.10 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and timber	M			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel and decomposed wood			×	Field Replicate BD5/20230112 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St to VSt	×	0.80: HP =200 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP95 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP96
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291467.4, N: 6255086.8 (56 MGA2020)	SURFACE ELEVATION : 41.90 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5 Field Replicate BD6/20230112 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.40: HP =180 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH	At 0.8m: mottled pale grey	w~PL	St	×	0.90: HP =170 kPa 0.90: PID<5
				1.20m			EXCAVATION AEC36TP96 TERMINATED AT 1.20 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP97
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291444.9, N: 6255111.2 (56 MGA2020)	SURFACE ELEVATION : 41.70 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.40m ES 0.50m	0.5		CI-CH	0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			At 0.8m: mottled pale grey			×	0.70: HP =190 kPa 0.90: PID<5
				1.5			1.20m EXCAVATION AEC36TP97 TERMINATED AT 1.20 m Target depth				
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP98
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291473.5, N: 6255131.2 (56 MGA2020)	SURFACE ELEVATION : 41.50 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD7/20230112 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.6m: mottled pale grey	w~PL	St to VSt	×	0.80: HP =170 kPa 0.80: PID<5
				1.0							
				1.20m			EXCAVATION AEC36TP98 TERMINATED AT 1.20 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP99
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291444.3, N: 6255144.9 (56 MGA2020)	SURFACE ELEVATION : 41.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5 Field Replicate BD8/20230112 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel At 0.7m: mottled pale grey	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			1.10m EXCAVATION AEC36TP99 TERMINATED AT 1.10 m Target depth			×	0.90: HP =220 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP100
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291477.8, N: 6255168.5 (56 MGA2020)	SURFACE ELEVATION : 41.10 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5
			0.40m ES 0.50m	0.30m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.40: HP =180 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH	At 0.9m: mottled pale grey	w~PL	St	×	0.90: HP =180 kPa 0.90: PID<5
				1.20m			EXCAVATION AEC36TP100 TERMINATED AT 1.20 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP101
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291448.2, N: 6255186.9 (56 MGA2020) | SURFACE ELEVATION : 41.00 (mAHD)
EQUIPMENT TYPE : 8 tonne Excavator | METHOD : 800mm bucket
DATE EXCAVATED : 12/01/23 | LOGGED BY : PJ | CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: grey, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5 Field Replicate BD9/20230112 taken at 0.0-0.1m
			0.50m ES 0.60m	0.5			0.40m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.50: HP =180 kPa 0.50: PID<5
			1.00m ES 1.10m	1.0		CI-CH	At 0.8m: mottled pale grey	w~PL	St to VSt	×	1.00: HP =190 kPa 1.00: PID<5
				1.5			1.30m EXCAVATION AEC36TP101 TERMINATED AT 1.30 m Target depth				
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP102
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291483.1, N: 6255209.6 (56 MGA2020)	SURFACE ELEVATION : 40.80 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING				MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5 Field Replicate BD10/20230112 taken at 0.0-0.1m
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt		RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5 1.0		CI-CH	At 0.8m: mottled pale grey				0.80: HP =200 kPa 0.80: PID<5
				1.10m			EXCAVATION AEC36TP102 TERMINATED AT 1.10 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE, E, F, H, VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP103
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291453.8, N: 6255222.6 (56 MGA2020)	SURFACE ELEVATION : 41.00 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 12/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5
			0.30m								
			0.40m ES 0.50m	0.5			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0		CI-CH	At 0.7m: mottled pale grey	w~PL	St to VSt	×	0.90: HP =190 kPa 0.90: PID<5
				1.30m			EXCAVATION AEC36TP103 TERMINATED AT 1.30 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP104

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Luddenham Road - Luddenham

POSITION : E: 291488.8, N: 6255240.7 (56 MGA2020)	SURFACE ELEVATION : 40.90 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

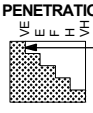
VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5 Field Replicate BD1/20230113 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St	×	RESIDUAL SOIL 0.40: HP =180 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			1.20m EXCAVATION AEC36TP104 TERMINATED AT 1.20 m Target depth			×	0.90: HP =170 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION



WATER



SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP105
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291457.4, N: 6255261.4 (56 MGA2020) | SURFACE ELEVATION : 41.30 (mAHD)
EQUIPMENT TYPE : 8 tonne Excavator | METHOD : 800mm bucket
DATE EXCAVATED : 13/01/23 | LOGGED BY : PJ | CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING					MATERIAL					
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				Field Replicate BD2/20230113 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =170 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St		0.80: HP =160 kPa 0.80: PID<5
				1.0							
				1.20			EXCAVATION AEC36TP105 TERMINATED AT 1.20 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP106
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291494.4, N: 6255283.8 (56 MGA2020)	SURFACE ELEVATION : 41.10 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.40m ES 0.50m	0.30m 0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0						×	0.90: HP =180 kPa 0.90: PID<5
				1.20m 1.5			EXCAVATION AEC36TP106 TERMINATED AT 1.20 m Target depth				
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP107
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291461.7, N: 6255289.7 (56 MGA2020)	SURFACE ELEVATION : 41.20 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	Field Replicate BD3/20230113 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St	×	0.80: HP =180 kPa 0.80: PID<5
				1.0							
				1.20m			EXCAVATION AEC36TP107 TERMINATED AT 1.20 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP108
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291454.0, N: 6255323.4 (56 MGA2020) | SURFACE ELEVATION : 40.70 (mAHD)
EQUIPMENT TYPE : 8 tonne Excavator | METHOD : 800mm bucket
DATE EXCAVATED : 13/01/23 | LOGGED BY : PJ | CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING					MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				Field Replicate BD4/20230113 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St		0.80: HP =170 kPa 0.80: PID<5
				1.0							
				1.20m			EXCAVATION AEC36TP108 TERMINATED AT 1.20 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP109
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291498.2, N: 6255322.6 (56 MGA2020)	SURFACE ELEVATION : 40.90 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5
			0.30m								
			0.40m ES 0.50m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0						×	0.90: HP =180 kPa 0.90: PID<5
			1.20m				EXCAVATION AEC36TP109 TERMINATED AT 1.20 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP110
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291472.2, N: 6255355.0 (56 MGA2020)	SURFACE ELEVATION : 40.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine to medium gravel	D			FILL 0.00: PID<5 Field Replicate BD5/20230113 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St	×	RESIDUAL SOIL 0.40: HP =180 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			At 0.8m: mottled pale grey			×	0.90: HP =190 kPa 0.90: PID<5
							EXCAVATION AEC36TP110 TERMINATED AT 1.20 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP111

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Luddenham Road - Luddenham

POSITION : E: 291506.6, N: 6255351.0 (56 MGA2020)	SURFACE ELEVATION : 40.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets, roots and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel and roots			×	Field Replicate BD6/20230113 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w~PL	St	×	0.80: HP =170 kPa 0.80: PID<5
				1.0			1.30m EXCAVATION AEC36TP111 TERMINATED AT 1.30 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION

VE E F H VH — No Resistance

WATER

10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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RMS LIB 40.3.14 .GLB Log RTA EXCAVATION AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:35 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA112
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291462.7, N: 6255389.1 (56 MGA2020) SURFACE ELEVATION : 39.50 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		H	Not Observed	ES 0.10m	0.0 39.5			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and roots	D		FILL 0.00: PID<5 Field Replicate BD5/20230118 taken at 0.0-0.1m
								0.30m BOREHOLE AEC36HA112 TERMINATED AT 0.30 m Refusal Tree roots present			
					0.5 39.0						
					1.0 38.5						
					1.5 38.0						
					2.0 37.5						
					2.5 37.0						
					3.0 36.5						
					3.5 36.0						
					4.0 35.5						
					4.5 35.0						
					5.0 34.5						

RevA

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:26 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA113
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291511.5, N: 6255401.8 (56 MGA2020) SURFACE ELEVATION : 39.40 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING					MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		H	Not Observed	ES 0.10m	0.0 39.4			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D		FILL 0.00: PID<5
				0.30m ES 0.40m			CI-CH	Silty CLAY: medium to high plasticity, orange-brown mottled pale grey, trace fine to medium ironstone gravel	w~PL	St	Field Replicate BD6/20230118 taken at 0.0-0.1m RESIDUAL SOIL 0.30: PID<5
					0.5 38.9			BOREHOLE AEC36HA113 TERMINATED AT 0.50 m Refusal			
					1.0 38.4						
					1.5 37.9						
					2.0 37.4						
					2.5 36.9						
					3.0 36.4						
					3.5 35.9						
					4.0 35.4						
					4.5 34.9						
					5.0 34.4						

RevA

See Explanatory Notes for details of abbreviations & basis of descriptions.

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NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA114
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291477.2, N: 6255423.5 (56 MGA2020) SURFACE ELEVATION : 39.40 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.30m	0.0 39.4			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D		FILL 0.00: PID<5
				0.40m ES 0.50m	0.30m						
				0.90m ES 1.00m	0.5 38.9		CI-CH	Silty CLAY: medium to high plasticity, orange-brown mottled pale grey, trace fine to medium ironstone gravel	w~PL	St	RESIDUAL SOIL 0.40: PID<5 0.90: PID<5
					1.0 38.4						
					1.20m			BOREHOLE AEC36HA114 TERMINATED AT 1.20 m Target depth			
					1.5 37.9						
					2.0 37.4						
					2.5 36.9						
					3.0 36.4						
					3.5 35.9						
					4.0 35.4						
					4.5 34.9						
					5.0 34.4						

RevA

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NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA115
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291512.0, N: 6255425.7 (56 MGA2020) SURFACE ELEVATION : 39.30 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 39.3			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	D		FILL 0.00: PID<5 Field Replicate BD7/20230118 taken at 0.0-0.1m
				0.30m ES 0.40m				0.25m			
					0.5 38.8		CI-CH	Silty CLAY: medium to high plasticity, orange-brown mottled pale grey, trace fine to medium ironstone gravel	w~PL	F to St	RESIDUAL SOIL 0.30: PID<5
				0.80m ES 0.90m							0.80: PID<5
					1.0 38.3			1.00m BOREHOLE AEC36HA115 TERMINATED AT 1.00 m Target depth			
					1.5 37.8						
					2.0 37.3						
					2.5 36.8						
					3.0 36.3						
					3.5 35.8						
					4.0 35.3						
					4.5 34.8						
					5.0 34.3						

RevA

See Explanatory Notes for details of abbreviations & basis of descriptions.

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NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA116
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291495.3, N: 6255444.7 (56 MGA2020) SURFACE ELEVATION : 39.10 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING					MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		H	Not Observed	ES 0.10m	0.0 39.1			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and roots	D		FILL 0.00: PID<5
								0.30m BOREHOLE AEC36HA116 TERMINATED AT 0.30 m Refusal			
					0.5 38.6						
					1.0 38.1						
					1.5 37.6						
					2.0 37.1						
					2.5 36.6						
					3.0 36.1						
					3.5 35.6						
					4.0 35.1						
					4.5 34.6						
					5.0 34.1						

RevA

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:26 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA117
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291512.3, N: 6255457.2 (56 MGA2020) SURFACE ELEVATION : 39.00 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 18/01/23 DATE COMPLETED : 18/01/23 DATE LOGGED : 18/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		H	Not Observed	ES 0.10m 0.30m ES 0.40m	0.0 39.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D		FILL 0.00: PID<5
								0.20m Silty CLAY: medium to high plasticity, orange-brown mottled pale grey, trace fine to medium ironstone gravel	w~PL	St to VSt	RESIDUAL SOIL 0.30: PID<5
					0.5 38.5		CI-CH	0.60m BOREHOLE AEC36HA117 TERMINATED AT 0.60 m Refusal Tree roots present			
					1.0 38.0						
					1.5 37.5						
					2.0 37.0						
					2.5 36.5						
					3.0 36.0						
					3.5 35.5						
					4.0 35.0						
					4.5 34.5						
					5.0 34.0						

RevA

See Explanatory Notes for details of abbreviations & basis of descriptions.

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NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA118
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291501.5, N: 6255487.8 (56 MGA2020) SURFACE ELEVATION : 38.70 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 20/01/23 DATE COMPLETED : 20/01/23 DATE LOGGED : 20/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) / RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 38.7			FILL: silty SAND: brown to pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	M		FILL 0.00: PID<5
				0.30m ES 0.40m				0.20m Silty CLAY: medium to high plasticity, pale orange-brown, trace fine to medium ironstone gravel			Field Replicate BD5/20230120 taken at 0.0-0.1m RESIDUAL SOIL 0.30: PID<5
				0.80m ES 0.90m	0.5 38.2		CI-CH		w~PL	F to St	0.80: PID<5
								0.90m BOREHOLE AEC36HA118 TERMINATED AT 0.90 m Target depth			
					1.0 37.7						
					1.5 37.2						
					2.0 36.7						
					2.5 36.2						
					3.0 35.7						
					3.5 35.2						
					4.0 34.7						
					4.5 34.2						
					5.0 33.7						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:26 10.02.00.04 Datgel Tools

NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : AEC36HA119
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291540.6, N: 6255555.0 (56 MGA2020) SURFACE ELEVATION : 38.60 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 20/01/23 DATE COMPLETED : 20/01/23 DATE LOGGED : 20/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		F	Not Observed	ES 0.10m	0.0 38.6			FILL: silty SAND: brown to pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets	M		FILL 0.00: PID<5 Field Replicate BD6/20230120 taken at 0.0-0.1m
				0.30m ES 0.40m				0.25m			
				0.80m ES 0.90m	0.5 38.1		CI-CH	Silty CLAY: medium to high plasticity, pale orange-brown, trace fine to medium ironstone gravel	w~PL	F to St	RESIDUAL SOIL 0.30: PID<5 0.80: PID<5
								0.90m			
					1.0 37.6			BOREHOLE AEC36HA119 TERMINATED AT 0.90 m Target depth			
					1.5 37.1						
					2.0 36.6						
					2.5 36.1						
					3.0 35.6						
					3.5 35.1						
					4.0 34.6						
					4.5 34.1						
					5.0 33.6						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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RMS LIB 40.3.14 .GLB Log RTA NON-CORE DRILL HOLE 2 AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:26 10.02.00.04 Datgel Tools

EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP120
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291520.5, N: 6255565.0 (56 MGA2020)	SURFACE ELEVATION : 38.90 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5 Field Replicate BD10/20230113 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				RESIDUAL SOIL 0.40: HP =230 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH		w<PL	VSt		0.90: HP =210 kPa 0.90: PID<5
				1.10m			EXCAVATION AEC36TP120 TERMINATED AT 1.10 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP121

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Luddenham Road - Luddenham

POSITION : E: 291542.0, N: 6255583.6 (56 MGA2020)	SURFACE ELEVATION : 38.60 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.25m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =220 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	St to VSt	×	0.80: HP =190 kPa 0.80: PID<5
				1.0							
				1.10m			EXCAVATION AEC36TP121 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION

VE E F H VH — No Resistance

WATER

10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP122
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291526.7, N: 6255623.8 (56 MGA2020)	SURFACE ELEVATION : 38.30 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETRO-METER (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5 Field Replicate BD11/20230113 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5			0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0		CI-CH	At 0.7m: mottled pale grey	w<PL	St to VSt		0.90: HP =180 kPa 0.90: PID<5
							1.20m EXCAVATION AEC36TP122 TERMINATED AT 1.20 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP123
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291530.5, N: 6255654.8 (56 MGA2020)	SURFACE ELEVATION : 38.20 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 13/01/23	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING				MATERIAL						
VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETROMETER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =220 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH		w<PL	St to VSt	×	0.80: HP =190 kPa 0.80: PID<5
				1.0			1.10m EXCAVATION AEC36TP123 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP124

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Luddenham Road - Luddenham

POSITION : E: 291546.4, N: 6255671.2 (56 MGA2020)	SURFACE ELEVATION : 38.00 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown-grey, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m				0.25m Silty CLAY: medium to high plasticity, pale brown, trace fine to medium ironstone gravel			×	Field Replicate BD1/20230116 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =210 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.7m: mottled pale grey	w~PL	St to VSt	×	0.80: HP =190 kPa 0.80: PID<5
				1.0			1.20m EXCAVATION AEC36TP124 TERMINATED AT 1.20 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

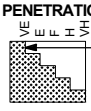


PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION



WATER



SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP125
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291537.0, N: 6255708.7 (56 MGA2020)	SURFACE ELEVATION : 38.50 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown-grey, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5 Field Replicate BD2/20230116 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5		CI-CH	0.35m Silty CLAY: medium to high plasticity, pale brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			At 0.8m: mottled pale grey			×	0.90: HP =190 kPa 0.90: PID<5
				1.5			1.20m EXCAVATION AEC36TP125 TERMINATED AT 1.20 m Target depth				
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP126
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291556.4, N: 6255716.5 (56 MGA2020)	SURFACE ELEVATION : 38.20 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown-grey, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.40m ES 0.50m	0.35m			Silty CLAY: medium to high plasticity, pale brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =190 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5		CI-CH	At 0.8m: mottled pale grey			×	0.90: HP =120 kPa 0.90: PID<5
				1.0			EXCAVATION AEC36TP126 TERMINATED AT 1.10 m Target depth				
				1.10m							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP127

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Luddenham Road - Luddenham

POSITION : E: 291540.6, N: 6255744.4 (56 MGA2020)	SURFACE ELEVATION : 38.60 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown-grey, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5 Field Replicate BD3/20230116 taken at 0.0-0.1m
			0.40m ES 0.50m	0.5			0.35m Silty CLAY: medium to high plasticity, pale brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.40: HP =210 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0		CI-CH		w~PL	St to VSt	×	0.90: HP =180 kPa 0.90: PID<5
							1.30m EXCAVATION AEC36TP127 TERMINATED AT 1.30 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION

VE E F H VH — No Resistance

WATER

10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP128

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Luddenham Road - Luddenham

POSITION : E: 291563.6, N: 6255765.7 (56 MGA2020)	SURFACE ELEVATION : 38.20 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING					MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown-grey, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5 Field Replicate BD4/20230116 taken at 0.0-0.1m
			0.40m ES 0.50m	0.30m 0.5		CI-CH	Silty CLAY: medium to high plasticity, pale brown, trace fine to medium ironstone gravel	w~PL	St to VSt	200	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			At 0.9m: mottled pale grey			200	0.90: HP =160 kPa 0.90: PID<5
				1.20m			EXCAVATION AEC36TP128 TERMINATED AT 1.20 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

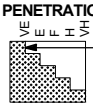


PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION



No Resistance

WATER



10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP129
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291567.7, N: 6255801.2 (56 MGA2020)	SURFACE ELEVATION : 38.80 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING				MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.40m ES 0.50m	0.5		CI-CH	0.30m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel At 0.7m: mottled pale grey	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =200 kPa 0.40: PID<5
			0.90m ES 1.00m	1.0			1.20m EXCAVATION AEC36TP129 TERMINATED AT 1.20 m Target depth			×	0.90: HP =210 kPa 0.90: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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NON-CORE DRILL HOLE - GEOLOGICAL LOG

HOLE NO : **AEC36HA130**
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291558.0, N: 6255821.5 (56 MGA2020) SURFACE ELEVATION : 39.90 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : Hand Tools MOUNTING : Hand Tools CONTRACTOR : Douglas Partners DRILLER : PJ

DATE STARTED : 20/01/23 DATE COMPLETED : 20/01/23 DATE LOGGED : 20/01/23 LOGGED BY : PJ CHECKED BY : MB

DRILLING						MATERIAL					
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	DRILLING PENETRATION	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m) RL (m AHD)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	STRUCTURE & Other Observations
HA		H	Not Observed	ES 0.10m	0.0 39.9			FILL: silty SAND: brown to pale brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and timber	M		FILL 0.00: PID<5
				0.30m ES 0.40m				0.25m			
					0.5 39.4		CI-CH	Silty CLAY: medium to high plasticity, red-brown mottled pale grey, with fine to medium ironstone gravel	w~PL	VSt	RESIDUAL SOIL 0.30: PID<5
								0.60m BOREHOLE AEC36HA130 TERMINATED AT 0.60 m Refusal			
					1.0 38.9						
					1.5 38.4						
					2.0 37.9						
					2.5 37.4						
					3.0 36.9						
					3.5 36.4						
					4.0 35.9						
					4.5 35.4						
					5.0 34.9						

See Explanatory Notes for details of abbreviations & basis of descriptions.

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP131
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291573.2, N: 6255839.9 (56 MGA2020)	SURFACE ELEVATION : 40.00 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING				MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	Field Replicate BD5/20230116 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH				×	0.80: HP =200 kPa 0.80: PID<5
				1.00m			EXCAVATION AEC36TP131 TERMINATED AT 1.00 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE, E, F, H, VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP132
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291558.2, N: 6255866.2 (56 MGA2020)	SURFACE ELEVATION : 41.40 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING				MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	Field Replicate BD6/20230116 taken at 0.0-0.1m RESIDUAL SOIL 0.30: HP =190 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5			At 0.7m: mottled pale grey			×	0.80: HP =200 kPa 0.80: PID<5
				1.0							
				1.10			EXCAVATION AEC36TP132 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP133
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291574.9, N: 6255876.8 (56 MGA2020)	SURFACE ELEVATION : 41.50 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.30m ES 0.40m	0.20m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =200 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.6m: mottled pale grey	w~PL	St to VSt	×	0.80: HP =200 kPa 0.80: PID<5
				1.00m 1.0			EXCAVATION AEC36TP133 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP134
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291569.0, N: 6255897.2 (56 MGA2020)	SURFACE ELEVATION : 42.00 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION (E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m 0.20m ES 0.30m	0.0			FILL: silty SAND: pale grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D		× 100 200 300 400	FILL 0.00: PID<5 Field Replicate BD7/20230116 taken at 0.0-0.1m 0.20: HP =220 kPa 0.20: PID<5
			0.70m ES 0.80m	0.5		CI-CH	0.50m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel At 0.7m: mottled pale grey	w~PL	St to VSt	×	RESIDUAL SOIL 0.70: HP =180 kPa 0.70: PID<5
				1.0			1.10m EXCAVATION AEC36TP134 TERMINATED AT 1.10 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC36TP135
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291579.0, N: 6255921.8 (56 MGA2020)	SURFACE ELEVATION : 41.80 (mAHD)	
EQUIPMENT TYPE : 8 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 16/01/23	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale grey-brown, fine to medium grained sand, low to medium plasticity silt, trace rootlets and fine gravel	D			FILL 0.00: PID<5
			0.40m ES 0.50m	0.30m			Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.40: HP =190 kPa 0.40: PID<5
			0.90m ES 1.00m	0.5 1.0		CI-CH	At 0.8m: mottled pale grey			×	0.90: HP =180 kPa 0.90: PID<5
				1.10m			EXCAVATION AEC36TP135 TERMINATED AT 1.10 m Target depth				
				1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC37TP01
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291185.3, N: 6254267.8 (56 MGA2020)	SURFACE ELEVATION : 50.10 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

DEPTH (m)	PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa	STRUCTURE & Other Observations
0.0			Not Observed	ES 0.10m 0.05m ES 0.20m			0.05m FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets	M			FILL 0.00: PID<5
						CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt		RESIDUAL SOIL 0.10: HP =220 kPa 0.10: PID<5
0.5				0.50m ES 0.60m			0.60m				0.50: HP =200 kPa 0.50: PID<5
							EXCAVATION AEC37TP01 TERMINATED AT 0.60 m Target depth				
1.0											
1.5											
2.0											
2.5											
3.0											
3.5											
4.0											
4.5											
5.0											



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC37TP02
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291180.9, N: 6254253.0 (56 MGA2020)	SURFACE ELEVATION : 50.50 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

DEPTH (m)	PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (kPa)	STRUCTURE & Other Observations
0.0			Not Observed	ES 0.10m 0.05m ES 0.20m			0.05m FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets	M			FILL 0.00: PID<5
							Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				RESIDUAL SOIL 0.10: HP =220 kPa 0.10: PID<5
				0.50m		CI-CH		w~PL	St to VSt		
0.5				ES 0.60m			0.60m				0.50: HP =180 kPa 0.50: PID<5
							EXCAVATION AEC37TP02 TERMINATED AT 0.60 m Target depth				
1.0											
1.5											
2.0											
2.5											
3.0											
3.5											
4.0											
4.5											
5.0											



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP01
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291069.8, N: 6254038.9 (56 MGA2020)	SURFACE ELEVATION : 51.90 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: pale brown, fine to medium grained sand, trace rootlets, trace coarse sandstone gravel, wire	M			FILL 0.00: PID<5
				0.20m			EXCAVATION AEC38TP01 TERMINATED AT 0.20 m Services present				
				0.5							
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP01A
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291044.8, N: 6254036.0 (56 MGA2020)	SURFACE ELEVATION : 50.10 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING				MATERIAL						
PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets	M			FILL 0.00: PID<5
				0.5			0.60m CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w~PL	St to VSt		RESIDUAL SOIL
				1.0		CI-CH	1.00m EXCAVATION AEC38TP01A TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE, E, F, H, VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP02
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291094.5, N: 6254053.1 (56 MGA2020)	SURFACE ELEVATION : 52.00 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

DEPTH (m)	PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION (Soil Type, Colour, Plasticity or Particle Characteristic, Secondary and Minor Components)	MOISTURE CONDITION	CONSISTENCY / RELATIVE DENSITY	HAND PENETROMETER (kPa)	STRUCTURE & Other Observations
0.0			Not Observed	ES 0.10m							FILL 0.00: PID<5
				0.20m							Field Replicate BD4/221130 taken at 00.00-00.10m depth
				ES 0.30m							
0.5				0.60m		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to coarse ironstone gravel	w<PL	St to VSt		RESIDUAL SOIL 0.20: HP =250 kPa 0.20: PID<5
				ES 0.70m							0.60: HP =210 kPa 0.60: PID<5
							0.15m: FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets, trace fine to coarse sandstone gravel	D			
							0.70m: EXCAVATION AEC38TP02 TERMINATED AT 0.70 m Target depth				
1.0											
1.5											
2.0											
2.5											
3.0											
3.5											
4.0											
4.5											
5.0											



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP03
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291071.4, N: 6254066.9 (56 MGA2020)	SURFACE ELEVATION : 51.90 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.10m FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets, trace fine gravel	M			FILL 0.00: PID<5
							FILL: silty CLAY: medium to high plasticity, red-brown with brown, trace fine to medium sand, trace fine to medium ironstone gravel	w<PL			
			0.50m ES 0.60m	0.5							0.50: PID<5
			0.80m ES 0.90m				0.80m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.80: HP =210 kPa 0.80: PID<5
			1.30m ES 1.40m	1.0		CI-CH		w<PL	St to VSt		
							1.40m EXCAVATION AEC38TP03 TERMINATED AT 1.40 m Target depth			×	1.30: HP =180 kPa 1.30: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
N Natural Exposure
E Existing Excavation
BH Backhoe Bucket
B Bulldozer Blade
R Ripper

SUPPORT
T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
U50 - Undisturbed Sample 50 mm diameter
D - Disturbed Sample
B - Bulk Disturbed Sample
MC - Moisture Content
HP - Hand Penetrometer (UCS kPa)
VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
D - Dry
M - Moist
W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP04
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291117.6, N: 6254080.8 (56 MGA2020)	SURFACE ELEVATION : 52.60 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

PENETRATION (VE, E, F, H)	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100, 200, 300, 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty CLAY: medium to high plasticity, red-brown and brown, trace fine to medium ironstone gravel, trace fine to medium sand	w<PL			FILL 0.00: PID<5
			0.30m ES 0.40m				0.20m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
			0.80m ES 0.90m	0.5		CI-CH	At 0.5m: pale grey mottled red-brown	w<PL	St to VSt	×	0.80: HP =200 kPa 0.80: PID<5
							0.90m EXCAVATION AEC38TP04 TERMINATED AT 0.90 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP05
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291094.3, N: 6254091.7 (56 MGA2020)	SURFACE ELEVATION : 52.10 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

PENETRATION	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.05m FILL: silty SAND: pale brown, fine to medium grained sand, with fine to coarse sandstone gravel, trace rootlets	M			FILL 0.00: PID<5
			0.30m ES 0.40m				Silty CLAY: medium to high plasticity, pale grey mottled red-brown, trace fine to medium ironstone gravel				RESIDUAL SOIL 0.10: HP =250 kPa 0.10: PID<5
				0.5		CI-CH		w<PL	VSt		
			0.80m				0.80m				0.60: HP =230 kPa 0.60: PID<5
			ES 0.90m				EXCAVATION AEC38TP05 TERMINATED AT 0.80 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP06
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291126.2, N: 6254116.7 (56 MGA2020)	SURFACE ELEVATION : 53.00 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m 0.30m 0.30m ES 0.60m ES 0.70m	0.0 0.5		CI-CH	0.15m FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets, trace fine to medium ironstone gravel Silty CLAY: medium to high plasticity, pale red-brown, trace fine to medium ironstone gravel 0.70m	M w<PL	St to VSt	× × ×	FILL 0.00: PID<5 Field Replicate BD3/221120 taken at 00.00-00.10m depth RESIDUAL SOIL 0.20: HP =210 kPa 0.20: PID<5 0.60: HP =200 kPa 0.60: PID<5
				1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0			EXCAVATION AEC38TP06 TERMINATED AT 0.70 m Target depth				



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP07
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291111.5, N: 6254127.8 (56 MGA2020)	SURFACE ELEVATION : 52.50 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.10m FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets, trace fine gravel	M			FILL 0.00: PID<5
			0.20m ES 0.30m			CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	w<PL	St	×	RESIDUAL SOIL 0.20: HP =180 kPa 0.20: PID<5
			0.60m ES 0.70m	0.5			0.70m			×	0.60: HP =160 kPa 0.60: PID<5
							EXCAVATION AEC38TP07 TERMINATED AT 0.70 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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RMS LIB 40.3.14 .GLB Log RTA EXCAVATION AEC_MASTER.GPJ <<DrawingFile>> 17/Feb/2023 17:48 10.02.00.04 Datgel Tools

EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP08
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291147.2, N: 6254155.4 (56 MGA2020)	SURFACE ELEVATION : 52.60 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB

EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m 0.20m ES 0.30m 0.60m ES 0.70m	0.0 0.5		CI-CH	0.10m FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets, trace fine gravel Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel 0.70m EXCAVATION AEC38TP08 TERMINATED AT 0.70 m Target depth	M w<PL	St to VSt		FILL 0.00: PID<5 RESIDUAL SOIL 0.20: HP =180 kPa 0.20: PID<5 0.60: HP =210 kPa 0.60: PID<5
				1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP09
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291123.7, N: 6254159.9 (56 MGA2020)	SURFACE ELEVATION : 52.00 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.15m FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets, trace fine gravel	M			FILL 0.00: PID<5
			0.20m ES 0.30m				Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel				Field Replicate BD2/221130 taken at 00.00-00.10m depth RESIDUAL SOIL 0.20: HP =150 kPa 0.20: PID<5
			0.70m ES 0.80m	0.5		CI-CH		w~PL	St		0.70: HP =170 kPa 0.70: PID<5
				1.0			1.00m EXCAVATION AEC38TP09 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP10
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291161.7, N: 6254182.3 (56 MGA2020)	SURFACE ELEVATION : 52.20 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets	M			FILL 0.00: PID<5
				0.15m							
			0.20m ES 0.30m				Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			×	RESIDUAL SOIL 0.20: HP =190 kPa 0.20: PID<5
				0.5		CI-CH		w<PL	St to VSt		
			0.70m ES 0.80m							×	0.70: HP =170 kPa 0.70: PID<5
				0.90m			EXCAVATION AEC38TP10 TERMINATED AT 0.90 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP11
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291141.8, N: 6254202.0 (56 MGA2020)	SURFACE ELEVATION : 51.30 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION E F H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa 100 200 300 400	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			0.15m FILL: sandy silty CLAY: low to medium plasticity, dark brown with red-brown, fine to medium sand, trace rootlets, trace fine to medium ironstone gravel, possible reworked natural	w<PL			FILL 0.00: PID<5
			0.30m ES 0.40m	0.5		CI-CH	Silty CLAY: medium to high plasticity, red-brown mottled pale grey, trace fine to medium ironstone gravel	w~PL	St to VSt	×	RESIDUAL SOIL 0.30: HP =180 kPa 0.30: PID<5
			0.80m ES 0.90m	1.0			1.00m EXCAVATION AEC38TP11 TERMINATED AT 1.00 m Target depth			×	0.80: HP =190 kPa 0.80: PID<5
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP12
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291173.1, N: 6254210.9 (56 MGA2020)	SURFACE ELEVATION : 51.50 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER 100 200 300 400 kPa	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets	M			FILL 0.00: PID<5
			0.30m ES 0.40m				0.20m Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel			X	Field Replicate BD1/221130 taken at 00.00-00.10m depth RESIDUAL SOIL 0.30: HP =190 kPa 0.30: PID<5
				0.5		CI-CH		w<PL	St to VSt		
			0.80m ES 0.90m				At 0.7m: red-brown mottled pale grey			X	0.80: HP =200 kPa 0.80: PID<5
				1.0			1.00m EXCAVATION AEC38TP12 TERMINATED AT 1.00 m Target depth				
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							

PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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EXCAVATION - GEOLOGICAL LOG

PIT NO : AEC38TP13
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Luddenham Road - Luddenham

POSITION : E: 291157.7, N: 6254231.9 (56 MGA2020)	SURFACE ELEVATION : 50.70 (mAHD)	
EQUIPMENT TYPE : 12 tonne Excavator	METHOD : 800mm bucket	
DATE EXCAVATED : 30/11/22	LOGGED BY : PJ	CHECKED BY : MB
EXCAVATION DIMENSIONS : 1.00 m LONG 0.80 m WIDE		

DRILLING | MATERIAL

VE / PENETRATION / E / F / H	SUPPORT	GROUND WATER LEVELS	SAMPLES & FIELD TESTS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE CONDITION	CONSISTENCY RELATIVE DENSITY	HAND PENETRO-METER kPa (100 / 200 / 300 / 400)	STRUCTURE & Other Observations
		Not Observed	ES 0.10m	0.0			FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets	M			FILL 0.00: PID<5
			0.20m	0.15							
			ES 0.30m				Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel, trace decomposed roots				RESIDUAL SOIL 0.20: HP =250 kPa 0.20: PID<5
				0.5		CI-CH		w<PL	VSt		
			0.70m								0.70: HP =240 kPa 0.70: PID<5
			ES 0.80m	0.80			EXCAVATION AEC38TP13 TERMINATED AT 0.80 m Target depth				
				1.0							
				1.5							
				2.0							
				2.5							
				3.0							
				3.5							
				4.0							
				4.5							
				5.0							



PHOTOGRAPHS NOTES ☒ YES ☐ NO

METHOD
- N Natural Exposure
- E Existing Excavation
- BH Backhoe Bucket
- B Bulldozer Blade
- R Ripper

SUPPORT
- T Timbering

PENETRATION
VE E F H VH — No Resistance

WATER
10 Oct., 73 Water Level on Date shown
water inflow
water outflow

SAMPLES & FIELD TESTS
- U50 - Undisturbed Sample 50 mm diameter
- D - Disturbed Sample
- B - Bulk Disturbed Sample
- MC - Moisture Content
- HP - Hand Penetrometer (UCS kPa)
- VS - Vane Shear; P-Peak, R-Remouded (uncorrected kPa)
- PBT - Plate Bearing Test

CLASSIFICATION SYMBOLS & SOIL DESCRIPTION
Based on Unified Classification System

MOISTURE
- D - Dry
- M - Moist
- W - Wet

CONSISTENCY/ RELATIVE DENSITY

VS	- Very Soft
S	- Soft
F	- Firm
St	- Stiff
VSt	- Very Stiff
H	- Hard
VL	- Very Loose
L	- Loose
MD	- Medium Dense
D	- Dense
VD	- Very Dense

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PIEZOMETER CONSTRUCTION

HOLE NO : AEC36-BH01

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Patons Lane - Orchard Hills

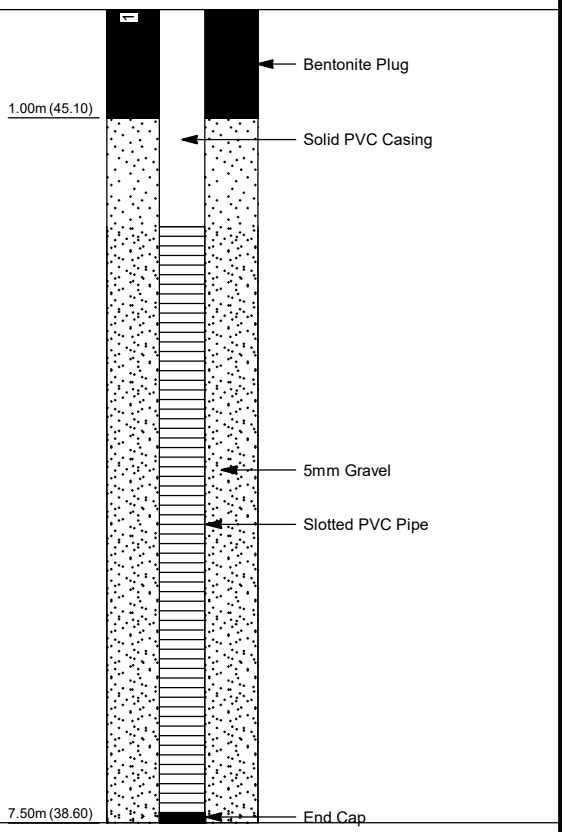
POSITION : E: 291000.7, N: 6254297.3 (56 MGA2020) SURFACE ELEVATION : 46.10 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : HANJIN DB8 MOUNTING : Track CONTRACTOR : Rockwell

DATE STARTED : 23/01/23 DATE COMPLETED : 23/01/23 DATE LOGGED : 23/01/23 LOGGED BY : LL CHECKED BY : MB

DRILLING				MATERIAL			PIEZOMETER CONSTRUCTION DETAILS
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	GROUND WATER LEVELS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL (See geotechnical log for soil/rock detail)	
AD/T		01/02/23	0.0			0.20m FILL: silty SAND: brown, fine to medium grained sand	
						Silty CLAY: brown and pale grey mottled red-brown	
			2.0		CI-CH		
			4.0				
						5.00m	
						SILTSTONE: dark grey and grey, apparently very low stregnth	
			6.0				
						7.50m	
						AEC36-BH01 TERMINATED AT 7.50 m Target depth	
			8.0				
			10.0				
			12.0				
			14.0				

ID	Type	Stick Up & RL	Tip Depth & RL	Installation Date	Static Water Level
1	Standpipe Piezometer	1.00 m 45.10 m mAHD	7.50 m 38.60 mAHD	23/01/2023	



This report of well/VWP installation must be read in conjunction with accompanying notes and abbreviations. The geotechnical log is a summary only and the detailed log should be referred to for strata details and any core loss zones.

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RMS LIB 40.3.14 .GLB Log RTA PIEZOMETER INSTALLATION LOG 1 AEC_GROUNDWATER WELLS.GPJ <<DrawingFile>> 20/Mar/2023 09:57 10.02.00.04 Datgel Tools

PIEZOMETER CONSTRUCTION

HOLE NO : AEC36-BH02
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Patons Lane - Orchard Hills

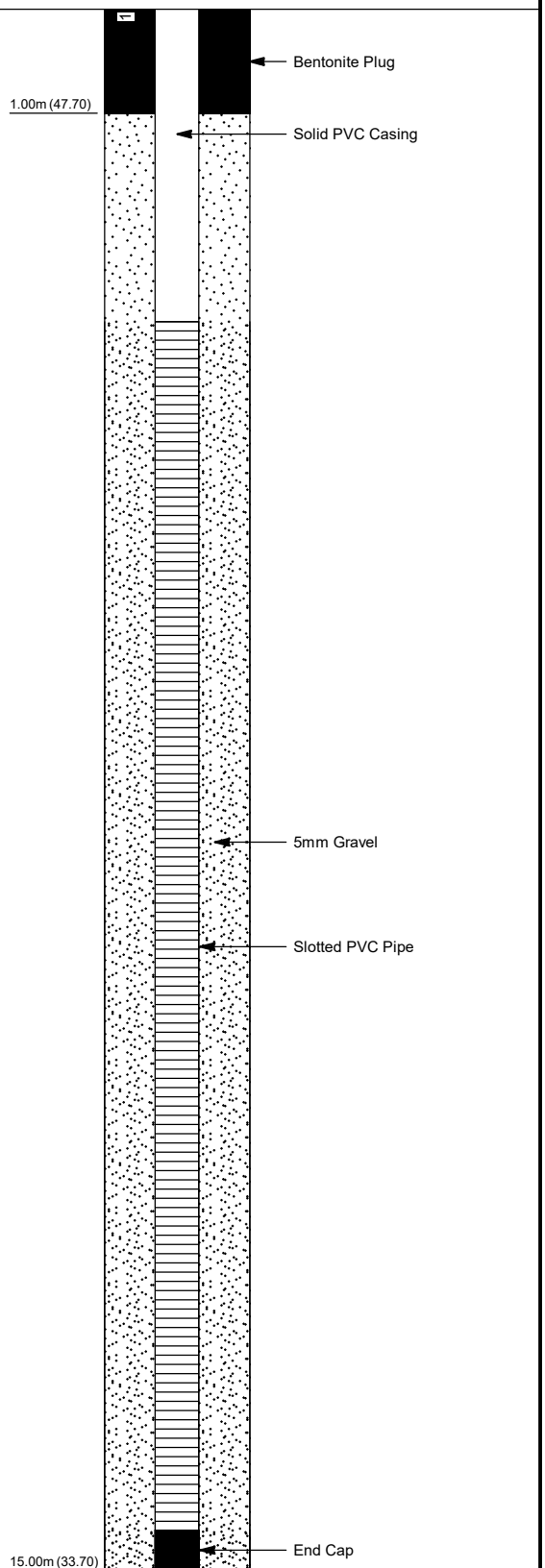
POSITION : E: 291329.4, N: 6254570.1 (56 MGA2020) SURFACE ELEVATION : 48.70 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : HANJIN DB8 MOUNTING : Track CONTRACTOR : Rockwell

DATE STARTED : 23/01/23 DATE COMPLETED : 23/01/23 DATE LOGGED : 23/01/23 LOGGED BY : LL CHECKED BY : MB

DRILLING				MATERIAL			PIEZOMETER CONSTRUCTION DETAILS
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	GROUND WATER LEVELS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL (See geotechnical log for soil/rock detail)	
AD/T		01/02/23	0.0			0.20m FILL: sandy SILT: dark brown, fine, trace rootlets	
					CI	Silty CLAY: medium plasticity, red-brown mottled pale grey	
			2.0				
			4.0			4.00m	
					CI-CH	Silty CLAY: medium to high plasticity, pale grey	
						5.00m	
			6.0			SILTSTONE: grey, aparently very low to low strength	
			8.0				
			10.0				
			12.0				
			14.0				
						AEC36-BH02 TERMINATED AT 15.00 m	
						15.00m Target depth	

ID	Type	Stick Up & RL	Tip Depth & RL	Installation Date	Static Water Level
1	Standpipe Piezometer	1.00 m 47.70 m mAHD	15.00 m 33.70 mAHD	23/01/2023	



This report of well/VWP installation must be read in conjunction with accompanying notes and abbreviations. The geotechnical log is a summary only and the detailed log should be referred to for strata details and any core loss zones.

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PIEZOMETER CONSTRUCTION

HOLE NO : AEC36-BH03
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Patons Lane - Orchard Hills

POSITION : E: 291429.2, N: 6254778.6 (56 MGA2020) SURFACE ELEVATION : 47.70 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : HANJIN DB8 MOUNTING : Track CONTRACTOR : Rockwell

DATE STARTED : 23/01/23 DATE COMPLETED : 23/01/23 DATE LOGGED : 23/01/23 LOGGED BY : LL CHECKED BY : MB

DRILLING				MATERIAL			PIEZOMETER CONSTRUCTION DETAILS
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	GROUND WATER LEVELS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL (See geotechnical log for soil/rock detail)	
AD/T		01/02/23	0.0				ID 1 Type: Standpipe Piezometer; Stick Up & RL: 1.00 m 46.70 m mAHD; Tip Depth & RL: 10.00 m 37.70 mAHD; Installation Date: 23/01/2023; Static Water Level
						0.30m FILL: silty SAND: dark brown, fine to medium grained sand, trace rootlets	Bentonite Plug
					GC	Sandy GRAVEL: brown, fine to medium gravel, sub-rounded, fine to medium	
						0.80m	1.00m (46.70)
			2.0		CI-CH	Silty CLAY: medium to high plasticity, red-brown, trace fine to medium ironstone gravel	Solid PVC Casing
						3.00m	
						3.50m	
						SANDSTONE: fine to medium grained, pale brown, apparently very low strength	
			4.0			4.00m	
						SILTSTONE: pale grey, apparently very low to low strength	5mm Gravel
			6.0				Slotted PVC Pipe
			8.0				
			10.0			10.00m	10.00m (37.70) End Cap
						AEC36-BH03 TERMINATED AT 10.00 m Target depth	
			12.0				
			14.0				

This report of well/VWP installation must be read in conjunction with accompanying notes and abbreviations. The geotechnical log is a summary only and the detailed log should be referred to for strata details and any core loss zones.

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RMS LIB 40.3.14 .GLB Log RTA PIEZOMETER INSTALLATION LOG 1 AEC_GROUNDWATER WELLS.GPJ <<DrawingFile>> 20/Mar/2023 09:57 10.02.00.04 Datgel Tools

PIEZOMETER CONSTRUCTION

HOLE NO : AEC36-BH04

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Patons Lane - Orchard Hills

POSITION : E: 291473.1, N: 6255240.0 (56 MGA2020) SURFACE ELEVATION : 40.90 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : HANJIN DB8 MOUNTING : Track CONTRACTOR : Rockwell

DATE STARTED : 24/01/23 DATE COMPLETED : 24/01/23 DATE LOGGED : 24/01/23 LOGGED BY : JS CHECKED BY : MB

DRILLING				MATERIAL			PIEZOMETER CONSTRUCTION DETAILS
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	GROUND WATER LEVELS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL (See geotechnical log for soil/rock detail)	ID 1 — Type: Standpipe Piezometer; Stick Up & RL; Tip Depth & RL: 6.20 m 34.70 mAHD; Installation Date: 24/01/2023; Static Water Level
AD/T		01/02/23	0.0			0.20m FILL: silty SAND: brown, fine to medium grained sand	Bentonite Plug
						Silty CLAY: brown and pale grey mottled red-brown	1.00m (39.90) Solid PVC Casing
			2.0		CI-CH		
			4.0				5mm Gravel
							Slotted PVC Pipe
						5.00m	
						SILTSTONE: dark grey and grey, apparently low strength	
			6.0			6.20m	6.20m (34.70) End Cap
						AEC36-BH04 TERMINATED AT 6.20 m Target depth	
			8.0				
			10.0				
			12.0				
			14.0				

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PIEZOMETER CONSTRUCTION

HOLE NO : AEC36-BH05
FILE / JOB NO : 204814.01
SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works
LOCATION : Patons Lane - Orchard Hills

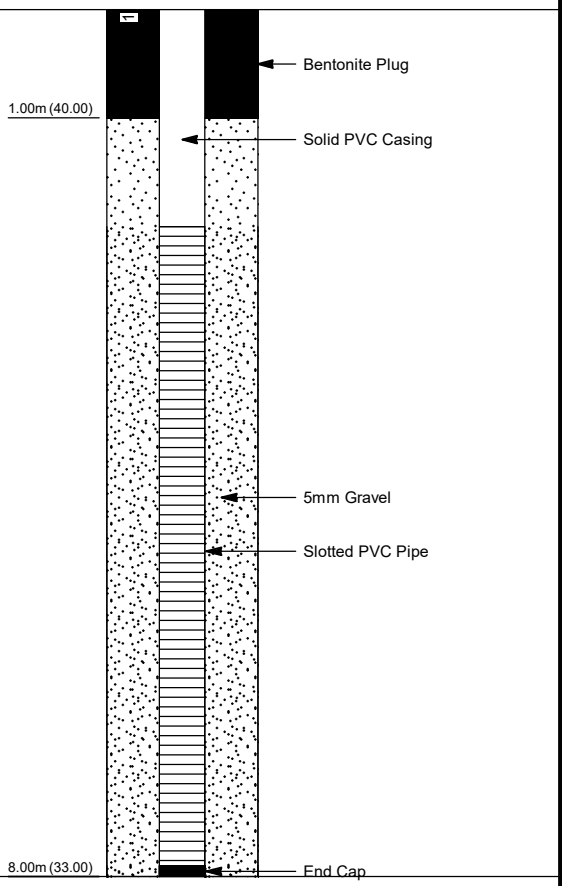
POSITION : E: 291563.3, N: 6255853.5 (56 MGA2020) SURFACE ELEVATION : 41.00 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : HANJIN DB8 MOUNTING : Track CONTRACTOR : Rockwell

DATE STARTED : 24/01/23 DATE COMPLETED : 24/01/23 DATE LOGGED : 24/01/23 LOGGED BY : KE CHECKED BY : MB

DRILLING				MATERIAL			PIEZOMETER CONSTRUCTION DETAILS
PROGRESS: DRILLING & CASING	PROGRESS: WATER LOSS	GROUND WATER LEVELS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL (See geotechnical log for soil/rock detail)	
AD/T		01/02/23 ▽	0.0			0.10m TOPSOIL: silty CLAY: low plasticity, brown, with roots	
						Silty CLAY: medium to high plasticity, pale grey mottled red	
			2.0		CI-CH	1.0m: grades to pale grey	
						2.50m SILTSTONE: grey and dark grey, apparently very low to low strength	
			4.0				
			6.0				
			8.0			8.00m AEC36-BH05 TERMINATED AT 8.00 m Target depth	
			10.0				
			12.0				
			14.0				

ID 1 — Type: Standpipe Piezometer — Stick Up & RL: 1.00m (40.00) — Tip Depth & RL: 8.00 m 33.00 mAHD — Installation Date: 24/01/2023 — Static Water Level



This report of well/VWP installation must be read in conjunction with accompanying notes and abbreviations. The geotechnical log is a summary only and the detailed log should be referred to for strata details and any core loss zones.

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PIEZOMETER CONSTRUCTION

HOLE NO : AEC38-BH01

FILE / JOB NO : 204814.01

SHEET : 1 OF 1

PROJECT : Sydney Metro Western Sydney Airport - Surface and Civil Alignment Works

LOCATION : Luddenham Road - Luddenham

POSITION : E: 291049.8, N: 6254035.9 (56 MGA2020) SURFACE ELEVATION : 50.40 (mAHD) ANGLE FROM HORIZONTAL : 90°

RIG TYPE : HANJIN DB8 MOUNTING : Track CONTRACTOR : Rockwell

DATE STARTED : 30/11/22 DATE COMPLETED : 30/11/22 DATE LOGGED : 30/11/22 LOGGED BY : JS CHECKED BY : MB

DRILLING				MATERIAL			PIEZOMETER CONSTRUCTION DETAILS					
PROGRESS							ID	Type	Stick Up & RL	Tip Depth & RL	Installation Date	Static Water Level
DRILLING & CASING	WATER LOSS	GROUND WATER LEVELS	DEPTH (m)	GRAPHIC LOG	CLASSIFICATION SYMBOL	MATERIAL (See geotechnical log for soil/rock detail)	1			13.00 m	37.40 mAHD	
AD/T		24/01/23	0.0			FILL: silty CLAY: medium to high plasticity, brown			0.50m (49.90)			
						0.80m						
					CI-CH	Silty CLAY: medium to high plasticity, pale grey, brown and red-brown, trace fine ironstone gravel, possibly fill						
						1.50m						
			2.0		CI-CH	Silty CLAY: medium to high plasticity, pale grey mottled brown and red-brown, with ironstone gravel						
						3.00m			3.00m (47.40)			
			4.0		CI-CH	Silty CLAY: medium to high plasticity, dark grey and grey, with ironstone gravel						
						4.50m						
			6.0			SILTSTONE: dark grey and grey; very low to low strength						
						7.50m						
			8.0			SILTSTONE: dark grey and grey; low to medium strength						
			10.0									
			12.0									
						13.00m			13.00m (37.40)			
			14.0			AEC38-BH01 TERMINATED AT 13.00 m Target depth						

Backfill

Bentonite

PN18 PVC-U Pipe

5mm sand/ gravel

PVC slotted screen (6m)

End Cap

This report of well/VWP installation must be read in conjunction with accompanying notes and abbreviations. The geotechnical log is a summary only and the detailed log should be referred to for strata details and any core loss zones.

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Sampling Methods

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Sampling

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

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

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

Test Pits

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

Large Diameter Augers

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

Continuous Spiral Flight Augers

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

Non-core Rotary Drilling

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

Continuous Core Drilling

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

Standard Penetration Tests

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

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

The test results are reported in the following form.

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

  4,6,7
  N=13

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

  15, 30/40 mm

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

Dynamic Cone Penetrometer Tests / Perth Sand Penetrometer Tests

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

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

Description and Classification Methods

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

Soil Types

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

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

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

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

Definitions of grading terms used are:

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

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

In fine grained soils (>35% fines)

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

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

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

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

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

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

Soil Descriptions

Cohesive Soils

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

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

Cohesionless Soils

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

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

Soil Origin

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

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

Moisture Condition – Coarse Grained Soils

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

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

Moisture Condition – Fine Grained Soils

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

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

Rock Strength

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

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

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

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

Degree of Weathering

The degree of weathering of rock is classified as follows:

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

Rock Descriptions

Degree of Fracturing

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

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

Rock Quality Designation

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

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

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

Stratification Spacing

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

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

Symbols & Abbreviations

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Introduction

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

Drilling or Excavation Methods

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

Water

▷	Water seep
▽	Water level

Sampling and Testing

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

Description of Defects in Rock

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

Defect Type

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

Orientation

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

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

Coating or Infilling Term

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

Coating Descriptor

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

Shape

cu	curved
ir	irregular
pl	planar
st	stepped
un	undulating

Roughness

po	polished
ro	rough
sl	slickensided
sm	smooth
vr	very rough

Other

fg	fragmented
bnd	band
qtz	quartz

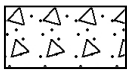
Symbols & Abbreviations

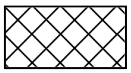
Graphic Symbols for Soil and Rock

General


Asphalt


Road base

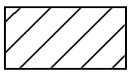

Concrete

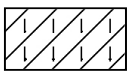

Filling

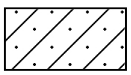
Soils


Topsoil

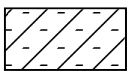

Peat

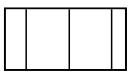

Clay

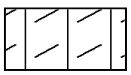

Silty clay

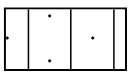

Sandy clay

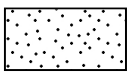

Gravelly clay

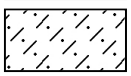

Shaly clay

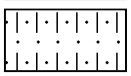

Silt


Clayey silt


Sandy silt

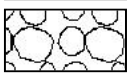

Sand

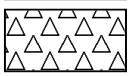

Clayey sand


Silty sand


Gravel

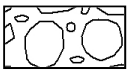

Sandy gravel


Cobbles, boulders

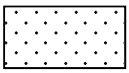

Talus

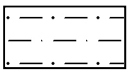
Sedimentary Rocks

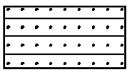

Boulder conglomerate

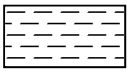

Conglomerate


Conglomeratic sandstone

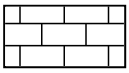

Sandstone


Siltstone

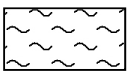

Laminite

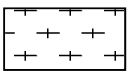

Mudstone, claystone, shale


Coal


Limestone

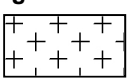
Metamorphic Rocks

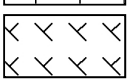

Slate, phyllite, schist

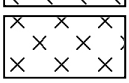

Gneiss

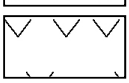

Quartzite

Igneous Rocks


Granite


Dolerite, basalt, andesite


Dacite, epidote


Tuff, breccia


Porphyry

Appendix H

Field Sheets and Calibration Records

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Groundwater Field Sheet

Project and Bore Installation Details

Bore / Standpipe ID:	HEC36BH01
Project Name:	SCAW
Project Number:	204814.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details

Date/Time:	25/11/23
Purged By:	PJ
GW Level (pre-purge):	2.28 m bgl
Observed Well Depth:	7.76 m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	15L L
Total Volume Purged:	45L (target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	DRY m bgl
Equipment:	Twister Pump

Micropurge and Sampling Details

Date/Time:	
Sampled By:	
Weather Conditions:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
GW Level (post sample):	m bgl
Total Volume Purged:	L
Equipment:	

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1° C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
Additional Readings Following stabilisation:	DO % Sat	SPC	TDS			

Sample Details

Sampling Depth (rationale):		m bgl,	
Sample Appearance (e.g. colour, siltiness, odour):			
Sample ID:			
QA/QC Samples:			
Sampling Containers and filtration:			
Comments / Observations:	High turbidity, no odour, brown		

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Groundwater Field Sheet

Project and Bore Installation Details	
Bore / Standpipe ID:	AECB6BH02
Project Name:	SCAW
Project Number:	204814.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details	
Date/Time:	25/11/23
Purged By:	AT
GW Level (pre-purge):	5.70 m bgl
Observed Well Depth:	15.00 m bgl
PSH observed:	Yes / (No) (interface / visual). Thickness if observed:
Estimated Bore Volume:	19 L
Total Volume Purged:	55 (target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	DRY m bgl
Equipment:	Twister Pump

Micropurge and Sampling Details	
Date/Time:	
Sampled By:	
Weather Conditions:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
GW Level (post sample):	m bgl
Total Volume Purged:	L
Equipment:	

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	***0.1° C***	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
Additional Readings Following stabilisation:	DO % Sat	SPC	TDS			

Sample Details

Sampling Depth (rationale):		m bgl,	
Sample Appearance (e.g. colour, siltiness, odour):			
Sample ID:			
QA/QC Samples:			
Sampling Containers and filtration:			
Comments / Observations:	Low turbidity, no odour, transparent/clear, cloudy		

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Groundwater Field Sheet

Project and Bore Installation Details	
Bore / Standpipe ID:	AEC36BH03
Project Name:	SCAW
Project Number:	204814.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details	
Date/Time:	25/11/23
Purged By:	PS
GW Level (pre-purge):	5.50 m bgl
Observed Well Depth:	9.55 m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	96 L
Total Volume Purged:	30 (target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	DRY m bgl
Equipment:	Twister Pump

Micropurge and Sampling Details	
Date/Time:	
Sampled By:	
Weather Conditions:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
GW Level (post sample):	m bgl
Total Volume Purged:	L
Equipment:	

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1° C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
Additional Readings Following stabilisation:	DO % Sat	SPC	TDS			

Sample Details

Sampling Depth (rationale):	m bgl,	
Sample Appearance (e.g. colour, siltiness, odour):		
Sample ID:		
QA/QC Samples:		
Sampling Containers and filtration:		
Comments / Observations:	Very high turbidity, no odour, dark brown, cloudy	

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Groundwater Field Sheet

Project and Bore Installation Details

Bore / Standpipe ID:	BH04
Project Name:	SCAW
Project Number:	204814.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details

Date/Time:	25/11/23
Purged By:	PT
GW Level (pre-purge):	m bgl 1.43
Observed Well Depth:	m bgl 5.59
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	8 L
Total Volume Purged:	30L (target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	DRY m bgl
Equipment:	Twister Pump

Micropurge and Sampling Details

Date/Time:	
Sampled By:	
Weather Conditions:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
GW Level (post sample):	m bgl
Total Volume Purged:	L
Equipment:	

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1° C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
Additional Readings Following stabilisation:	DO % Sat	SPC	TDS			

Sample Details

Sampling Depth (rationale):	m bgl,	
Sample Appearance (e.g. colour, siltiness, odour):		
Sample ID:		
QA/QC Samples:		
Sampling Containers and filtration:		
Comments / Observations:	Very high turbidity, no odour, dark brown, cloudy	

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Groundwater Field Sheet

Project and Bore Installation Details

Bore / Standpipe ID:	AEC36BH05
Project Name:	SCAW
Project Number:	204814.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details

Date/Time:	25/11/23
Purged By:	PJ
GW Level (pre-purge):	1.89 m bgl
Observed Well Depth:	7.00 m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	10 L
Total Volume Purged:	45 (target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	DRY m bgl
Equipment:	Twister Pump

Micropurge and Sampling Details

Date/Time:	
Sampled By:	
Weather Conditions:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
GW Level (post sample):	m bgl
Total Volume Purged:	L
Equipment:	

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1° C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
Additional Readings Following stabilisation:	DO % Sat	SPC	TDS			

Sample Details

Sampling Depth (rationale):	m bgl,	
Sample Appearance (e.g. colour, siltiness, odour):		
Sample ID:		
QA/QC Samples:		
Sampling Containers and filtration:		
Comments / Observations:	Very high turbidity, no odour, dark brown, cloudy.	

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Groundwater Field Sheet

Project and Bore Installation Details	
Bore / Standpipe ID:	AEC36BH01
Project Name:	SIAM
Project Number:	201814.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details	
Date/Time:	
Purged By:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
Total Volume Purged:	(target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	m bgl
Equipment:	

Micropurge and Sampling Details	
Date/Time:	1/2/23
Sampled By:	BT
Weather Conditions:	Fine
GW Level (pre-purge):	1.64 m bgl
Observed Well Depth:	7.76 m bgl
PSH observed:	Yes / (No) ((interface) / visual). Thickness if observed:
Estimated Bore Volume:	12 L
GW Level (post sample):	6.5 m bgl
Total Volume Purged:	12 L
Equipment:	Peri Pump

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1° C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
1 0.5	20.6	5.1	288.5	7.04		95.7
2 1.0	20.1	5.2	380.7	6.93		104.6
3 1.5	19.6	5.3	511	6.83		109.2
4 2.0	19.1	5.4	529	6.73		113.2
5 2.5	18.3	5.7	236.4	6.55		115.9
6 3.0	18.3	5.6	246.6	6.55		116.0
7 3.5	18.3	5.6	250.2	6.55		115.4
8 4.0	18.3	5.6	248.3	6.55		115.3

Additional Readings Following stabilisation:	DO % Sat	SPC	TDS
	56	175.2	112.45

Sample Details

Sampling Depth (rationale):	5.5	m bgl,	Mid Screen
Sample Appearance (e.g. colour, siltiness, odour):	Cloudy pale brown, high turbidity, no odour		
Sample ID:	AEC36BH01		
QA/QC Samples:	BD1/20230201		
Sampling Containers and filtration:			
Comments / Observations:			

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Groundwater Field Sheet

Project and Bore Installation Details	
Bore / Standpipe ID:	AEL36BH02
Project Name:	SFNW
Project Number:	208414.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details	
Date/Time:	
Purged By:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
Total Volume Purged:	(target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	m bgl
Equipment:	

Micropurge and Sampling Details	
Date/Time:	1/02/25
Sampled By:	PD
Weather Conditions:	Fine, sunny
GW Level (pre-purge):	4.53 m bgl
Observed Well Depth:	15.00 m bgl
PSH observed:	Yes / ~~No~~ (~~interface~~ / visual). Thickness if observed:
Estimated Bore Volume:	21 L
GW Level (post sample):	6.52 m bgl
Total Volume Purged:	11 L
Equipment:	Peri Pump

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS/cm or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1°C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
1 0.5	19.0	5.4	117.4	6.92		87.2
2 1.0	18.7	5.2	239.9	6.81		50.0
3 1.5	18.6	5.0	265.0	6.75		42.2
4 2.0	18.6	5.0	255.0	6.72		38.5
5 2.5	18.6	4.9	250.0	6.71		33.0
6 3.0	18.6	4.9	251.2	6.71		38.4
7 3.5	18.6	4.9	250.9	6.71		37.9

Additional Readings Following stabilisation:	DO % Sat	SPC	TDS
	49	316.0	264.75

Sample Details

Sampling Depth (rationale):	12 m bgl, mid screen
Sample Appearance (e.g. colour, siltiness, odour):	Clear / transparent, slightly cloudy, no odour
Sample ID:	AEL36BH02
QA/QC Samples:	BD2/20230201
Sampling Containers and filtration:	
Comments / Observations:	

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Groundwater Field Sheet

Project and Bore Installation Details	
Bore / Standpipe ID:	MW36BH03
Project Name:	SAW
Project Number:	204840.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details	
Date/Time:	
Purged By:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
Total Volume Purged:	(target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	m bgl
Equipment:	

Micropurge and Sampling Details	
Date/Time:	11/2/23
Sampled By:	BJ
Weather Conditions:	Sunny, fine
GW Level (pre-purge):	5.49 m bgl
Observed Well Depth:	9.55 m bgl
PSH observed:	Yes / (No) ((interface) / visual). Thickness if observed:
Estimated Bore Volume:	8 L
GW Level (post sample):	7.02 m bgl
Total Volume Purged:	89 L
Equipment:	Peri Pump

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS/cm or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	0.1° C	+/- 0.3 mg/L	+/- 3%	+/- 0.1	+/- 10%	+/- 10 mV
1 0.5	19.6	5.5	546.0	7.32		58.3
2 1.0	19.3	5.4	497.2	7.23		60.2
3 1.5	19.2	5.3	417.9	7.12		62.4
4 2.0	19.1	5.2	517.0	7.01		64.5
5 2.5	19.1	5.2	606.0	6.94		66.0
6 3.0	19.0	5.1	650.2	6.82		65.2
7 3.5	19.0	5.1	648.4	6.82		64.9
8 4.0	19.0	5.1	655.2	6.82		64.6

Additional Readings Following stabilisation:	DO % Sat	SPC	TDS
	53	820	481.00

Sample Details

Sampling Depth (rationale):	8	m bgl,	Mid screen
Sample Appearance (e.g. colour, siltiness, odour):	Pale grey, cloudy, low turbidity, no odour		
Sample ID:	MW36BH03		
QA/QC Samples:			
Sampling Containers and filtration:			
Comments / Observations:			

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Groundwater Field Sheet

Project and Bore Installation Details	
Bore / Standpipe ID:	AEC36BH04
Project Name:	SCAW
Project Number:	204814.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details	
Date/Time:	
Purged By:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
Total Volume Purged:	(target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	m bgl
Equipment:	

Micropurge and Sampling Details	
Date/Time:	11/7/23
Sampled By:	JF
Weather Conditions:	Sunny
GW Level (pre-purge):	1.44 m bgl
Observed Well Depth:	5.59 m bgl
PSH observed:	Yes / No (interface) / visual). Thickness if observed:
Estimated Bore Volume:	8 L
GW Level (post sample):	3.52 m bgl
Total Volume Purged:	5 L
Equipment:	Peri Pump

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS/cm) (mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1° C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
1 0.5	19.1	1.4	20633	6.27		74.6
2 1.0	18.5	1.4	20442	6.23		77.5
3 1.5	18.5	1.3	20240	6.22		79.4
4 2.0	18.5	1.3	20193	6.21		80.1
5 2.5	18.5	1.3	20127	6.21		80.4
6 3.0	18.5	1.3	20140	6.21		81.0

Additional Readings Following stabilisation:	DO % Sat	SPC	TDS
	15.6	11162.00	3056.00

Sample Details

Sampling Depth (rationale):	4.5 m bgl,	Mid screen
Sample Appearance (e.g. colour, siltiness, odour):	Cloudy, brown, no odour, high turbidity	
Sample ID:	AEC36BH04	
QA/QC Samples:		
Sampling Containers and filtration:		
Comments / Observations:		

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Groundwater Field Sheet

Project and Bore Installation Details

Bore / Standpipe ID:	AE1S6BH05
Project Name:	SIAW
Project Number:	204814.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details

Date/Time:	
Purged By:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
Total Volume Purged:	(target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	m bgl
Equipment:	

Micropurge and Sampling Details

Date/Time:	1/12/23
Sampled By:	DJ
Weather Conditions:	Sunny
GW Level (pre-purge):	2.84 m bgl
Observed Well Depth:	7.00 m bgl
PSH observed:	Yes / (No) (interface) / visual). Thickness if observed:
Estimated Bore Volume:	8 L
GW Level (post sample):	5.26 m bgl
Total Volume Purged:	8 L
Equipment:	Peri Pump

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1°C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
1 0.5	19.6	0.9	19409	6.61		3.9
2 1.0	19.5	0.7	19289	6.63		3.5
3 1.5	19.5	0.6	19143	6.65		4.6
4 2.0	19.5	0.6	19065	6.65		5.9
5 2.5	19.5	0.6	19060	6.65		5.8
6 3.0	19.5	0.6	18906	6.65		6.0

Additional Readings Following stabilisation:	DO % Sat	SPC	TDS
	5	21176	13754.00

Sample Details

Sampling Depth (rationale):	5	m bgl.	Mid screen
Sample Appearance (e.g. colour, siltiness, odour):	Clear/transparent, slightly cloudy, no odour		
Sample ID:	AE1S6BH05		
QA/QC Samples:			
Sampling Containers and filtration:			
Comments / Observations:			

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Groundwater Field Sheet

Project and Bore Installation Details	
Bore / Standpipe ID:	SMGW-BH-B313
Project Name:	SCAW
Project Number:	204814.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details	
Date/Time:	
Purged By:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
Total Volume Purged:	(target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	m bgl
Equipment:	

Micropurge and Sampling Details	
Date/Time:	1/2/23
Sampled By:	PJ
Weather Conditions:	Sunny
GW Level (pre-purge):	2.20 m bgl
Observed Well Depth:	4.80 m bgl
PSH observed:	Yes / ~~No~~ ~~(interface~~ / visual). Thickness if observed:
Estimated Bore Volume:	5 L
GW Level (post sample):	3.14 m bgl
Total Volume Purged:	9 L
Equipment:	Peri Pump

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1 °C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
1 0.5	20.5	1.9	11566	6.42		-26.9
2 1.0	20.0	1.1	11402	6.26		-30.1
3 1.5	19.9	0.9	11287	6.14		-34.0
4 2.0	20.0	0.7	11282	6.09		-38.0
5 2.5	20.0	0.7	11260	6.09		-36.8
6 3.0	20.0	0.7	11220	6.09		-37.0
7 3.5	20.0	0.7	11218	6.09		-37.6
Additional Readings Following stabilisation:	DO % Sat	SPC	TDS			
	7	10519	4316.0			

Sample Details

Sampling Depth (rationale):	3.0	m bgl,	Mid Screen
Sample Appearance (e.g. colour, siltiness, odour):	Clear/transparent, slightly turbid, slightly cloudy, no odour		
Sample ID:	SMGW-BH-B313		
QA/QC Samples:	BD3/20230201		
Sampling Containers and filtration:			
Comments / Observations:			

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Groundwater Field Sheet

Project and Bore Installation Details

Bore / Standpipe ID:	SMGW-BH-B317
Project Name:	SCAU
Project Number:	204814.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details

Date/Time:	
Purged By:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
Total Volume Purged:	(target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	m bgl
Equipment:	

Micropurge and Sampling Details

Date/Time:	11/7/23
Sampled By:	PJ
Weather Conditions:	Sunny
GW Level (pre-purge):	2.12 m bgl
Observed Well Depth:	5.50 m bgl
PSH observed:	Yes / No (interface) / visual). Thickness if observed:
Estimated Bore Volume:	7 L
GW Level (post sample):	3.56 m bgl
Total Volume Purged:	6 L
Equipment:	Peri Pump

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1° C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
1 0.5	20.8	0.8	6759	6.74		-70.1
2 1.0	20.6	0.7	6248	6.7		-65.8
3 1.5	20.5	0.7	6265	6.66		-60.8
4 2.0	20.5	0.7	6295	6.66		-61.0
5 2.5	20.5	0.7	6289	6.66		-60.9

Additional Readings Following stabilisation:	DO % Sat	SPC	TDS
	11.0	6888.0	4485.0

Sample Details

Sampling Depth (rationale):	4	m bgl,	mid screen
Sample Appearance (e.g. colour, siltiness, odour):	clear/transparent, slightly cloudy, low turbidity, no odour		
Sample ID:	SMGW-BH-B317		
QA/QC Samples:			
Sampling Containers and filtration:			
Comments / Observations:			

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Groundwater Field Sheet

Project and Bore Installation Details	
Bore / Standpipe ID:	SMGW-BH-BS19
Project Name:	SCAW
Project Number:	76481.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details	
Date/Time:	
Purged By:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
Total Volume Purged:	(target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	m bgl
Equipment:	

Micropurge and Sampling Details	
Date/Time:	1/12/23
Sampled By:	DF
Weather Conditions:	Sunny
GW Level (pre-purge):	2.52 m bgl
Observed Well Depth:	4.93 m bgl
PSH observed:	Yes / (No) ((interface) / visual). Thickness if observed:
Estimated Bore Volume:	5 L
GW Level (post sample):	4.36 m bgl
Total Volume Purged:	5 L
Equipment:	Peri Pump

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	0.1°C	+/- 0.3 mg/L	+/- 3%	+/- 0.1	+/- 10%	+/- 10 mV
1 0.5	21.9	1.9	17052	6.16		96.4
2 1.0	21.2	1.8	16848	5.73		120.6
3 1.5	21.0	1.8	16673	5.57		134.0
4 2.0	21.0	1.8	16535	5.49		141.6
5 2.5	21.0	1.8	16520	5.49		142.4
6 3.0	21.0	1.8	16540	5.49		141.9
7 3.5	21.0	1.8	16538	5.49		140.9

Additional Readings Following stabilisation:	DO % Sat	SPC	TDS
	23.0	17223	11173.64

Sample Details

Sampling Depth (rationale):	4.5	m bgl, Lower screen,
Sample Appearance (e.g. colour, siltiness, odour):	Pale brown, low turbidity, cloudy, no odour	
Sample ID:	SMGW-BH-BS19	
QA/QC Samples:	-	
Sampling Containers and filtration:		
Comments / Observations:		

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RECORD OF ASBESTOS SAMPLES

Project: WSA SCAW Tender Design	**Project Number:** 204814.01
Client: CPB Contractors Pty Limited & United Infrastructure Pty Limited (CPBUIJV)	**Date:**
Location: Elizabeth Drive, Luddenham	**Field Staff:**

Sample ID	Sample Type	Sample Depth (m)	Weight of 10 L Bulk Sample (g)	Number of Fragments >7 mm	Condition of Fragments (good/ poor)	Size range of fragments (mm)	Weight of ACM and FA collected (g)
AEL36TP71	Soil	0.0-0.1	14962	1	poor	50mm	6g

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SURFACE WATER SAMPLING FORM

Project: WSA SCAW Tender Design	**Project No:** 204814.01
Client: CPB Contractors Pty Limited & United Infrastructure Pty Limited (CPBUIJV)	
Location: Elizabeth Drive, Luddenham	
Sampling Method: Bailer	

Sample ID:	AEC36SW1					
Sampling Date	25/1/23					
Time of Sampling	2.30pm					
Temperature (°C)	24.8					
pH (record to one decimal place)	6.6					
EC (µS/cm)	5168.0					
Dissolved Oxygen (% Sat)	38.0					
Dissolved Oxygen (mg/L)	3.1					
Turbidity (NTU)						
Redox (mV)	5.6					
TDS (mg/L)	4023.5					
Odour	NO					
Colour	Transparent Slightly Cloudy					
Observations	V. Low Turbidity					

Notes:
* BD1/20230125 & * BD2/20230125 taken with AEC36SW1

Supervisor: PJ	Date: 25/1/23

Water quality meter calibration details (please tick calibration liquids used):

Meter ID							
Buffer (pH 4)	☐	Use-by Date		Conductivity Standard (2.76 mS/cm)	☐	Use-by Date	
Buffer (pH 6.88)	☐	Use-by Date		Total Dissolved Solids Standard (2 ppk)	☐	Use-by Date	
Buffer (pH 9)	☐	Use-by Date		Rapid Cal Solution	☐	Use-by Date	

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GROUNDWATER SAMPLING FORM

AEC38BH01

Project: ~~Proposed Car Yard Redevelopment~~ SLAW	**Project No:** ~~218043.00~~ 204814.01
Client: ~~MKD Partners Pty Ltd~~ AEC38	
Location: ~~1 Thomas Rd, Londonderry~~	
Sampling Method: Twister Pump	

Bore No.	AEC38BH01				
Purging Date	16/12/22				
Bore Casing Diameter (mm)	50mm				
SWL (m below top of casing)	3.86				
Height of Casing (m above GL*)	0.64				
SWL (m below GL*)	0.4.50				
Total Bore Depth (m below GL*)	13.78				
Well Volume (L) **[which for 50mm casing is 2L approx. per metre depth]	18.6L				
Purged Volume (L) (≈ well vol x 3)	55L				
Sampling Date					
Sampling Time					
Temperature (°C)					
pH (record to one decimal place)					
EC (µS/cm)					
Dissolved Oxygen (% Sat)					
Dissolved Oxygen (mg/L)					
Turbidity (NTU)					
Redox (mV)					
TDS (mg/L)					
Odour					
Colour					
Recharge Rate					
Observations					

Notes: Pale grey-brown, no odour

Supervisor:	**Date:**

Water quality meter calibration details (please tick calibration liquids used):

Meter ID							
Buffer (pH 4)	☐	Use-by Date		Conductivity Standard (2.76 mS/cm)	☐	Use-by Date	
Buffer (pH 6.88)	☐	Use-by Date		Total Dissolved Solids Standard (2 parts per thousand)	☐	Use-by Date	
Buffer (pH 9)	☐	Use-by Date		Rapid Cal Solution	☐	Use-by Date	

*GL – denotes ground level

**Well Volume = πr^2 x depth of water, where r is internal casing radius

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Groundwater Field Sheet

Project and Bore Installation Details

Bore / Standpipe ID:	AEC38BH01
Project Name:	
Project Number:	
Site Location:	
Bore GPS Co-ord:	
Installation Date:	
GW Level (during drilling):	m bgl
Well Depth:	m bgl
Screened Interval:	m bgl
Contaminants/Comments:	

Bore Development Details

Date/Time:	
Purged By:	
GW Level (pre-purge):	m bgl
Observed Well Depth:	m bgl
PSH observed:	Yes / No (interface / visual). Thickness if observed:
Estimated Bore Volume:	L
Total Volume Purged:	(target: no drill mud, min 3 well vol. or dry)
GW Level (post-purge):	m bgl
Equipment:	

Micropurge and Sampling Details

Date/Time:	24/1/23, 7.00am
Sampled By:	PJ
Weather Conditions:	Fine, sunny
GW Level (pre-purge):	4.02 m bgl
Observed Well Depth:	13.16 m bgl
PSH observed:	Yes / (No) (~~interface~~ / visual). Thickness if observed:
Estimated Bore Volume:	18. L
GW Level (post sample):	5.16 m bgl
Total Volume Purged:	~10 L
Equipment:	Peri / Geo Pump

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	**0.1°C**	**+/- 0.3 mg/L**	**+/- 3%**	**+/- 0.1**	**+/- 10%**	**+/- 10 mV**
0.5	18.7	3.5	21.6	6.35		-4.5
1.0	18.7	1.9	18.4	6.41		-9.9
1.5	18.7	1.5	17.2	6.44		-13.5
2.0	18.7	1.4	17.1	6.44		-14.1

Additional Readings Following stabilisation:	DO % Sat	SPC	TDS
	10	20.9	13.65

Sample Details

Sampling Depth (rationale):	10 m bgl, Mid screen
Sample Appearance (e.g. colour, siltiness, odour):	Clear, slightly turbid, no odour, very little silt
Sample ID:	AEC38BH01
QA/QC Samples:	BD1/20230124
Sampling Containers and filtration:	
Comments / Observations:	

468
1382

66

Multi Parameter Water Meter

Instrument **YSI Quatro Pro Plus**
Serial No. **12D100011**

airmet
Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments
Battery	Charge Condition	✓	
	Fuses	✓	
	Capacity	✓	
Switch/keypad	Operation	✓	
Display	Intensity	✓	
	Operation (segments)	✓	
Grill Filter	Condition	✓	
	Seal	✓	
PCB	Condition	✓	
Connectors	Condition	✓	
Sensor	1. pH	✓	
	2. mV	✓	
	3. EC	✓	
	4. D.O	✓	
	5. Temp	✓	
Alarms	Beeper	✓	
	Settings	✓	
Software	Version	✓	
Data logger	Operation	✓	
Download	Operation	✓	
Other tests:			

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Standard Solutions	Certified	Solution Bottle Number	Instrument Reading
1. pH 7.00		pH 7.00		386467	pH 6.99
2. pH 4.00		pH 4.00		399527	pH 4.14
3. mV		237.6mV		39557/395763	237.7mV
4. EC		2.76mS		396172	2.762mS
6. D.O		0.0%		391223	0.1%
7. Temp		21.7°C		MultiTherm	21.4°C

Calibrated by: **Lebelle Chee**

Calibration date: **18/01/2023**

Next calibration due: **18/02/2023**



PID Calibration Certificate

Instrument PhoCheck Tiger
Serial No. T-108801

airmet

Air-Met Scientific Pty Ltd
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm		
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No		Instrument Reading
PID Lamp		94ppm Isobutylene	NATA	SY506		94.3ppm

Calibrated by: Alex Buist

Calibration date: 4/11/2022

Next calibration due: 6/05/2023

Appendix I

Summary of Results

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Table I1: Summary of Laboratory Results for Soil – Metals, TRH, BTEX, PAH

				Metals								TRH						BTEX				PAH			
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH C6-C10 less BTEX	TRH >C10-C16 less Naphthalene	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAH
Sample ID	Depth	Sample Date	Soil type	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
AEC36TP01	0 - 0.1 m	13/12/2022	Fill	<4	<0.4	12	5	9	<0.1	4	5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD1/20221213	0 - 0.1 m	13/12/2022	Fill	<4	<0.4	11	6	12	<0.1	5	5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP02	0 - 0.1 m	13/12/2022	Fill	<4	<0.4	12	6	16	<0.1	4	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP03	0 - 0.1 m	13/12/2022	Fill	5	<0.4	17	8	17	<0.1	4	42	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP03	0.3 - 0.4 m	13/12/2022	Natural	<4	<0.4	14	15	10	<0.1	5	14	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP04	0 - 0.05 m	13/12/2022	Fill	7	<0.4	40	5	18	<0.1	6	12	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD9/20221213	0 - 0.05 m	13 Dec 2022	Fill	15	<0.4	71	6.2	24	<0.1	9	20	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP05	0 - 0.1 m	13/12/2022	Fill	7	<0.4	34	5	22	<0.1	6	17	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD10/20221213	0 - 0.1 m	13 Dec 2022	Fill	15	<0.4	53	6.9	30	<0.1	6.4	16	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP06	0 - 0.1 m	13/12/2022	Fill	7	<0.4	33	7	22	<0.1	6	14	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP07	0 - 0.1 m	13/12/2022	Fill	8	<0.4	36	5	20	<0.1	5	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP08	0 - 0.1 m	13/12/2022	Fill	9	<0.4	45	6	22	<0.1	5	13	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP08	0.4 - 0.5 m	13/12/2022	Natural	7	<0.4	34	8	16	<0.1	4	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP09	0 - 0.1 m	13/12/2022	Fill	9	<0.4	40	3	15	<0.1	3	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP10	0 - 0.1 m	13/12/2022	Fill	8	<0.4	31	5	17	<0.1	3	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP11	0 - 0.1 m	13/12/2022	Fill	6	<0.4	19	11	17	<0.1	4	19	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP12	0 - 0.1 m	13/12/2022	Fill	8	<0.4	28	8	18	<0.1	4	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP13	0 - 0.1 m	13/12/2022	Fill	6	<0.4	21	10	17	<0.1	4	17	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP14	0 - 0.1 m	13/12/2022	Fill	7	<0.4	17	11	17	<0.1	6	20	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP15	0 - 0.1 m	13/12/2022	Fill	7	<0.4	24	13	20	<0.1	7	20	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP15	0.3 - 0.4 m	13/12/2022	Natural	7	<0.4	24	13	15	<0.1	4	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP16	0 - 0.1 m	14/12/22	Fill	9	<0.4	22	15	23	<0.1	8	25	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD1/20221214	0 - 0.1 m	15 Dec 2022	Fill	14	<0.4	33	20	28	<0.1	9	30	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 410	17000 55	600 1100	80 -	1200 35	30000 150	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP17	0 - 0.1 m	14/12/22	Fill	8	<0.4	29	16	26	<0.1	10	25	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD2/20221214	0 - 0.1 m	14/12/22	Fill	7	<0.4	24	15	22	<0.1	8	22	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP18	0 - 0.1 m	14/12/22	Fill	6	<0.4	19	14	19	<0.1	8	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP19	0 - 0.1 m	14/12/22	Fill	6	<0.4	20	16	20	<0.1	11	31	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD3/20221214	0 - 0.1 m	15 Dec 2022	Fill	13	<0.4	32	25	31	<0.1	15	54	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 410	17000 55	600 1100	80 -	1200 35	30000 150	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP20	0 - 0.1 m	14/12/22	Fill	6	<0.4	20	15	21	<0.1	9	24	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD4/20221214	0 - 0.1 m	14/12/22	Fill	6	<0.4	19	15	19	<0.1	8	23	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP20	0.2 - 0.3 m	14/12/22	Natural	6	<0.4	16	14	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
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP21	0 - 0.1 m	14/12/22	Fill	8	<0.4	23	17	21	<0.1	9	28	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP22	0 - 0.1 m	14/12/22	Fill	7	<0.4	21	12	21	<0.1	8	26	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP23	0 - 0.1 m	14/12/22	Fill	8	<0.4	20	15	30	<0.1	7	25	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05

				Metals								TRH						BTEX				PAH			
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH C6-C10 less BTEX	TRH >C10-C16 less Naphthalene	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAH
Sample ID	Depth	Sample Date	Soil type	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
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP24	0 - 0.1 m	14/12/22	Fill	5	<0.4	18	14	17	<0.1	8	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP25	0 - 0.1 m	14/12/22	Fill	7	<0.4	23	20	23	<0.1	10	32	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP25	0.2 - 0.3 m	14/12/22	Natural	7	<0.4	18	24	19	<0.1	5	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP26	0 - 0.1 m	14/12/22	Fill	5	<0.4	13	11	15	<0.1	6	16	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP27	0 - 0.1 m	14/12/22	Fill	6	<0.4	19	11	17	<0.1	4	12	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP28	0 - 0.1 m	14/12/22	Fill	5	<0.4	18	10	17	<0.1	5	10	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP29	0 - 0.1 m	14/12/22	Fill	7	<0.4	25	10	21	<0.1	7	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP30	0 - 0.1 m	14/12/22	Fill	7	<0.4	24	12	21	<0.1	6	12	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP30	0.2 - 0.3 m	14/12/22	Natural	10	<0.4	31	16	19	<0.1	6	17	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP31	0 - 0.1 m	14/12/22	Fill	6	<0.4	20	7	17	<0.1	3	13	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP32	0 - 0.1 m	14/12/22	Fill	4	<0.4	15	7	15	<0.1	3	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP33	0 - 0.1 m	14/12/22	Fill	9	<0.4	24	11	23	<0.1	8	20	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP34	0 - 0.1 m	14/12/22	Fill	10	<0.4	25	12	23	<0.1	7	17	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP34	0.3 - 0.4 m	14/12/22	Natural	5	<0.4	18	13	16	<0.1	8	19	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP35	0 - 0.1 m	14/12/22	Fill	9	<0.4	25	12	23	<0.1	7	13	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP36	0 - 0.1 m	14/12/22	Fill	7	<0.4	21	9	20	<0.1	5	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP37	0 - 0.1 m	19/12/22	Fill	<4	<0.4	10	8	13	<0.1	4	10	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD1/20221219	0 - 0.1 m	19/12/22	Fill	<4	<0.4	11	8	13	<0.1	5	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP37	0.3 - 0.4 m	19/12/22	Natural	<4	<0.4	11	13	9	<0.1	3	12	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP38	0 - 0.1 m	19/12/22	Fill	<4	<0.4	10	12	16	<0.1	6	41	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP39	0 - 0.1 m	19/12/22	Fill	10	<0.4	28	11	27	<0.1	6	12	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP40	0 - 0.1 m	19/12/22	Fill	7	<0.4	20	10	24	<0.1	5	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD3/20221219	0 - 0.1 m	19 Dec 2022	Fill	8.7	<0.4	23	11	20	<0.1	5.3	13	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP41	0 - 0.1 m	19/12/22	Fill	5	<0.4	17	11	21	<0.1	5	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP42	0 - 0.1 m	19/12/22	Fill	7	<0.4	18	14	22	<0.1	7	15	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP43	0 - 0.1 m	19/12/22	Fill	7	<0.4	18	14	24	<0.1	8	10	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP43	0.3 - 0.4 m	19/12/22	Natural	<4	<0.4	10	18	10	<0.1	4	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP44	0 - 0.1 m	19/12/22	Fill	5	<0.4	15	10	18	<0.1	5	10	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP45	0 - 0.1 m	19/12/22	Fill	5	<0.4	13	14	18	<0.1	7	25	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP46	0 - 0.1 m	19/12/22	Fill	7	<0.4	17	12	23	<0.1	6	10	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP47	0 - 0.1 m	19/12/22	Fill	9	<0.4	35	6	16	<0.1	3	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP48	0 - 0.1 m	19/12/22	Fill	8	<0.4	24	9	17	<0.1	5	13	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP49	0 - 0.1 m	19/12/22	Fill	8	<0.4	25	13	21	<0.1	6	13	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP50	0 - 0.1 m	19/12/22	Fill	6	<0.4	16	12	20	<0.1	7	10	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP50	0.4 - 0.5 m	19/12/22	Natural	<4	<0.4	8	15	8	<0.1	4	16	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP51	0 - 0.1 m	19/12/22	Fill	7	<0.4	43	8	17	<0.1	5	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05

				Metals								TRH						BTEX				PAH			
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH C6-C10 less BTEX	TRH >C10-C16 less Naphthalene	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAH
Sample ID	Depth	Sample Date	Soil type	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
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP52	0 - 0.1 m	19/12/22	Fill	9	<0.4	29	7	15	<0.1	3	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP53	0 - 0.1 m	19/12/22	Fill	11	<0.4	24	8	18	<0.1	4	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP54	0 - 0.1 m	20/12/22	Fill	7	<0.4	22	6	19	<0.1	3	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP54	0.4 - 0.5 m	20/12/22	Natural	9	<0.4	10	9	10	<0.1	<1	5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP55	0 - 0.1 m	20/12/22	Fill	7	<0.4	21	9	15	<0.1	4	10	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD2/20221220	0 - 0.1 m	20/12/22	Fill	9	<0.4	25	10	17	<0.1	4	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP56	0 - 0.1 m	20/12/22	Fill	6	<0.4	37	6	15	<0.1	5	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP57	0 - 0.1 m	20/12/22	Fill	11	<0.4	33	6	18	<0.1	3	14	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP58	0 - 0.1 m	20/12/22	Fill	10	<0.4	23	7	16	<0.1	3	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP59	0 - 0.1 m	20/12/22	Fill	9	<0.4	26	16	18	<0.1	4	27	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP60	0 - 0.1 m	20/12/22	Fill	8	<0.4	40	3	16	<0.1	3	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP60 - [TRIPLICATE]	0 - 0.1 m	20/12/22	Fill	8	<0.4	41	3	15	<0.1	3	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP61	0 - 0.1 m	20/12/22	Fill	8	<0.4	27	5	15	<0.1	3	5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP61	0.3 - 0.4 m	20/12/22	Natural	5	<0.4	16	11	9	<0.1	1	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP62	0 - 0.1 m	20/12/22	Fill	9	<0.4	25	8	16	<0.1	3	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP63	0 - 0.1 m	20/12/22	Fill	8	<0.4	28	12	16	<0.1	3	15	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD7/20221220	0 - 0.1 m	20 Dec 2022	Fill	15	<0.4	45	40	22	<0.1	7.9	47	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP64	0 - 0.1 m	20/12/22	Fill	8	<0.4	29	8	16	<0.1	4	19	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP65	0 - 0.1 m	20/12/22	Fill	9	<0.4	23	11	15	<0.1	3	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP66	0 - 0.1 m	20/12/22	Fill	8	<0.4	25	6	14	<0.1	3	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP67	0 - 0.1 m	20/12/22	Fill	11	<0.4	25	17	20	<0.1	3	20	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP68	0 - 0.1 m	20/12/22	Fill	8	<0.4	25	6	15	<0.1	3	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP68	0.4 - 0.5 m	20/12/22	Natural	5	<0.4	22	13	11	<0.1	2	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP69	0 - 0.1 m	20/12/22	Fill	8	<0.4	23	10	18	<0.1	4	20	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP70	0 - 0.1 m	20/12/22	Fill	7	<0.4	28	6	15	<0.1	3	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP71	0 - 0.1 m	20/12/22	Fill	7	<0.4	26	13	23	<0.1	4	38	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP71-PACM	0 - 0.1 m	12/01/23	Material	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP72	0 - 0.1 m	12/01/23	Fill	7	<0.4	25	7	17	<0.1	4	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD1/20230112	0 - 0.1 m	12/01/23	Fill	8	<0.4	27	9	19	<0.1	4	12	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP73	0 - 0.1 m	12/01/23	Fill	10	<0.4	33	6	18	<0.1	4	12	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP74	0 - 0.1 m	12/01/23	Fill	7	<0.4	26	5	16	<0.1	3	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP75	0 - 0.1 m	12/01/23	Fill	8	<0.4	29	10	20	<0.1	5	17	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD3/20230112	0 - 0.1 m	12 Jan 2023	Fill	22	<0.4	63	19	28	<0.1	13	28	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP75	0.3 - 0.4 m	12/01/23	Natural	4	<0.4	15	14	11	<0.1	2	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36HA76	0 - 0.1 m	18/01/2023	Fill	7	<0.4	21	9	16	<0.1	4	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD1/20230118	0 - 0.1 m	18 Jan 2023	Fill	20	<0.4	57	19	27	<0.1	10	22	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5

				Metals								TRH						BTEX				PAH			
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH C6-C10 less BTEX	TRH >C10-C16 less Naphthalene	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAH
Sample ID	Depth	Sample Date	Soil type	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
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA77	0 - 0.1 m	18/01/2023	Fill	5	<0.4	14	8	11	<0.1	6	16	<25	<50	<25	<50	120	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD2/20230118	0 - 0.1 m	18/01/2023	Fill	7	<0.4	19	10	14	<0.1	8	18	<25	<50	<25	<50	120	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA78	0 - 0.1 m	18/01/2023	Fill	9	<0.4	30	9	18	<0.1	5	10	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA78	0.3 - 0.4 m	18/01/2023	Natural	7	<0.4	27	14	14	<0.1	4	12	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA79	0 - 0.1 m	18/01/2023	Fill	7	<0.4	20	8	31	<0.1	4	41	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
PACM79	0 m	18/01/2023	Material	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA80	0 - 0.1 m	18/01/2023	Fill	7	<0.4	24	6	15	<0.1	4	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA81	0 - 0.1 m	18/01/2023	Fill	9	<0.4	33	7	24	<0.1	5	19	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA82	0 - 0.1 m	20/01/2023	Fill	7	<0.4	30	5	16	<0.1	4	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD1/20230120	0 - 0.1 m	20/01/2023	Fill	8	<0.4	34	6	19	<0.1	5	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA83	0 - 0.1 m	20/01/2023	Fill	5	<0.4	21	6	18	<0.1	4	12	<25	<50	<25	<50	200	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD2/20230120	0 - 0.1 m	20 Jan 2023	Fill	12	<0.4	42	10	25	<0.1	6.7	18	<20	<50	<20	<50	150	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA84	0 - 0.1 m	20/01/2023	Fill	5	<0.4	20	5	15	<0.1	4	8	<25	<50	<25	<50	140	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA84	0.3 - 0.4 m	20/01/2023	Natural	7	<0.4	32	10	15	<0.1	5	9	<25	<50	<25	<50	160	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36HA85	0 - 0.1 m	20/01/2023	Fill	6	<0.4	25	5	17	<0.1	5	9	<25	<50	<25	<50	180	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA86	0 - 0.1 m	20/01/2023	Fill	6	<0.4	24	7	16	<0.1	6	12	<25	<50	<25	<50	130	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA87	0 - 0.1 m	20/01/2023	Fill	7	<0.4	28	6	18	<0.1	5	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP88	0 - 0.1 m	13/01/23	Fill	7	<0.4	30	14	28	<0.1	12	25	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP88	0.4 - 0.5 m	13/01/23	Natural	6	<0.4	18	20	13	<0.1	7	30	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP89	0 - 0.1 m	13/01/23	Fill	7	<0.4	24	15	25	<0.1	12	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP90	0 - 0.1 m	13/01/23	Fill	6	<0.4	26	16	26	<0.1	11	22	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP91	0 - 0.1 m	13/01/23	Fill	9	<0.4	31	19	25	<0.1	13	30	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP92	0 - 0.1 m	13/01/23	Fill	9	<0.4	30	15	28	<0.1	11	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP93	0 - 0.1 m	12/01/23	Fill	8	<0.4	32	10	20	<0.1	6	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD4/20230112	0 - 0.1 m	12 Jan 2023	Fill	23	<0.4	72	18	37	<0.1	13	23	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP94	0 - 0.1 m	12/01/23	Fill	10	<0.4	37	10	25	<0.1	7	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP94	0.4 - 0.5 m	12/01/23	Natural	7	<0.4	26	8	15	<0.1	4	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP95	0 - 0.1 m	12/01/23	Fill	6	<0.4	18	8	64	<0.1	5	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP96	0 - 0.1 m	12/01/23	Fill	6	<0.4	23	9	24	<0.1	7	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP97	0 - 0.1 m	12/01/23	Fill	6	<0.4	19	10	24	<0.1	5	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP98	0 - 0.1 m	12/01/23	Fill	7	<0.4	22	7	25	<0.1	5	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP99	0 - 0.1 m	12/01/23	Fill	6	<0.4	20	7	25	<0.1	5	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP100	0 - 0.1 m	12/01/23	Fill	8	<0.4	25	11	29	<0.1	8	14	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP101	0 - 0.1 m	12/01/23	Fill	5	<0.4	17	8	18	<0.1	6	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP102	0 - 0.1 m	12/01/23	Fill	4	<0.4	15	11	22	<0.1	7	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP103	0 - 0.1 m	12/01/23	Fill	5	<0.4	13	6	18	<0.1	4	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05

				Metals								TRH						BTEX				PAH			
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH C6-C10 less BTEX	TRH >C10-C16 less Naphthalene	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAH
Sample ID	Depth	Sample Date	Soil type	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
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP103	0.4 - 0.5 m	12/01/23	Natural	5	<0.4	14	23	11	<0.1	8	16	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP104	0 - 0.1 m	13/01/23	Fill	<4	<0.4	11	5	11	<0.1	4	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD1/20230113	0 - 0.1 m	13/01/23	Fill	<4	<0.4	10	5	10	<0.1	4	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP105	0 - 0.1 m	13/01/23	Fill	<4	<0.4	11	6	12	<0.1	3	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP106	0 - 0.1 m	13/01/23	Fill	<4	<0.4	7	4	7	<0.1	2	5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP107	0 - 0.1 m	13/01/23	Fill	<4	<0.4	9	5	13	<0.1	4	13	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD3/20230113	0 - 0.1 m	13 Jan 2023	Fill	3.4	<0.4	11	5.4	11	<0.1	<5	6.3	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP108	0 - 0.1 m	13/01/23	Fill	<4	<0.4	9	5	11	<0.1	3	4	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD4/20230113	0 - 0.1 m	13 Jan 2023	Fill	5.1	<0.4	14	6.3	13	<0.1	<5	<5	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP109	0 - 0.1 m	13/01/23	Fill	<4	<0.4	8	4	9	<0.1	3	5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP109	0.4 - 0.5 m	13/01/23	Natural	4	<0.4	12	9	9	<0.1	4	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP110	0 - 0.1 m	13/01/23	Fill	<4	<0.4	13	7	11	<0.1	3	6	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP111	0 - 0.1 m	13/01/23	Fill	<4	<0.4	15	5	12	<0.1	3	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA112	0 - 0.1 m	18/01/2023	Fill	<4	<0.4	2	3	5	<0.1	2	10	<25	<50	<25	<50	240	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA113	0 - 0.1 m	18/01/2023	Fill	<4	<0.4	8	3	10	<0.1	2	5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA114	0 - 0.1 m	18/01/2023	Fill	<4	<0.4	7	4	12	<0.1	2	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA115	0 - 0.1 m	18/01/2023	Fill	5	<0.4	13	10	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
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA115	0.3 - 0.4 m	18/01/2023	Natural	<4	<0.4	11	15	7	<0.1	9	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36HA116	0 - 0.1 m	18/01/2023	Fill	5	<0.4	14	14	22	<0.1	8	18	<25	<50	<25	<50	120	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA117	0 - 0.1 m	18/01/2023	Fill	5	<0.4	13	13	20	<0.1	7	18	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA118	0 - 0.1 m	20/01/2023	Fill	<4	<0.4	8	11	11	<0.1	4	24	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA119	0 - 0.1 m	20/01/2023	Fill	4	<0.4	11	9	13	<0.1	5	19	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP120	0 - 0.1 m	13/01/23	Fill	5	<0.4	12	15	16	<0.1	9	26	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP121	0 - 0.1 m	13/01/23	Fill	8	<0.4	16	14	26	<0.1	9	20	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP122	0 - 0.1 m	13/01/23	Fill	5	<0.4	14	11	20	<0.1	7	11	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP122	0.4 - 0.5 m	13/01/23	Natural	<4	<0.4	7	8	6	<0.1	3	10	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP123	0 - 0.1 m	13/01/23	Fill	<4	<0.4	10	10	17	<0.1	6	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP124	0 - 0.1 m	16/01/2023	Fill	4	<0.4	10	9	17	<0.1	5	8	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD1/20230116	0 - 0.1 m	16/01/23	Fill	4	<0.4	9	9	17	<0.1	6	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP125	0 - 0.1 m	16/01/23	Fill	6	<0.4	13	11	24	<0.1	7	7	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD2/20230116	0 - 0.1 m	16 Jan 2023	Fill	9.7	<0.4	17	13	32	<0.1	8.3	11	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP126	0 - 0.1 m	16/01/23	Fill	6	<0.4	17	14	23	<0.1	10	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP126	0.4 - 0.5 m	16/01/23	Natural	<4	<0.4	6	8	4	<0.1	1	3	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP127	0 - 0.1 m	16/01/23	Fill	<4	<0.4	12	13	14	<0.1	6	9	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP128	0 - 0.1 m	16/01/23	Fill	7	<0.4	16	13	28	<0.1	9	12	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD4/20230116	0 - 0.1 m	16 Jan 2023	Fill	11	<0.4	24	18	33	<0.1	12	18	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5

				Metals								TRH						BTEX				PAH			
Sample ID	Depth	Sample Date	Soil type	Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH C6-C10 less BTEX	TRH >C10-C16 less Naphthalene	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAH
				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
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP129	0 - 0.1 m	16/01/23	Fill	8	<0.4	18	11	25	<0.1	10	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36HA130	0 - 0.1 m	20/01/2023	Fill	6	<0.4	14	13	19	<0.1	11	32	<25	<50	<25	<50	120	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP131	0 - 0.1 m	16/01/23	Fill	6	<0.4	13	16	22	<0.1	16	39	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP132	0 - 0.1 m	16/01/23	Fill	5	<0.4	15	17	17	<0.1	10	32	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP132	0.3 - 0.4 m	16/01/23	Natural	5	<0.4	11	24	12	<0.1	5	30	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC36TP133	0 - 0.1 m	16/01/23	Fill	5	<0.4	16	17	15	<0.1	31	86	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP134	0 - 0.1 m	16/01/23	Fill	7	<0.4	17	14	19	<0.1	10	25	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36TP135	0 - 0.1 m	16/01/23	Fill	7	<0.4	20	10	21	<0.1	6	15	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC36SED1	0 - 0.1 m	20/01/2023	Sediment	5	<0.4	7	15	15	<0.1	6	58	<25	<50	<25	<50	160	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC37TP01	0 - 0.05 m	30/11/2022	Fill	7	<0.4	24	33	74	<0.1	15	60	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC37TP01	0.1 - 0.2 m	30/11/2022	Natural	6	<0.4	17	19	12	<0.1	5	16	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC37TP02	0 - 0.05 m	30/11/2022	Fill	8	<0.4	24	20	27	<0.1	4	16	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38SP1A		17/01/2023	Fill	<4	<0.4	10	<1	7	<0.1	1	4	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD3/20230117		17/01/2023	Fill	<4	<0.4	7	<1	5	<0.1	<1	2	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.08	<0.5	0.2
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38SP2A		17/01/2023	Fill	<4	<0.4	7	4	10	<0.1	4	23	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.4	<0.5	4
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD4/20230117		17 Jan 2023	Fill	<2	<0.4	8.1	<5	8	<0.1	<5	20	<20	<50	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38SP2B		17/01/2023	Fill	<4	<0.4	7	3	9	<0.1	4	20	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	0.1
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38SS1	0 - 0.1 m	17/01/2023	Fill	<4	<0.4	12	59	47	<0.1	6	77	<25	<50	<25	<50	230	110	<0.2	<0.5	<1	<1	<0.1	1.7	2.5	18
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38SS2	0 - 0.1 m	17/01/2023	Fill	<4	0.8	11	33	29	<0.1	14	51	<25	<50	<25	<50	150	130	<0.2	<0.5	<1	<1	<0.1	0.2	<0.5	1.8
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP01	0 - 0.1 m	30/11/2022	Fill	<4	<0.4	10	9	14	<0.1	5	23	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP01A	0 - 0.1 m	30/11/2022	Fill	<4	<0.4	12	12	11	<0.1	5	35	<25	<50	<25	<50	170	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP02	0 - 0.1 m	30/11/2022	Fill	<4	<0.4	18	25	29	<0.1	17	71	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.81	1	6.9
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD4 / 20221130	0 - 0.1 m	30 Nov 2022	Fill	3.7	<0.4	15	29	38	<0.1	15	110	<20	<50	<20	<50	100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	2.2
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP03	0 - 0.1 m	30/11/2022	Fill	5	<0.4	16	24	17	<0.1	23	32	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP03	0.5 - 0.6 m	30/11/2022	Fill	4	<0.4	13	21	13	<0.1	7	20	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC38TP04	0 - 0.1 m	30/11/2022	Fill	4	<0.4	18	15	12	<0.1	5	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC38TP04	0.3 - 0.4 m	30/11/2022	Natural	<4	<0.4	9	16	7	<0.1	3	14	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC38TP05	0 - 0.05 m	30/11/2022	Fill	<4	<0.4	9	3	13	<0.1	4	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP06	0 - 0.1 m	30/11/2022	Fill	10	<0.4	19	11	13	<0.1	8	26	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.2	<0.5	2.2
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD3/20221130	0 - 0.1 m	30/11/2022	Fill	9	<0.4	18	13	14	<0.1	9	28	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.06	<0.5	0.56
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP07	0 - 0.1 m	30/11/2022	Fill	12	<0.4	22	11	16	<0.1	10	44	<25	<50	<25	<50	100	<100	<0.2	<0.5	<1	<1	0.3	2	2.8	29
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP08	0 - 0.1 m	30/11/2022	Fill	9	<0.4	22	13	17	<0.1	8	46	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP09	0 - 0.1 m	30/11/2022	Fill	9	<0.4	21	9	14	<0.1	7	27	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD2 / 20221130	0 - 0.1 m	30 Nov 2022	Fill	15	<0.4	24	13	20	<0.1	9.6	40	<20	<50	<20	<50	<100	160	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP09	0.2 - 0.3 m	30/11/2022	Natural	8	<0.4	17	8	9	<0.1	3	14	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP10	0 - 0.1 m	30/11/2022	Fill	8	<0.4	20	12	15	<0.1	6	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05

				Metals								TRH						BTEX				PAH			
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH C6-C10 less BTEX	TRH >C10-C16 less Naphthalene	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAH
Sample ID	Depth	Sample Date	Soil type	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
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP11	0 - 0.1 m	30/11/2022	Fill	11	<0.4	27	13	16	<0.1	4	17	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	310 180	NL -	- 1300	- 5600	4 65	NL 105	NL 125	NL 45	NL 170	- 0.7	3 -	300 -
AEC38TP12	0 - 0.1 m	30/11/2022	Fill	9	<0.4	25	18	17	<0.1	6	24	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
BD1/20221130	0 - 0.1 m	30/11/2022	Fill	12	<0.4	27	18	19	<0.1	7	48	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -
AEC38TP13	0 - 0.1 m	30/11/2022	Fill	10	<0.4	27	17	20	<0.1	6	21	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05
				300 100	90 -	300 190	17000 210	600 1100	80 -	1200 180	30000 490	- -	- 120	260 180	NL -	- 300	- 2800	3 50	NL 85	NL 70	230 105	NL 170	- 0.7	3 -	300 -

Lab result

HIL/HSL value EIL/ESL value

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

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

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

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

Notes: QA/QC replicate of sample listed directly below the primary sample

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Table I1 (continued): Summary of Laboratory Results for Soil (continued) – Phenols, OCP, OPP, PCB, Asbestos, PFAS, phthalates

				Phenols					OCP										OPP		PCB	Asbestos	Asbestos			PFAS				Phthalates
				Total Phenols	Phenol	Pentachlorophenol	Cresols	Other phenols	DDT+DDE+DDD [c]	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Other OCP	Chlorpyriphos	Other OPP	Total PCB	Trace Analysis	ACM >7mm	FA and AF Estimation	FA and AF Estimation	PFOS	PFOA	PFOS and PFHxS	Total Positive PFAS	All phthalates
Sample ID	Depth	Sample Date	Soil type	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	-	-	g	%(w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
AEC36TP01	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD1/20221213	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP02	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD2/20221213	0 - 0.1 m	13/12/2022	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP03	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP03	0.3 - 0.4 m	13/12/2022	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP04	0 - 0.05 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD9/20221213	0 - 0.05 m	13 Dec 2022	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP05	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD10/20221213	0 - 0.1 m	13 Dec 2022	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP06	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP07	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP08	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP08	0.4 - 0.5 m	13/12/2022	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP09	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP10	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP11	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP12	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP13	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP14	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP15	0 - 0.1 m	13/12/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP15	0.3 - 0.4 m	13/12/2022	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP16	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD1/20221214	0 - 0.1 m	14/12/2022	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP17	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD2/20221214	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP18	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP19	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD3/20221214	0 - 0.1 m	14/12/22	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP20	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD4/20221214	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP20	0.2 - 0.3 m	14/12/22	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP21	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP22	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD5/20221214	0 - 0.1 m	14/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP23	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD6/20221214	0 - 0.1 m	14/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP24	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-

				Phenols					OCP										OPP		PCB	Asbestos	Asbestos			PFAS				Phthalates
				Total Phenols	Phenol	Pentachlorophenol	Cresols	Other phenols	DDT+DDE+DDD [C]	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Other OCP	Chlorpyriphos	Other OPP	Total PCB	Trace Analysis	ACM >7mm	FA and AF Estimation	FA and AF Estimation	PFOS	PFOA	PFOS and PFHxS	Total Positive PFAS	All phthalates
Sample ID	Depth	Sample Date	Soil type	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	-	-	g	%(w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP25	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP25	0.2 - 0.3 m	14/12/22	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP26	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP27	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP28	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP29	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP30	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP30	0.2 - 0.3 m	14/12/22	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP31	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP32	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP33	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP34	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP34	0.3 - 0.4 m	14/12/22	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP35	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP36	0 - 0.1 m	14/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP37	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD1/20221219	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP37	0.3 - 0.4 m	19/12/22	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP38	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP39	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP40	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.05	-	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD3/20221219	0 - 0.1 m	19 Dec 2022	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP41	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD4/20221219	0 - 0.1 m	19/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP42	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP43	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP43	0.3 - 0.4 m	19/12/22	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP44	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD6/20221219	0 - 0.1 m	19/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.05	-	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP45	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP46	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP47	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP48	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP49	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP50	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD10/20221219	0 - 0.1 m	19/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP50	0.4 - 0.5 m	19/12/22	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP51	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP52	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP53	0 - 0.1 m	19/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-

				Phenols					OCP										OPP		PCB	Asbestos	Asbestos			PFAS				Phthalates
				Total Phenols	Phenol	Pentachlorophenol	Cresols	Other phenols	DDT+DDE+DDD [c]	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Other OCP	Chlorpyriphos	Other OPP	Total PCB	Trace Analysis	ACM >7mm	FA and AF Estimation	FA and AF Estimation	PFOS	PFOA	PFOS and PFHxS	Total Positive PFAS	All phthalates
Sample ID	Depth	Sample Date	Soil type	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	-	-	g	%(w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP54	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP54	0.4 - 0.5 m	20/12/22	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP55	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD2/20221220	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP56	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP57	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP58	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP59	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP60	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP60 - [TRIPLICATE]	0 - 0.1 m	20/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP61	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP61	0.3 - 0.4 m	20/12/22	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP62	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP63	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD7/20221220	0 - 0.1 m	20 Dec 2022	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP64	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP65	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP66	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP67	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD10/20221220	0 - 0.1 m	20/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP68	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP68	0.4 - 0.5 m	20/12/22	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP69	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP70	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP71	0 - 0.1 m	20/12/22	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	AD	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP71-PACM	0 - 0.1 m	12/01/23	Material	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	AD	-	-	-	-	-	-	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP72	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD1/20230112	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP73	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD2/20230112	0 - 0.1 m	12/01/23	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP74	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP75	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD3/20230112	0 - 0.1 m	12 Jan 2023	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP75	0.3 - 0.4 m	12/01/23	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA76	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD1/20230118	0 - 0.1 m	18 Jan 2023	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA77	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD2/20230118	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA78	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	AD	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA78	0.3 - 0.4 m	18/01/2023	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-

				Phenols					OCP										OPP		PCB	Asbestos	Asbestos			PFAS				Phthalates
				Total Phenols	Phenol	Pentachlorophenol	Cresols	Other phenols	DDT+DDE+DDD [C]	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Other OCP	Chlorpyriphos	Other OPP	Total PCB	Trace Analysis	ACM >7mm	FA and AF Estimation	FA and AF Estimation	PFOS	PFOA	PFOS and PFHxS	Total Positive PFAS	All phthalates
Sample ID	Depth	Sample Date	Soil type	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	-	-	g	%(w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA79	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD3/20230118	0 - 0.1 m	18/01/2023	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
PACM79	0 m	18/01/2023	Material	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	AD	-	-	-	-	-	-	-	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA80	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD4/20230118	0 - 0.1 m	18/01/2023	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA81	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA82	0 - 0.1 m	20/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD1/20230120	0 - 0.1 m	20/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA83	0 - 0.1 m	20/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD2/20230120	0 - 0.1 m	20 Jan 2023	Fill	-	<0.5	<1	1.1	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA84	0 - 0.1 m	20/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA84	0.3 - 0.4 m	20/01/2023	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA85	0 - 0.1 m	20/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA86	0 - 0.1 m	20/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA87	0 - 0.1 m	20/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP88	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP88	0.4 - 0.5 m	13/01/23	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP89	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP90	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP91	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP92	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP93	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD4/20230112	0 - 0.1 m	12 Jan 2023	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP94	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP94	0.4 - 0.5 m	12/01/23	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP95	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP96	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP97	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP98	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP99	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP100	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP101	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP102	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP103	0 - 0.1 m	12/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP103	0.4 - 0.5 m	12/01/23	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP104	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD1/20230113	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP105	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD2/20230113	0 - 0.1 m	13/01/23	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP106	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -

				Phenols					OCP										OPP		PCB	Asbestos	Asbestos			PFAS				Phthalates
				Total Phenols	Phenol	Pentachlorophenol	Cresols	Other phenols	DDT+DDE+DDD [c]	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Other OCP	Chlorpyriphos	Other OPP	Total PCB	Trace Analysis	ACM >7mm	FA and AF Estimation	FA and AF Estimation	PFOS	PFOA	PFOS and PFHxS	Total Positive PFAS	All phthalates
Sample ID	Depth	Sample Date	Soil type	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	-	-	g	%(w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
AEC36TP107	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD3/20230113	0 - 0.1 m	13 Jan 2023	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP108	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD4/20230113	0 - 0.1 m	13 Jan 2023	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP109	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP109	0.4 - 0.5 m	13/01/23	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP110	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP111	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA112	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA113	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA114	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA115	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA115	0.3 - 0.4 m	18/01/2023	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA116	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA117	0 - 0.1 m	18/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA118	0 - 0.1 m	20/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	<PQL
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA119	0 - 0.1 m	20/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	<PQL
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP120	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP121	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP122	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP122	0.4 - 0.5 m	13/01/23	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP123	0 - 0.1 m	13/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP124	0 - 0.1 m	16/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD1/20230116	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP125	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD2/20230116	0 - 0.1 m	16 Jan 2023	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP126	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP126	0.4 - 0.5 m	16/01/23	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP127	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD3/20230116	0 - 0.1 m	16/01/23	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP128	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD4/20230116	0 - 0.1 m	16 Jan 2023	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP129	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36HA130	0 - 0.1 m	20/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP131	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP132	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP132	0.3 - 0.4 m	16/01/23	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP133	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP134	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC36TP135	0 - 0.1 m	16/01/23	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -

				Phenols					OCP										OPP		PCB	Asbestos	Asbestos			PFAS				Phthalates
				Total Phenols	Phenol	Pentachlorophenol	Cresols	Other phenols	DDT+DDE+DDD [C]	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Other OCP	Chlorpyriphos	Other OPP	Total PCB	Trace Analysis	ACM >7mm	FA and AF Estimation	FA and AF Estimation	PFOS	PFOA	PFOS and PFHxS	Total Positive PFAS	All phthalates
Sample ID	Depth	Sample Date	Soil type	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	-	-	g	%(w/w)	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
AEC36SED1	0 - 0.1 m	20/01/2023	Sediment	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC37TP01	0 - 0.05 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC37TP01	0.1 - 0.2 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC37TP02	0 - 0.05 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38SP1A		17/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD3/20230117		17/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38SP2A		17/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD4/20230117		17 Jan 2023	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38SP2B		17/01/2023	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38SS1	0 - 0.1 m	17/01/2023	Fill	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38SS2	0 - 0.1 m	17/01/2023	Fill	<5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP01	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP01A	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP02	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.05	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD4 / 20221130	0 - 0.1 m	30 Nov 2022	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP03	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP03	0.5 - 0.6 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP04	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP04	0.3 - 0.4 m	30/11/2022	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP05	0 - 0.05 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP06	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD3/20221130	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP07	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP08	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP09	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD2 / 20221130	0 - 0.1 m	30 Nov 2022	Fill	-	<0.5	<1	<0.5	<PQL	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.05	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP09	0.2 - 0.3 m	30/11/2022	Natural	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP10	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP11	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP12	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
BD1/20221130	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	-	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -
AEC38TP13	0 - 0.1 m	30/11/2022	Fill	<5	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	-	-	-	<0.001	<0.005	<0.005	<0.005	<0.005	-
				120 -	40000 -	120 -	4000 -	- -	400 180	- 180	10 -	70 -	20 -	340 -	10 -	10 -	400 -	- -	250 -	- -	1 -					- 0.01	10 10	1	- -	- -

Lab result

HIL/HSL value EIL/ESL value

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

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

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

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

Notes: QA/QC replicate of sample listed directly below the primary sample

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Table I2: Summary of Results of Groundwater and Surface Water Analysis (All results in µg/L)

| Sample Location / Identification (Borehole or Replicate) | Sample Date | Metals (dissolved) | | | | | | | | Metals (total) | | | | | | | | Polycylic Aromatic Hydrocarbons | | | | | | Total Recoverable Hydrocarbons, BTEX and Volatile Organic Compounds | | | | | | | |

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Table I2 (continued): Summary of Results of Groundwater and Surface Water Analysis (All results in µg/L)

Sample Location / Identification (Borehole or Replicate)	Sample Date	Organochlorine Pesticides												Organophosphorus Pesticides																						Polychlorinated Biphenyls			Phenols											PFAS									Phthalates				
		Aldrin	Dieldrin	gamma-Chlordane	alpha-Chlordane	Total Chlordanes	pp-DDT	Endosulfan I	Endosulfan II	Endrin	Heptachlor	Methoxychlor	Lindane	Other OCP	Azinphos-methyl	Bromophos-ethyl	Chlorpyrifos	Chlorfenvinphos	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethion	Ethoprophos (Ethoprop)	Fenitrothion	Fensulfothion	Fenthion	Malathion	Mevinphos (Phosdrin)	Monocrotophos	Omethoate	Parathion	Methyl Parathion	Pyrazophos	Tetrbufos	Tetrachlorvinphos	Pirimiphos-methyl	Other OPP	Aroclor 1242	Aroclor 1254	Other PCB	Phenol	2,4,6-Trichlorophenol	2,4-Dinitrophenol	4-Nitrophenol	2,3,4,6-Tetrachlorophenol	Total Tetrachlorophenols	Pentachlorophenol	2-Chlorophenol	2,4-Dimethylphenol	2,4-Dichlorophenol	2,6-Dichlorophenol	2-Methylphenol (0-Cresol)	Other Phenols	Perfluorohexanesulfonic acid - PFHxS	Perfluorooctanesulfonic acid PFOS	Total Positive PFHxS & PFOS	Perfluorooctanoic acid PFOA	6:2 FTS	Perfluorohexanoic acid (PFHxA)	Perfluoroheptanoic acid (PFHpA)	Perfluorobutanoic acid (PFBA)	Other PFAS	Diethylphthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di(2-ethylhexyl)phthalate	Other Phthalates
AEC36BH01	1/02/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	<1	<PQL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.02	<PQL	-	-	-	-	-
BD1/20230201	1/02/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	<1	<PQL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.02	<PQL	-	-	-	-	-
AEC36BH02	1/02/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<20	<20	<400	<400	<20	-	<100	<20	<20	<20	<20	<20	<PQL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.004	<PQL	-	-	-	-	-
AEC36BH03	1/02/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	<1	<PQL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.01	<PQL	-	-	-	-	-
AEC36BH04	1/02/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	1	<PQL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.01	<PQL	-	-	-	-	-
AEC36BH05	1/02/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	<1	<PQL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.01	<PQL	-	-	-	-	-
SMGW-BH-B313	1/02/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	<1	<PQL	**0.0003**	**0.0007**	**0.001**	**0.0007**	<0.0004	<0.0004	<0.0004	<0.02	<PQL	-	-	-	-	-
BD3/20230201	1/02/2023	<0.2	<0.2	-	-	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<PQL	<2	-	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<20	<PQL	<1	<1	<PQL	<3	<10	<30	<30	-	<30	<10	<3	<3	<3	<3	<3	<PQL	<0.001	<0.0005	< 0.001	< 0.01	< 0.005	< 0.01	< 0.01	<0.05	<PQL	<5	<5	<5	<5	<PQL
SMGW-BH-B317	1/02/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	<1	<PQL	**0.0002**	**0.0006**	**0.0009**	**0.001**	<0.0004	**0.0009**	**0.0007**	<0.02	<PQL	-	-	-	-	-
SMGW-BH-B319	1/02/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	<1	<PQL	<0.0002	**0.001**	**0.001**	**0.0007**	<0.0004	**0.0006**	<0.0004	<0.02	<PQL	-	-	-	-	-
AEC38BH01	24/01/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<5	<1	<20	<100	<1	-	<5	<1	<1	<1	<1	<1	<PQL	<0.0002	<0.0002	<0.0002	<0.0002	**0.0004**	<0.0004	<0.0004	<0.002	<PQL	-	-	-	-	-
BD1/20230124	24/01/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<5	<1	<20	<100	<1	-	<5	<1	<1	<1	<1	<1	<PQL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.0004	<0.002	<PQL	-	-	-	-	-
AEC36SW1	25/01/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<5	<1	<20	<100	<1	-	<5	<1	<1	<1	<1	<1	<PQL	**0.002**	**0.0081**	**0.01**	**0.0064**	<0.0004	<0.002	<0.0004	<0.02	<PQL	-	-	-	-	-
BD1/20230125	25/01/2023	<0.01	<0.01	<0.01	<0.01	<PQL	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	-	<0.01	<0.2	<0.15	-	<0.2	-	<0.2	-	-	<0.05	-	-	-	<0.01	<0.2	-	-	-	-	<PQL	<0.1	<0.1	<PQL	<5	<1	<20	<100	<1	-	<5	<1	<1	<1	<1	<1	<PQL	**0.002**	**0.0088**	**0.011**	**0.0065**	<0.0004	<0.002	<0.0004	<0.02	<PQL	-	-	-	-	-
BD2/30230125	25/01/2023	<0.2	<0.2	-	-	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<PQL	<2	-	<2	<20	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<20	<PQL	<1	<1	<PQL	<3	<10	<30	<30	-	<30	<10	<3	<3	<3	<3	<3	<PQL	**0.002**	**0.008**	**0.01**	**0.005**	<0.005	**0.003**	<0.001	**0.007**	<PQL	-	-	-	-	-
Assessment Criteria																																																																						
Freshwater DGV		0.001	0.01	0.03			0.006	0.03		0.01	0.01	0.005	0.2	-	0.01	-	0.01	-	0.01	-	0.15	-	-	-	0.2	-	-	0.05	-	-	-	0.004	-	-	-	-	-	-	0.3	0.01	-	320	3	45	58	10	0.2	3.6	340	2	120	34	-	-	-	-	-	-	-	-	-	-	-	1000	3700	10	1	-
Guidelines for Recreational Water	**Health**	3			20		90	200		-	3	3000	100	-	300	100	100	20	40	50	70	40	40	10	70	100	70	700	50	20	10	200	7	200	9	1000	900	-	-	-	-	-	200	-	-	-	-	100	3000	-	2000	-	-	-	-	-	-	-	-	-	-	-	-	100	-
	Aesthetic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	0.1	-	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HSL D for Vapour Intrusion, Clay (depth 2 m to <4 m)		-	-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freshwater Water Quality Guideline - NEMP 2.0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recreational Water Quality Guideline - NEMP 2.0		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

PQL	Practical Quantitation Limit
-	not defined/ not analysed/ not applicable
BD1/20230124	Blind replicate from AEC38BH01
BD1/20230125	Blind replicate from AEC36SW1
BD1/20230201	Blind replicate from AEC36BH01
BD3/20230201	Blind replicate from SMGW-BH-B313
BD2/30230125	Blind replicate from AEC36SW1
	Exceedance of DGV or freshwater quality guideline

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Table I3: Summary of Laboratory Results for Waste Classification – Metals, TRH, BTEX, PAH, Phenol, OCP, OPP, PCB, Asbestos, PFAS

				Metals								TRH		BTEX				PAH			Phenol						OCP		OPP		PCB	Asbestos	PFAS		pH
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Benzo(a)pyrene	Benzo(a)pyrene inTCLP	Total PAHs	2-Methylphenol (o-Cresol)	Cresol (total)	Total Phenols	2,4,5-trichlorophenol	2,4,6-trichlorophenol	Phenol	Total Endosulfan	Total Analysed OCP	Chlorpyriphos	Total Analysed OPP	Total PCB	Total Asbestos	PFOA	PFOS+PFHxS	pH
Sample ID	Depth	Sample Date	Soil type	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/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	µg/kg	µg/kg	pH units
AEC36TP01	0 - 0.1 m	13/12/2022	Fill	<4	<0.4	12	5	9	<0.1	4	5	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD1/20221213	0 - 0.1 m	13/12/2022	Fill	<4	<0.4	11	6	12	<0.1	5	5	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP02	0 - 0.1 m	13/12/2022	Fill	<4	<0.4	12	6	16	<0.1	4	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	7.2
BD2/20221213	0 - 0.1 m	13/12/2022	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36TP03	0 - 0.1 m	13/12/2022	Fill	5	<0.4	17	8	17	<0.1	4	42	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP03	0.3 - 0.4 m	13/12/2022	Natural	<4	<0.4	14	15	10	<0.1	5	14	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP04	0 - 0.05 m	13/12/2022	Fill	7	<0.4	40	5	18	<0.1	6	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD9/20221213	0 - 0.05 m	13 Dec 2022	Fill	15	<0.4	71	6.2	24	<0.1	9	20	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP05	0 - 0.1 m	13/12/2022	Fill	7	<0.4	34	5	22	<0.1	6	17	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD10/20221213	0 - 0.1 m	13 Dec 2022	Fill	15	<0.4	53	6.9	30	<0.1	6.4	16	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP06	0 - 0.1 m	13/12/2022	Fill	7	<0.4	33	7	22	<0.1	6	14	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP07	0 - 0.1 m	13/12/2022	Fill	8	<0.4	36	5	20	<0.1	5	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP08	0 - 0.1 m	13/12/2022	Fill	9	<0.4	45	6	22	<0.1	5	13	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP08	0.4 - 0.5 m	13/12/2022	Natural	7	<0.4	34	8	16	<0.1	4	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP09	0 - 0.1 m	13/12/2022	Fill	9	<0.4	40	3	15	<0.1	3	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP10	0 - 0.1 m	13/12/2022	Fill	8	<0.4	31	5	17	<0.1	3	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP11	0 - 0.1 m	13/12/2022	Fill	6	<0.4	19	11	17	<0.1	4	19	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP12	0 - 0.1 m	13/12/2022	Fill	8	<0.4	28	8	18	<0.1	4	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP13	0 - 0.1 m	13/12/2022	Fill	6	<0.4	21	10	17	<0.1	4	17	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP14	0 - 0.1 m	13/12/2022	Fill	7	<0.4	17	11	17	<0.1	6	20	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP14	0.3-0.4 m	13/12/2022	Natural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.9
AEC36TP15	0 - 0.1 m	13/12/2022	Fill	7	<0.4	24	13	20	<0.1	7	20	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	6.3
AEC36TP15	0.3 - 0.4 m	13/12/2022	Natural	7	<0.4	24	13	15	<0.1	4	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP16	0 - 0.1 m	14/12/22	Fill	9	<0.4	22	15	23	<0.1	8	25	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD1/20221214	0 - 0.1 m	14/12/2022	Fill	14	<0.4	33	20	28	<0.1	9	30	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP17	0 - 0.1 m	14/12/22	Fill	8	<0.4	29	16	26	<0.1	10	25	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD2/20221214	0 - 0.1 m	14/12/22	Fill	7	<0.4	24	15	22	<0.1	8	22	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP18	0 - 0.1 m	14/12/22	Fill	6	<0.4	19	14	19	<0.1	8	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP19	0 - 0.1 m	14/12/22	Fill	6	<0.4	20	16	20	<0.1	11	31	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD3/20221214	0 - 0.1 m	14/12/22	Fill	13	<0.4	32	25	31	<0.1	15	54	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP20	0 - 0.1 m	14/12/22	Fill	6	<0.4	20	15	21	<0.1	9	24	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD4/20221214	0 - 0.1 m	14/12/22	Fill	6	<0.4	19	15	19	<0.1	8	23	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP20	0.2 - 0.3 m	14/12/22	Natural	6	<0.4	16	14	11	<0.1	5	18	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP21	0 - 0.1 m	14/12/22	Fill	8	<0.4	23	17	21	<0.1	9	28	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP22	0 - 0.1 m	14/12/22	Fill	7	<0.4	21	12	21	<0.1	8	26	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD5/20221214	0 - 0.1 m	14/12/2022	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36TP23	0 - 0.1 m	14/12/22	Fill	8	<0.4	20	15	30	<0.1	7	25	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD6/20221214	0 - 0.1 m	14/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36TP24	0 - 0.1 m	14/12/22	Fill	5	<0.4	18	14	17	<0.1	8	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP25	0 - 0.1 m	14/12/22	Fill	7	<0.4	23	20	23	<0.1	10	32	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP25	0.2 - 0.3 m	14/12/22	Natural	7	<0.4	18	24	19	<0.1	5	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP26	0 - 0.1 m	14/12/22	Fill	5	<0.4	13	11	15	<0.1	6	16	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP27	0 - 0.1 m	14/12/22	Fill	6	<0.4	19	11	17	<0.1	4	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP28	0 - 0.1 m	14/12/22	Fill	5	<0.4	18	10	17	<0.1	5	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	6.1
AEC36TP29	0 - 0.1 m	14/12/22	Fill	7	<0.4	25	10	21	<0.1	7	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP30	0 - 0.1 m	14/12/22	Fill	7	<0.4	24	12	21	<0.1	6	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP30	0.2 - 0.3 m	14/12/22	Natural	10	<0.4	31	16	19	<0.1	6	17	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP31	0 - 0.1 m	14/12/22	Fill	6	<0.4	20	7	17	<0.1	3	13	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP32	0 - 0.1 m	14/12/22	Fill	4	<0.4	15	7	15	<0.1	3	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP33	0 - 0.1 m	14/12/22	Fill	9	<0.4	24	11	23	<0.1	8	20	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP34	0 - 0.1 m	14/12/22	Fill	10	<0.4	25	12	23	<0.1	7	17	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP34	0.3 - 0.4 m	14/12/22	Natural	5	<0.4	18	13	16	<0.1	8	19	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	6.1
AEC36TP35	0 - 0.1 m	14/12/22	Fill	9	<0.4	25	12	23	<0.1	7	13	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP36	0 - 0.1 m	14/12/22	Fill	7	<0.4	21	9	20	<0.1	5	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP37	0 - 0.1 m	19/12/22	Fill	<4	<0.4	10	8	13	<0.1	4	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	5.4
BD1/20221219	0 - 0.1 m	19/12/22	Fill	<4	<0.4	11	8	13	<0.1	5	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP37	0.3 - 0.4 m	19/12/22	Natural	<4	<0.4	11	13	9	<0.1	3	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP38	0 - 0.1 m	19/12/22	Fill	<4	<0.4	10	12	16	<0.1	6	41	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP39	0 - 0.1 m	19/12/22	Fill	10	<0.4	28	11	27	<0.1	6	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP40	0 - 0.1 m	19/12/22	Fill	7	<0.4	20	10	24	<0.1	5	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD3/20221219	0 - 0.1 m	19 Dec 2022	Fill	8.7	<0.4	23	11	20	<0.1	5.3	13	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP41	0 - 0.1 m	19/12/22	Fill	5	<0.4	17	11	21	<0.1	5	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD4/20221219	0 - 0.1 m	19/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36TP42	0 - 0.1 m	19/12/22	Fill	7	<0.4	18	14	22	<0.1	7	15	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	

				Metals								TRH		BTEX				PAH			Phenol						OCP		OPP		PCB	Asbestos	PFAS		pH
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Benzo(a)pyrene	Benzo(a)pyrene inTCLP	Total PAHs	2-Methylphenol (o-Cresol)	Cresol (total)	Total Phenols	2,4,5-trichlorophenol	2,4,6-trichlorophenol	Phenol	Total Endosulfan	Total Analysed OCP	Chlorpyriphos	Total Analysed OPP	Total PCB	Total Asbestos	PFOA	PFOS+PFHxS	pH
Sample ID	Depth	Sample Date	Soil type	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/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	µg/kg	µg/kg	pH units
AEC36TP43	0 - 0.1 m	19/12/22	Fill	7	<0.4	18	14	24	<0.1	8	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	6.9
AEC36TP43	0.3 - 0.4 m	19/12/22	Natural	<4	<0.4	10	18	10	<0.1	4	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP44	0 - 0.1 m	19/12/22	Fill	5	<0.4	15	10	18	<0.1	5	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD6/20221219	0 - 0.1 m	19/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36TP45	0 - 0.1 m	19/12/22	Fill	5	<0.4	13	14	18	<0.1	7	25	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP46	0 - 0.1 m	19/12/22	Fill	7	<0.4	17	12	23	<0.1	6	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP47	0 - 0.1 m	19/12/22	Fill	9	<0.4	35	6	16	<0.1	3	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP48	0 - 0.1 m	19/12/22	Fill	8	<0.4	24	9	17	<0.1	5	13	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP49	0 - 0.1 m	19/12/22	Fill	8	<0.4	25	13	21	<0.1	6	13	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP50	0 - 0.1 m	19/12/22	Fill	6	<0.4	16	12	20	<0.1	7	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD10/20221219	0 - 0.1 m	19/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36TP50	0.4 - 0.5 m	19/12/22	Natural	<4	<0.4	8	15	8	<0.1	4	16	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP51	0 - 0.1 m	19/12/22	Fill	7	<0.4	43	8	17	<0.1	5	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP52	0 - 0.1 m	19/12/22	Fill	9	<0.4	29	7	15	<0.1	3	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP53	0 - 0.1 m	19/12/22	Fill	11	<0.4	24	8	18	<0.1	4	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP54	0 - 0.1 m	20/12/22	Fill	7	<0.4	22	6	19	<0.1	3	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP54	0.4 - 0.5 m	20/12/22	Natural	9	<0.4	10	9	10	<0.1	<1	5	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	**4.7**
AEC36TP55	0 - 0.1 m	20/12/22	Fill	7	<0.4	21	9	15	<0.1	4	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD2/20221220	0 - 0.1 m	20/12/22	Fill	9	<0.4	25	10	17	<0.1	4	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP56	0 - 0.1 m	20/12/22	Fill	6	<0.4	37	6	15	<0.1	5	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP57	0 - 0.1 m	20/12/22	Fill	11	<0.4	33	6	18	<0.1	3	14	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP58	0 - 0.1 m	20/12/22	Fill	10	<0.4	23	7	16	<0.1	3	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP59	0 - 0.1 m	20/12/22	Fill	9	<0.4	26	16	18	<0.1	4	27	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP60	0 - 0.1 m	20/12/22	Fill	8	<0.4	40	3	16	<0.1	3	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP60 - [TRIPLICATE]	0 - 0.1 m	20/12/22	Fill	8	<0.4	41	3	15	<0.1	3	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
AEC36TP61	0 - 0.1 m	20/12/22	Fill	8	<0.4	27	5	15	<0.1	3	5	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP61	0.3 - 0.4 m	20/12/22	Natural	5	<0.4	16	11	9	<0.1	1	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP62	0 - 0.1 m	20/12/22	Fill	9	<0.4	25	8	16	<0.1	3	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP63	0 - 0.1 m	20/12/22	Fill	8	<0.4	28	12	16	<0.1	3	15	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD7/20221220	0 - 0.1 m	20 Dec 2022	Fill	15	<0.4	45	40	22	<0.1	7.9	47	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP64	0 - 0.1 m	20/12/22	Fill	8	<0.4	29	8	16	<0.1	4	19	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP65	0 - 0.1 m	20/12/22	Fill	9	<0.4	23	11	15	<0.1	3	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP66	0 - 0.1 m	20/12/22	Fill	8	<0.4	25	6	14	<0.1	3	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP67	0 - 0.1 m	20/12/22	Fill	11	<0.4	25	17	20	<0.1	3	20	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD10/20221220	0 - 0.1 m	20/12/22	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36TP68	0 - 0.1 m	20/12/22	Fill	8	<0.4	25	6	15	<0.1	3	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP68	0.4 - 0.5 m	20/12/22	Natural	5	<0.4	22	13	11	<0.1	2	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	**4.9**
AEC36TP69	0 - 0.1 m	20/12/22	Fill	8	<0.4	23	10	18	<0.1	4	20	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP70	0 - 0.1 m	20/12/22	Fill	7	<0.4	28	6	15	<0.1	3	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP71	0 - 0.1 m	20/12/22	Fill	7	<0.4	26	13	23	<0.1	4	38	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	AD	<5	<5	
AEC36TP71-PACM	0 - 0.1 m	12/01/23	Material	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	AD	-	-	
AEC36TP72	0 - 0.1 m	12/01/23	Fill	7	<0.4	25	7	17	<0.1	4	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD1/20230112	0 - 0.1 m	12/01/23	Fill	8	<0.4	27	9	19	<0.1	4	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP73	0 - 0.1 m	12/01/23	Fill	10	<0.4	33	6	18	<0.1	4	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD2/20230112	0 - 0.1 m	12/01/23	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36TP74	0 - 0.1 m	12/01/23	Fill	7	<0.4	26	5	16	<0.1	3	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP75	0 - 0.1 m	12/01/23	Fill	8	<0.4	29	10	20	<0.1	5	17	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD3/20230112	0 - 0.1 m	12 Jan 2023	Fill	**22**	<0.4	63	19	28	<0.1	13	28	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP75	0.3 - 0.4 m	12/01/23	Natural	4	<0.4	15	14	11	<0.1	2	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36HA76	0 - 0.1 m	18/01/2023	Fill	7	<0.4	21	9	16	<0.1	4	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD1/20230118	0 - 0.1 m	18 Jan 2023	Fill	20	<0.4	57	19	27	<0.1	10	22	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36HA77	0 - 0.1 m	18/01/2023	Fill	5	<0.4	14	8	11	<0.1	6	16	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD2/20230118	0 - 0.1 m	18/01/2023	Fill	7	<0.4	19	10	14	<0.1	8	18	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36HA78	0 - 0.1 m	18/01/2023	Fill	9	<0.4	30	9	18	<0.1	5	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	AD	<5	<5	
AEC36HA78	0.3 - 0.4 m	18/01/2023	Natural	7	<0.4	27	14	14	<0.1	4	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36HA79	0 - 0.1 m	18/01/2023	Fill	7	<0.4	20	8	31	<0.1	4	41	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD3/20230118	0 - 0.1 m	18/01/2023	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
PACM79	0 m	18/01/2023	Material	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	AD	-	-	
AEC36HA80	0 - 0.1 m	18/01/2023	Fill	7	<0.4	24	6	15	<0.1	4	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD4/20230118	0 - 0.1 m	18/01/2023	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36HA81	0 - 0.1 m	18/01/2023	Fill	9	<0.4	33	7	24	<0.1	5	19	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA82	0 - 0.1 m	20/01/2023	Fill	7	<0.4	30	5	16	<0.1	4	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD1/20230120	0 - 0.1 m	20/01/2023	Fill	8	<0.4	34	6	19	<0.1	5	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36HA83	0 - 0.1 m	20/01/2023	Fill	5	<0.4	21	6	18	<0.1	4	12	<25	140	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD2/20230120	0 - 0.1 m	20 Jan 2023	Fill	12	<0.4	42	10	25	<0.1	6.7	18	<20	194	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	1.1	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36HA84	0 - 0.1 m	20/01/2023	Fill	5	<0.4	20	5	15	<0.1	4	8	<25	100	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA84	0.3 - 0.4 m	20/01/2023	Natural	7	<0.4	32	10	15	<0.1	5	9	<25	110	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36HA85	0 - 0.1 m	20/01/2023	Fill	6	<0.4	25	5	17	<0.1	5	9	<25	130	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA86	0 - 0.1 m	20/01/2023	Fill	6	<0.4	24	7	16	<0.1	6	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	

				Metals								TRH		BTEX				PAH			Phenol						OCP		OPP		PCB	Asbestos	PFAS		pH
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Benzo(a)pyrene	Benzo(a)pyrene inTCLP	Total PAHs	2-Methylphenol (o-Cresol)	Cresol (total)	Total Phenols	2,4,5-trichlorophenol	2,4,6-trichlorophenol	Phenol	Total Endosulfan	Total Analysed OCP	Chlorpyriphos	Total Analysed OPP	Total PCB	Total Asbestos	PFOA	PFOS+PFHxS	pH
Sample ID	Depth	Sample Date	Soil type	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/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	µg/kg	µg/kg	pH units
AEC36HA87	0 - 0.1 m	20/01/2023	Fill	7	<0.4	28	6	18	<0.1	5	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP88	0 - 0.1 m	13/01/23	Fill	7	<0.4	30	14	28	<0.1	12	25	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP88	0.4 - 0.5 m	13/01/23	Natural	6	<0.4	18	20	13	<0.1	7	30	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP89	0 - 0.1 m	13/01/23	Fill	7	<0.4	24	15	25	<0.1	12	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP90	0 - 0.1 m	13/01/23	Fill	6	<0.4	26	16	26	<0.1	11	22	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	6.9
AEC36TP91	0 - 0.1 m	13/01/23	Fill	9	<0.4	31	19	25	<0.1	13	30	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP92	0 - 0.1 m	13/01/23	Fill	9	<0.4	30	15	28	<0.1	11	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP93	0 - 0.1 m	12/01/23	Fill	8	<0.4	32	10	20	<0.1	6	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD4/20230112	0 - 0.1 m	12 Jan 2023	Fill	**23**	<0.4	72	18	37	<0.1	13	23	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP94	0 - 0.1 m	12/01/23	Fill	10	<0.4	37	10	25	<0.1	7	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP94	0.4 - 0.5 m	12/01/23	Natural	7	<0.4	26	8	15	<0.1	4	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP95	0 - 0.1 m	12/01/23	Fill	6	<0.4	18	8	**64**	<0.1	5	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP96	0 - 0.1 m	12/01/23	Fill	6	<0.4	23	9	24	<0.1	7	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP97	0 - 0.1 m	12/01/23	Fill	6	<0.4	19	10	24	<0.1	5	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP98	0 - 0.1 m	12/01/23	Fill	7	<0.4	22	7	25	<0.1	5	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP99	0 - 0.1 m	12/01/23	Fill	6	<0.4	20	7	25	<0.1	5	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP100	0 - 0.1 m	12/01/23	Fill	8	<0.4	25	11	29	<0.1	8	14	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP101	0 - 0.1 m	12/01/23	Fill	5	<0.4	17	8	18	<0.1	6	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP102	0 - 0.1 m	12/01/23	Fill	4	<0.4	15	11	22	<0.1	7	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP103	0 - 0.1 m	12/01/23	Fill	5	<0.4	13	6	18	<0.1	4	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP103	0.4 - 0.5 m	12/01/23	Natural	5	<0.4	14	23	11	<0.1	8	16	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP104	0 - 0.1 m	13/01/23	Fill	<4	<0.4	11	5	11	<0.1	4	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD1/20230113	0 - 0.1 m	13/01/23	Fill	<4	<0.4	10	5	10	<0.1	4	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP105	0 - 0.1 m	13/01/23	Fill	<4	<0.4	11	6	12	<0.1	3	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD2/20230113	0 - 0.1 m	13/01/23	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36TP106	0 - 0.1 m	13/01/23	Fill	<4	<0.4	7	4	7	<0.1	2	5	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP107	0 - 0.1 m	13/01/23	Fill	<4	<0.4	9	5	13	<0.1	4	13	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD3/20230113	0 - 0.1 m	13 Jan 2023	Fill	3.4	<0.4	11	5.4	11	<0.1	<5	6.3	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP108	0 - 0.1 m	13/01/23	Fill	<4	<0.4	9	5	11	<0.1	3	4	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD4/20230113	0 - 0.1 m	13 Jan 2023	Fill	5.1	<0.4	14	6.3	13	<0.1	<5	<5	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP109	0 - 0.1 m	13/01/23	Fill	<4	<0.4	8	4	9	<0.1	3	5	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	6.7
AEC36TP109	0.4 - 0.5 m	13/01/23	Natural	4	<0.4	12	9	9	<0.1	4	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP110	0 - 0.1 m	13/01/23	Fill	<4	<0.4	13	7	11	<0.1	3	6	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP111	0 - 0.1 m	13/01/23	Fill	<4	<0.4	15	5	12	<0.1	3	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA112	0 - 0.1 m	18/01/2023	Fill	<4	<0.4	2	3	5	<0.1	2	10	<25	190	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA113	0 - 0.1 m	18/01/2023	Fill	<4	<0.4	8	3	10	<0.1	2	5	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA114	0 - 0.1 m	18/01/2023	Fill	<4	<0.4	7	4	12	<0.1	2	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA115	0 - 0.1 m	18/01/2023	Fill	5	<0.4	13	10	17	<0.1	6	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	6
AEC36HA115	0.3 - 0.4 m	18/01/2023	Natural	<4	<0.4	11	15	7	<0.1	9	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36HA116	0 - 0.1 m	18/01/2023	Fill	5	<0.4	14	14	22	<0.1	8	18	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA117	0 - 0.1 m	18/01/2023	Fill	5	<0.4	13	13	20	<0.1	7	18	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA118	0 - 0.1 m	20/01/2023	Fill	<4	<0.4	8	11	11	<0.1	4	24	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA119	0 - 0.1 m	20/01/2023	Fill	4	<0.4	11	9	13	<0.1	5	19	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP120	0 - 0.1 m	13/01/23	Fill	5	<0.4	12	15	16	<0.1	9	26	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	6.5
AEC36TP121	0 - 0.1 m	13/01/23	Fill	8	<0.4	16	14	26	<0.1	9	20	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP122	0 - 0.1 m	13/01/23	Fill	5	<0.4	14	11	20	<0.1	7	11	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP122	0.4 - 0.5 m	13/01/23	Natural	<4	<0.4	7	8	6	<0.1	3	10	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP123	0 - 0.1 m	13/01/23	Fill	<4	<0.4	10	10	17	<0.1	6	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP124	0 - 0.1 m	16/01/2023	Fill	4	<0.4	10	9	17	<0.1	5	8	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD1/20230116	0 - 0.1 m	16/01/23	Fill	4	<0.4	9	9	17	<0.1	6	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP125	0 - 0.1 m	16/01/23	Fill	6	<0.4	13	11	24	<0.1	7	7	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD2/20230116	0 - 0.1 m	16 Jan 2023	Fill	9.7	<0.4	17	13	32	<0.1	8.3	11	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP126	0 - 0.1 m	16/01/23	Fill	6	<0.4	17	14	23	<0.1	10	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP126	0.4 - 0.5 m	16/01/23	Natural	<4	<0.4	6	8	4	<0.1	1	3	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	6.6
AEC36TP127	0 - 0.1 m	16/01/23	Fill	<4	<0.4	12	13	14	<0.1	6	9	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD3/20230116	0 - 0.1 m	16/01/23	Fill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5	
AEC36TP128	0 - 0.1 m	16/01/23	Fill	7	<0.4	16	13	28	<0.1	9	12	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD4/20230116	0 - 0.1 m	16 Jan 2023	Fill	11	<0.4	24	18	33	<0.1	12	18	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC36TP129	0 - 0.1 m	16/01/23	Fill	8	<0.4	18	11	25	<0.1	10	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36HA130	0 - 0.1 m	20/01/2023	Fill	6	<0.4	14	13	19	<0.1	11	32	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP131	0 - 0.1 m	16/01/23	Fill	6	<0.4	13	16	22	<0.1	16	39	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP132	0 - 0.1 m	16/01/23	Fill	5	<0.4	15	17	17	<0.1	10	32	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	6.7
AEC36TP132	0.3 - 0.4 m	16/01/23	Natural	5	<0.4	11	24	12	<0.1	5	30	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC36TP133	0 - 0.1 m	16/01/23	Fill	5	<0.4	16	17	15	<0.1	31	86	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP134	0 - 0.1 m	16/01/23	Fill	7	<0.4	17	14	19	<0.1	10	25	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36TP135	0 - 0.1 m	16/01/23	Fill	7	<0.4	20	10	21	<0.1	6	15	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC36SED1	0 - 0.1 m	20/01/2023	Sediment	5	<0.4	7	15	15	<0.1	6	58	<25	140	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC37TP01	0 - 0.05 m	30/11/2022	Fill	7	<0.4	24	33	74	<0.1	15	60	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	7.4

				Metals								TRH		BTEX				PAH			Phenol						OCP		OPP		PCB	Asbestos	PFAS		pH
				Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C9	TRH C10-C36	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Benzo(a)pyrene	Benzo(a)pyrene inTCLP	Total PAHs	2-Methylphenol (o-Cresol)	Cresol (total)	Total Phenols	2,4,5-trichlorophenol	2,4,6-trichlorophenol	Phenol	Total Endosulfan	Total Analysed OCP	Chlorpyrifos	Total Analysed OPP	Total PCB	Total Asbestos	PFOA	PFOS+PFHxS	pH
Sample ID	Depth	Sample Date	Soil type	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/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	µg/kg	µg/kg	pH units
AEC37TP01	0.1 - 0.2 m	30/11/2022	Natural	6	<0.4	17	19	12	<0.1	5	16	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC37TP02	0 - 0.05 m	30/11/2022	Fill	8	<0.4	24	20	27	<0.1	4	16	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38SP1A		17/01/2023	Fill	<4	<0.4	10	<1	7	<0.1	1	4	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD3/20230117		17/01/2023	Fill	<4	<0.4	7	<1	5	<0.1	<1	2	<25	<50	<0.2	<0.5	<1	<1	0.08	-	0.2	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC38SP2A		17/01/2023	Fill	<4	<0.4	7	4	10	<0.1	4	23	<25	<50	<0.2	<0.5	<1	<1	0.4	-	4	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD4/20230117		17 Jan 2023	Fill	<2	<0.4	8.1	<5	8	<0.1	<5	20	<20	<50	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC38SP2B		17/01/2023	Fill	<4	<0.4	7	3	9	<0.1	4	20	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	0.1	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38SS1	0 - 0.1 m	17/01/2023	Fill	<4	<0.4	12	59	47	<0.1	6	77	<25	**270**	<0.2	<0.5	<1	<1	1.7	<0.001	18	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	
AEC38SS2	0 - 0.1 m	17/01/2023	Fill	<4	**0.8**	11	33	29	<0.1	14	51	<25	130	<0.2	<0.5	<1	<1	0.2	-	1.8	-	-	<5	-	-	-	-	-	-	-	-	-	-	-	
AEC38TP01	0 - 0.1 m	30/11/2022	Fill	<4	<0.4	10	9	14	<0.1	5	23	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38TP01A	0 - 0.1 m	30/11/2022	Fill	<4	<0.4	12	12	11	<0.1	5	35	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38TP02	0 - 0.1 m	30/11/2022	Fill	<4	<0.4	18	25	29	<0.1	17	71	<25	<50	<0.2	<0.5	<1	<1	0.81	<0.001	6.9	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	8.4
BD4 / 20221130	0 - 0.1 m	30 Nov 2022	Fill	3.7	<0.4	15	29	38	<0.1	15	110	<20	126	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC38TP03	0 - 0.1 m	30/11/2022	Fill	5	<0.4	16	24	17	<0.1	23	32	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38TP03	0.5 - 0.6 m	30/11/2022	Fill	4	<0.4	13	21	13	<0.1	7	20	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38TP04	0 - 0.1 m	30/11/2022	Fill	4	<0.4	18	15	12	<0.1	5	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38TP04	0.3 - 0.4 m	30/11/2022	Natural	<4	<0.4	9	16	7	<0.1	3	14	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC38TP05	0 - 0.05 m	30/11/2022	Fill	<4	<0.4	9	3	13	<0.1	4	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	6.4
AEC38TP06	0 - 0.1 m	30/11/2022	Fill	10	<0.4	19	11	13	<0.1	8	26	<25	<50	<0.2	<0.5	<1	<1	0.2	-	2.2	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD3/20221130	0 - 0.1 m	30/11/2022	Fill	9	<0.4	18	13	14	<0.1	9	28	<25	<50	<0.2	<0.5	<1	<1	0.06	-	0.56	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC38TP07	0 - 0.1 m	30/11/2022	Fill	12	<0.4	22	11	16	<0.1	10	44	<25	<50	<0.2	<0.5	<1	<1	2	<0.001	**29**	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38TP08	0 - 0.1 m	30/11/2022	Fill	9	<0.4	22	13	17	<0.1	8	46	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38TP09	0 - 0.1 m	30/11/2022	Fill	9	<0.4	21	9	14	<0.1	7	27	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	6.2
BD2 / 20221130	0 - 0.1 m	30 Nov 2022	Fill	15	<0.4	24	13	20	<0.1	9.6	40	<20	85	<0.1	<0.1	<0.1	<0.3	<0.5	-	<0.5	<0.2	<0.5	-	<1	<1	<0.5	<0.05	<0.05	<0.2	<0.2	<0.1	-	<5	<5	
AEC38TP09	0.2 - 0.3 m	30/11/2022	Natural	8	<0.4	17	8	9	<0.1	3	14	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC38TP10	0 - 0.1 m	30/11/2022	Fill	8	<0.4	20	12	15	<0.1	6	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38TP11	0 - 0.1 m	30/11/2022	Fill	11	<0.4	27	13	16	<0.1	4	17	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
AEC38TP12	0 - 0.1 m	30/11/2022	Fill	9	<0.4	25	18	17	<0.1	6	24	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
BD1/20221130	0 - 0.1 m	30/11/2022	Fill	12	<0.4	27	18	19	<0.1	7	48	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<5	<5	
AEC38TP13	0 - 0.1 m	30/11/2022	Fill	10	<0.4	27	17	20	<0.1	6	21	<25	<50	<0.2	<0.5	<1	<1	<0.05	-	<0.05	-	-	<5	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	<5	<5	
Waste Classification Criteria [f]																																		
CT1				100	20	100	NC	100	4	40	NC	650	10000	10	288	600	1000	0.8	N/A	200	4000	4000	288	8000	40	288	60	<50	4	4	<50	NC	N/A	N/A	-
SCC1				500	100	1900	NC	1500	50	1050	NC	650	10000	18	518	1080	1800	10	N/A	200	7200	200	518	14400	72	518	108	<50	7.5	7.5	<50	NC	18000	1800	-
TCLP1				N/A	N/A	N/A	NC	N/A	N/A	N/A	NC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NC	N/A	N/A	-
CT2				400	80	400	NC	400	16	160	NC	2600	40000	40	1152	2400	4000	3.2	N/A	800	16000	16000	1152	32000	160	1152	240	<50	16	16	<50	NC	N/A	N/A	-
SCC2				2000	400	7600	NC	6000	200	4200	NC	2600	40000	72	2073	4320	7200	23	N/A	800	28800	28800	2073	57600	288	2073	432	<50	30	30	<50	NC	72000	7200	-
TCLP2				N/A	N/A	N/A	NC	N/A	N/A	N/A	NC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NC	N/A	N/A	-
Excavated Natural Material (ENM) Order Assessment Criteria																																		
Maximum average concentration				20	0.5	75	100	50	0.5	30	150	NC	250	N/A	N/A	N/A	N/A	0.5	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5 to 9**
Absolute maximum concentration				40	1	150	200	100	1	60	300	NC	500	0.5	65	25	15	1	-	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4.5 to 10**

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

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

Notes:

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

Appendix J

Data Quality Assurance and Quality Control

Data Quality Assurance and Quality Control Report for DSI for AEC 36, 37 & 38 Surface & Civil Alignment Works (SCAW) Package for Sydney Metro - Western Sydney Airport (SMWSA)

1.0 Field and Laboratory Data Quality Assurance and Quality Control

The field and laboratory data quality assurance and quality control (QA / QC) procedures and results are summarised in the following Table 1. Reference should be made to the field work methodology and the laboratory results / certificates of analysis for further details. The relative percentage difference (RPD) results, along with the other field QC samples are included in the summary results Table QA1 to QA7.

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	PC
Intra-laboratory replicates	5% of primary samples, 10% for PFAS	C
	<30% RPD	PC
Inter-laboratory replicates	5% of primary samples; 10% for PFAS	C
	<30% RPD	PC
Trip Spikes	1 per sampling event; 60-140% recovery	C
Trip Blanks	1 per sampling event; <PQL	C
Rinsates	1 per water sampling event; <PQL	PC
Laboratory / Reagent Blanks	1 per batch; <PQL	C
Laboratory Duplicate	1 per lab batch; As laboratory certificate	PC
Matrix Spikes	1 per lab batch; 70-130% recovery (inorganics); 60-140% recovery (organics)	PC
Surrogate Spikes	All organics analysis; 70-130% recovery (inorganics); 60-140% recovery (organics)	PC
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; NR Not required

Laboratory comments from a review of the laboratory certificates are listed as follows:

- For sample 312096-34, the Extracted Internal Standards for 8:2FTS (161%) was outside the acceptance range (50-150%), however, the target analyte result was unaffected;
- The matrix spike recovery for 10:2-FTS for sample 313366-4 was outside the acceptance criteria (60-140%), however, an acceptable recovery was obtained for the laboratory control sample;
- For arsenic, chromium and zinc in sample 313366-28, the spike recovery results could not be obtained due to the inhomogeneous nature of the elements in the sample, however, an acceptable recovery was obtained for the laboratory control sample;
- The RPD result for chromium for sample 313725-70 was exceeded, therefore, a triplicate result was issued as laboratory sample number 313725-129;
- For sample 314512-88, the Extracted Internal Standards for PFUnDA (47%) was outside the acceptance range (50-150%) however the target analyte result was unaffected;
- For arsenic, lead, nickel and zinc in sample 314512-4, the spike recovery results could not be obtained due to the inhomogeneous nature of the elements in the sample, however, an acceptable recovery was obtained for the laboratory control sample;
- For arsenic, lead, nickel and zinc in sample 314763-32, the spike recovery results could not be obtained due to the inhomogeneous nature of the elements in the sample, however, an acceptable recovery was obtained for the laboratory control sample;
- For sample 314763-35, the Extracted Internal Standards for 8:2FTS (176%) was outside the acceptance range (50-150%) however the target analyte result was unaffected;
- For sample 314763-36, the Extracted Internal Standards for 8:2FTS (154%) and EtFOSAA (#) were outside the acceptance range (50-150%) however the target analyte results were unaffected;
- For sample 314763-47, the Extracted Internal Standards for 8:2 FTS (163%) was outside the acceptance range (50-150%) however the target analyte result was unaffected;
- For zinc in sample 314966-27, the spike recovery result could not be obtained due to the inhomogeneous nature of the elements in the sample, however, an acceptable recovery was obtained for the laboratory control sample;
- For sample 314966-A-10, the Extracted Internal Standards for 8:2FTS (151%) was outside the acceptance range (50-150%) however the target analyte result was unaffected;
- For sample 314966-A-18, the Extracted Internal Standards for PFUnDA (35%) and EtFOSAA (41%) were outside the acceptance range (50-150%) however the target analyte results were unaffected;
- For sample 314966-A-21, the Extracted Internal Standards for EtFOSAA (42%) were outside the acceptance range (50-150%) however the target analyte results were unaffected;
- For sample 314966-A-26, the Extracted Internal Standards for PFUnDA (38%) and EtFOSAA (39%) were outside the acceptance range (50-150%) however the target analyte results were unaffected;
- For sample S22-De0022416, the RPD for benz(a)anthracene and fluoranthene were outside the acceptable range (30%) however, further analysis attributed this to sample heterogeneity;
- For sample S22-De0022416, the RPD for naphthalene and phenanthrene were outside the acceptable range (30%), however, the RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria;

- For sample S22-De0018933, the RPD for 4.4'-DDD and dieldrin were outside the acceptable range (30%) however, the RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria;
- For sample R22-De0000946, the RPD for chromium, lead, nickel and zinc were outside the acceptable range (30%) however, the RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria;
- For sample S23-Ja0003547, the RPD for PAH were outside the acceptable range (30%) however the RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria;
- For sample B23-Ja0002662, the RPD for zinc was outside the acceptable range (30%) however, further analysis attributed this to sample heterogeneity;
- For sample S23-Ja0033020, the RPD for lead was outside the acceptable range (30%) however, the RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria;
- For samples 315291-9 and 315291-10, the practical quantitation limits for PFBA, PFPeA, PFHxA, PFNA due to matrix interference;
- For sample 315291-1, the Extracted Internal Standards for PFBA (22%) and PFTeDA (48%) were outside the acceptance range (50-150%) however the target analyte results were unaffected;
- For sample 315291-2, the Extracted Internal Standards for PFBA (23%) were outside the acceptance range (50-150%) however the target analyte results were unaffected;
- For sample 315291-9, the Extracted Internal Standards for PFBA (#), PFHxA (30%), PFPeA (21%) PFHpA (40%), were outside the acceptance range (50-150%) however the target analyte results were unaffected or the practical quantitation limit was raised;
- For sample 315291-10, the Extracted Internal Standards for PFBA (#), PFPeA (20%), PFHxA (30%), PFHpA (40%), were outside the acceptance range (50-150%) however the target analyte results were unaffected or the practical quantitation limit was raised;
- The practical quantitation limits for speciated phenols in laboratory certificate 315291 were raised due to low spike recoveries;
- For samples 315614-1, 315614-2, 315614-3, 315614-5, 315614-6, 315614-7, 315614-8, 315614-9 and 315614-10 the Extracted Internal Standards for PFBA were outside the acceptance range (50-150%) however the target analyte results were unaffected;
- For samples 315614-9 and 315614-10, the Extracted Internal Standards for PFPeA were outside the acceptance range (50-150%) however the target analyte results were unaffected;
- The practical quantitation limits for speciated phenols in sample 315614-3 were raised due to interferences from analytes (other than those being tested); and
- For sample N23-Ja0041013, the RPD for ammonia was outside the acceptable range (30%) however, the RPD passed the Eurofins Environment Testing's QC - Acceptance Criteria.

It is considered that the above listed comments do not affect the overall assessment.

For soil sample, laboratory analysis was undertaken within recommended holding times except for:

- pH in 4 samples (laboratory certificate 313725);
- TRH, BTEX, PAH, OCP, OPP and phenols for inter-laboratory blind replicate samples reported in laboratory certificate 952982-S); and
- TRH, BTEX, PAH, OCP, OPP, PCB and phenols for inter-laboratory blind replicate samples reported in laboratory certificate 955154-S).

The above-listed analysis of soil samples outside of the recommended holding times is not considered to affect the overall assessment of analytical results.

For water samples, analysis was undertaken within recommended holding times except for:

- Speciated phenols in the samples in laboratory certificate 315291; and
- TRH, VOC, PAH, PCB, OCP, OPP and phenols in laboratory certificate 959919-W.

The above-listed analysis of water samples was marginally outside of the recommended holding times, and this is not considered to affect the overall assessment of analytical results.

For soil, the RPD results for intra-laboratory and intra-laboratory analysis were within the acceptable range with the exception of metals (arsenic, chromium, nickel, copper, lead, nickel and zinc) in some samples, TRH >C_{34}-C_{40} in one pair of samples, and PAH in some pairs of samples. The exceedances are not, however, considered to be of concern given the low actual differences in the concentrations between the primary and replicate samples and the nature of sampled fill where some heterogeneity is expected.

For water samples, RPD results for intra-laboratory and intra-laboratory analysis were within the acceptable range except for zinc in two sample pairs, nickel in one sample pair, TRH >C_{16}-C_{34} in one sample pair, PFHxA in one sample pair and PFOS in one sample pair. The exceedances are not, however, considered to be of concern given the low actual differences in the concentrations.

Although replicate samples for sediment samples were not analysed, given that the tests undertaken are the same for soil samples, and the purpose of replicate analysis is to check for consistency of results for each laboratory method, the overall replicate analysis of 10% of primary soil and sediment samples is considered sufficient.

For groundwater and surface water sampling, the electronic interface probe, flow cell and probes (where used) were decontaminated between monitoring wells by rinsing in a diluted Liquinox solution and then rinsing in demineralised water. Rinsate samples was collected by running demineralised water over the decontaminated sampling equipment and directing the water into sampling bottles provided by the laboratory. Rinsate test results were all less than the practical quantitation limits. For soil and sediment sampling, to avoid the need for decontaminating sampling equipment, disposable nitrile gloves were changed between each sampling event and used for sample collection. Soil and sediment samples collected from the hand auger was carefully done so as to be representative of the target strata/material (e.g., natural soil samples were observed to be free of overlying fill).

Rinsate samples had concentrations of contaminants less than the PQL except for TRH >C_{10}-C_{16} in AECRINS01 and AECRINS02. According to the laboratory certificates (315291), the positive result in the rinsate samples is due to a single peak with no hydrocarbon profile that is consistent with the use of plastic containers. Therefore, the detected TRH in rinsate samples was sourced from the container used to store the demineralised water and not from cross-contamination. It was also noted on the laboratory certificates that rinsate samples AECRINS01, AECRINS02 and AECRINS03 were filtered prior to analysis.

In summary, the QC data is determined to be of sufficient quality to be considered acceptable for the assessment.

2.0 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 target locations sampled.
	Preparation of 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 above.
Comparability	Using appropriate techniques for sample recovery, storage and transportation, which were the same for the duration of the project.

Data Quality Indicator	Method(s) of Achievement
	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.

3.0 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.

4.0 References

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

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Table QA1: Relative Percentage Difference Results for Soil

			Metals								TRH				BTEX				PAH				Phenols	OCP												OPP		PCB	PFAS			
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs	Total / All Phenols	DDD	DDT+DDE+DDD [c]	DDE	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Other OCP	Chlorpyriphos	Other OPP	Total PCB	PFOS	PFOA	PFOS and PFHxS	Total positive PFAS
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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
BD1/20221213	0 - 0.1 m	13/12/2022	<4	<0.4	11	6	12	<0.1	5	5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36TP01	0 - 0.1 m	13/12/2022	<4	<0.4	12	5	9	<0.1	4	5	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	0	0	1	1	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	0%	0%	9%	18%	29%	0%	22%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD9/20221213	0 - 0.05 m	13 Dec 2022	15	<0.4	71	6.2	24	<0.1	9	20	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP04	0 - 0.05 m	13/12/2022	7	<0.4	40	5	18	<0.1	6	12	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	8	0	31	1.2	6	0	3	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**73%**	0%	**56%**	21%	29%	0%	**40%**	**50%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD10/20221213	0 - 0.1 m	13 Dec 2022	15	<0.4	53	6.9	30	<0.1	6.4	16	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP05	0 - 0.1 m	13/12/2022	7	<0.4	34	5	22	<0.1	6	17	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.5	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	8	0	19	1.9	8	0	0.4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**73%**	0%	**44%**	**32%**	**31%**	0%	6%	6%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD3/20221130	0 - 0.1 m	30/11/2022	9	<0.4	18	13	14	<0.1	9	28	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.06	<0.5	0.56	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC38TP06	0 - 0.1 m	30/11/2022	10	<0.4	19	11	13	<0.1	8	26	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.2	<0.5	2.2	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	1	0	1	2	1	0	1	2	0	0	0	0	0	0	0	0	0	0.14	0	1.64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	11%	0%	5%	17%	7%	0%	12%	7%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**108%**	0%	**119%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20221214	0 - 0.1 m	14/12/2022	14	<0.4	33	20	28	<0.1	9	30	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP16	0 - 0.1 m	14/12/22	9	<0.4	22	15	23	<0.1	8	25	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	5	0	11	5	5	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**43%**	0%	**40%**	29%	20%	0%	12%	18%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD2/20221214	0 - 0.1 m	14/12/22	7	<0.4	24	15	22	<0.1	8	22	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36TP17	0 - 0.1 m	14/12/22	8	<0.4	29	16	26	<0.1	10	25	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	1	0	5	1	4	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	13%	0%	19%	6%	17%	0%	22%	13%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD3/20221214	0 - 0.1 m	14/12/2022	13	<0.4	32	25	31	<0.1	15	54	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP19	0 - 0.1 m	14/12/22	6	<0.4	20	16	20	<0.1	11	31	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	7	0	12	9	11	0	4	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**74%**	0%	**46%**	**44%**	**43%**	0%	**31%**	**54%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD4/20221214	0 - 0.1 m	14/12/22	6	<0.4	19	15	19	<0.1	8	23	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36TP20	0 - 0.1 m	14/12/22	6	<0.4	20	15	21	<0.1	9	24	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	0	0	1	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	0%	0%	5%	0%	10%	0%	12%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20221219	0 - 0.1 m	19/12/22	<4	<0.4	11	8	13	<0.1	5	11	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36TP37	0 - 0.1 m	19/12/22	<4	<0.4	10	8	13	<0.1	4	10	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	0%	0%	10%	0%	0%	0%	22%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD3/20221219	0 - 0.1 m	19 Dec 2022	8.7	<0.4	23	11	20	<0.1	5.3	13	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36TP40	0 - 0.1 m	19/12/22	7	<0.4	20	10	24	<0.1	5	11	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	1.7	0	3	1	4	0	0.3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	22%	0%	14%	10%	18%	0%	6%	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

			Metals								TRH				BTEX				PAH				Phenols	OCP													OPP		PCB	PFAS			
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs	Total / All Phenols	DDD	DDT+DDE+DDD [c]	DDE	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Other OCP	Chlorpyrifos	Other OPP	Total PCB	PFOS	PFOA	PFOS and PFHxS	Total positive PFAS
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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
BD2/20221220	0 - 0.1 m	20/12/22	9	<0.4	25	10	17	<0.1	4	11	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36TP55	0 - 0.1 m	20/12/22	7	<0.4	21	9	15	<0.1	4	10	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	2	0	4	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	25%	0%	17%	11%	13%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD7/20221220	0 - 0.1m	20 Dec 2022	15	<0.4	45	40	22	<0.1	7.9	47	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP63	0 - 0.1 m	20/12/22	8	<0.4	28	12	16	<0.1	3	15	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	7	0	17	28	6	0	4.9	32	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**61%**	0%	**47%**	**108%**	**32%**	0%	**90%**	**103%**	22%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20230112	0 - 0.1 m	12/01/23	8	<0.4	27	9	19	<0.1	4	12	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36TP72	0 - 0.1 m	12/01/23	7	<0.4	25	7	17	<0.1	4	9	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	1	0	2	2	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	13%	0%	8%	25%	11%	0%	0%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD3/20230112	0 - 0.1 m	12 Jan 2023	22	<0.4	63	19	28	<0.1	13	28	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP75	0 - 0.1 m	12/01/23	8	<0.4	29	10	20	<0.1	5	17	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	14	0	34	9	8	0	8	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**93%**	0%	**74%**	**62%**	**33%**	0%	**89%**	**49%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20230118	0 - 0.1 m	18 Jan 2023	20	<0.4	57	19	27	<0.1	10	22	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36HA76	0 - 0.1 m	18/01/2023	7	<0.4	21	9	16	<0.1	4	9	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	13	0	36	10	11	0	6	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**96%**	0%	**92%**	**71%**	**51%**	0%	**86%**	**84%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD2/20230118	0 - 0.1 m	18/01/2023	7	<0.4	19	10	14	<0.1	8	18	<25	<50	120	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36HA77	0 - 0.1 m	18/01/2023	5	<0.4	14	8	11	<0.1	6	16	<25	<50	120	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	2	0	5	2	3	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	**33%**	0%	**30%**	22%	24%	0%	29%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20230120	0 - 0.1 m	20/01/2023	8	<0.4	34	6	19	<0.1	5	7	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36HA82	0 - 0.1 m	20/01/2023	7	<0.4	30	5	16	<0.1	4	9	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	1	0	4	1	3	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	13%	0%	13%	18%	17%	0%	22%	25%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD2/20230120	0 - 0.1 m	20 Jan 2023	12	<0.4	42	10	25	<0.1	6.7	18	<20	<50	150	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	1.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36HA83	0 - 0.1 m	20/01/2023	5	<0.4	21	6	18	<0.1	4	12	<25	<50	200	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	7	0	21	4	7	0	2.7	6	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**82%**	0%	**67%**	**50%**	**33%**	0%	**50%**	**40%**	0%	0%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD4/20230112	0 - 0.1 m	12 Jan 2023	23	<0.4	72	18	37	<0.1	13	23	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP93	0 - 0.1 m	12/01/23	8	<0.4	32	10	20	<0.1	6	11	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	15	0	40	8	17	0	7	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**97%**	0%	**77%**	**57%**	**60%**	0%	**74%**	**71%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20230113	0 - 0.1 m	13/01/23	<4	<0.4	10	5	10	<0.1	4	8	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36TP104	0 - 0.1 m	13/01/23	<4	<0.4	11	5	11	<0.1	4	6	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	0	0	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	0%	0%	10%	0%	10%	0%	0%	29%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD3/20230113	0 - 0.1 m	13 Jan 2023	3.4	<0.4	11	5.4	11	<0.1	<5	6.3	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP107	0 - 0.1 m	13/01/23	<4	<0.4	9	5	13	<0.1	4	13	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	0.6	0	2	0.4	2	0	0	6.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	16%	0%	20%	8%	17%	0%	0%	**69%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

			Metals								TRH				BTEX				PAH				Phenols	OCP													OPP		PCB	PFAS			
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs	Total / All Phenols	DDD	DDT+DDE+DDD [c]	DDE	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Other OCP	Chlorpyrifos	Other OPP	Total PCB	PFOS	PFOA	PFOS and PFHxS	Total positive PFAS
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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
BD4/20230113	0 - 0.1 m	13 Jan 2023	5.1	<0.4	14	6.3	13	<0.1	<5	<5	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP108	0 - 0.1 m	13/01/23	<4	<0.4	9	5	11	<0.1	3	4	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	1.1	0	5	1.3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	24%	0%	**43%**	23%	17%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20230116	0 - 0.1 m	16/01/23	4	<0.4	9	9	17	<0.1	6	9	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC36TP124	0 - 0.1 m	16/01/2023	4	<0.4	10	9	17	<0.1	5	8	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	0%	0%	11%	0%	0%	0%	18%	12%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD2/20230116	0 - 0.1 m	16 Jan 2023	9.7	<0.4	17	13	32	<0.1	8.3	11	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP125	0 - 0.1 m	16/01/23	6	<0.4	13	11	24	<0.1	7	7	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	3.7	0	4	2	8	0	1.3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**47%**	0%	27%	17%	29%	0%	17%	**44%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD4/20230116	0 - 0.1 m	16 Jan 2023	11	<0.4	24	18	33	<0.1	12	18	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC36TP128	0 - 0.1 m	16/01/23	7	<0.4	16	13	28	<0.1	9	12	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	4	0	8	5	5	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**44%**	0%	**40%**	**32%**	16%	0%	29%	**40%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD3/20230117		17/01/2023	<4	<0.4	7	<1	5	<0.1	<1	2	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.08	<0.5	0.2	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC38SP1A		17/01/2023	<4	<0.4	10	<1	7	<0.1	1	4	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0.03	0	0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	0%	0%	**35%**	0%	**33%**	0%	0%	**67%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	**46%**	0%	**120%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD4/20230117		17 Jan 2023	<2	<0.4	8.1	<5	8	<0.1	<5	20	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC38SP2A		17/01/2023	<4	<0.4	7	4	10	<0.1	4	23	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.4	<0.5	4	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	0	0	1.1	0	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	0%	0%	15%	0%	22%	0%	0%	14%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	**156%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD4 / 20221130	0 - 0.1 m	30 Nov 2022	3.7	<0.4	15	29	38	<0.1	15	110	<20	<50	100	<100	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC38TP02	0 - 0.1 m	30/11/2022	<4	<0.4	18	25	29	<0.1	17	71	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	0.81	1	6.9	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	0	0	3	4	9	0	2	39	0	0	0	0	0	0	0	0	0	0.31	0.5	6.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	0%	0%	18%	15%	27%	0%	13%	**43%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	**47%**	**67%**	**173%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD2 / 20221130	0 - 0.1 m	30 Nov 2022	15	<0.4	24	13	20	<0.1	9.6	40	<20	<50	<100	160	<0.1	<0.1	<0.1	<0.1	<0.5	<0.5	<0.5	<0.5	<PQL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<PQL	<0.2	<PQL	<0.1	<0.005	<0.005	<0.005	<0.05
AEC38TP09	0 - 0.1 m	30/11/2022	9	<0.4	21	9	14	<0.1	7	27	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	6	0	3	4	6	0	2.6	13	0	0	0	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory		RPD	**50%**	0%	13%	**36%**	**35%**	0%	**31%**	**39%**	0%	0%	0%	**46%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20221130	0 - 0.1 m	30/11/2022	12	<0.4	27	18	19	<0.1	7	48	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
AEC38TP12	0 - 0.1 m	30/11/2022	9	<0.4	25	18	17	<0.1	6	24	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<0.1	<0.05	<0.5	<0.05	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<PQL	<0.1	<PQL	<0.1	<0.005	<0.005	<0.005	<0.005
		Difference	3	0	2	0	2	0	1	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Intra-laboratory		RPD	29%	0%	8%	0%	11%	0%	15%	**67%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD2/20221213	0 - 0.1 m	13/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
AEC36TP02	0 - 0.1 m	13/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Intra-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%
BD5/20221214	0 - 0.1 m	14/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05
AEC36TP22	0 - 0.1 m	14/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Inter-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%

			Metals								TRH				BTEX				PAH				Phenols	OCP													OPP		PCB	PFAS			
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs	Total / All Phenols	DDD	DDT+DDE+DDD [c]	DDE	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Other OCP	Chlorpyrifos	Other OPP	Total PCB	PFOS	PFOA	PFOS and PFHxS	Total positive PFAS
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	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
BD6/20221214	0 - 0.1 m	14/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
AEC36TP23	0 - 0.1 m	14/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Intra-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%
BD4/20221219	0 - 0.1 m	19/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
AEC36TP41	0 - 0.1 m	19/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Intra-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%
BD6/20221219	0 - 0.1 m	19/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05
AEC36TP44	0 - 0.1 m	19/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Inter-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%
BD10/20221219	0 - 0.1 m	19/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
AEC36TP50	0 - 0.1 m	19/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Intra-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%
BD10/20221220	0 - 0.1 m	20/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05
AEC36TP67	0 - 0.1 m	20/12/2022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Inter-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%
BD2/20230112	0 - 0.1 m	12/01/2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
AEC36TP73	0 - 0.1 m	12/01/2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Intra-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%
BD3/20230118	0 - 0.1 m	18/01/2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
AEC36HA79	0 - 0.1 m	18/01/2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Intra-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%
BD3/20230116	0 - 0.1 m	16/1/123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
AEC36TP127	0 - 0.1 m	16/1/123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Intra-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%
BD2/20230113	0 - 0.1 m	13/01/2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
AEC36TP105	0 - 0.1 m	13/01/2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Intra-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%
BD4/20230118	0 - 0.1 m	18/01/2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.05
AEC36HA80	0 - 0.1 m	18/01/2023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005
		Difference	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0
Inter-laboratory		RPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%	0%

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Table QA2: Trip Blank Results - Soils (mg/kg)

Sample ID	Sampling Date	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene
TB-301122	30/11/2022	<0.2	<0.5	<1	<1	<2
TB-131222	13/12/2022	<0.2	<0.5	<1	<1	<2
TB-141222	14/12/2022	<0.2	<0.5	<1	<1	<2
TB-191222	19/12/2022	<0.2	<0.5	<1	<1	<2
TB-201222	20/12/2022	<0.2	<0.5	<1	<1	<2
TB-120123	12/01/2023	<0.2	<0.5	<1	<1	<2
TB-130123	13/01/2023	<0.2	<0.5	<1	<1	<2
TB-170123*	16/01/2023	<0.2	<0.5	<1	<1	<2
TB-170123**	17/01/2023	<0.2	<0.5	<1	<1	<2
TB-180123	18/01/2023	<0.2	<0.5	<1	<1	<2
TB-200120	20/01/2023	<0.2	<0.5	<1	<1	<2

Notes: * laboratory certificate 314635

** laboratory certificate 314763

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

Sample ID	Sampling date	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene
TS-301122	30/11/2022	97	97	97	97	97
TS-131222	13/12/2022	101	96	96	94	96
TS-141222	14/12/2022	96	97	99	98	99
TS-191222	19/12/2022	84	91	89	94	94
TS-201222	20/12/2022	92	93	89	90	91
TS-120123	12/01/2023	104	105	104	103	103
TS-130123	13/01/2023	87	87	87	87	88
TS-170123**	16/01/2023	95	95	96	96	96
TS-170123**	17/01/2023	101	101	101	100	99
TS-180123	18/01/2023	101	102	97	100	99
TS-200120	20/01/2023	106	107	107	106	107

Notes: * laboratory certificate 314635

** laboratory certificate 314763

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Table QA4: Relative Percentage Difference Results for Groundwater and Surface Water

	Metals (dissolved)								Metals (total)								TRH				BTEX					PAH						Phenols													OCP										OPP											
	Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	Arsenic	Cadmium	Chromium (III + VI)	Copper	Lead	Mercury	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	o-xylene	m+p-xylene	Naphthalene	Anthracene	Fluoranthene	Benzo(a)pyrene	Phenanthrene	Other PAH	Phenol	2,4,6-Trichlorophenol	2,4-Dinitrophenol	4-Nitrophenol	2,3,4,6-Tetrachlorophenol	Total Tetrachlorophenols	Pentachlorophenol	2-Chlorophenol	2,4-Dimethylphenol	2,4-Dichlorophenol	2,6-Dichlorophenol	Other Phenols	Aldrin	Dieldrin	gamma-Chlordane	alpha-Chlordane	pp-DDT	Endosulfan I	Endosulfan II	Endrin	Heptachlor	Methoxychlor	Lindane	Other OCP	Azinphos-methyl	Bromophos-ethyl	Chlorpyrifos	Diazinon	Dichlorovos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Methyl Parathion	Other OPP
Sample ID	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BD1/20230124	<1	<0.1	<1	<1	<1	<0.05	6	7	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<5	<1	<20	<100	<1	-	<5	<1	<1	<1	<1	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	<0.01	<0.2	<0.15	<0.2	<0.2	<0.05	<0.01	<0.2	<PQL
AEC38BH01	<1	<0.1	<1	<1	<1	<0.05	6	10	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<5	<1	<20	<100	<1	-	<5	<1	<1	<1	<1	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	<0.01	<0.2	<0.15	<0.2	<0.2	<0.05	<0.01	<0.2	<PQL
	0	0	0	0	0	0	0	3	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
intra-laboratory	0%	0%	0%	0%	0%	0%	0%	**35%**	-	-	-	-	-	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20230125	<1	<0.1	<1	<1	<1	<0.05	1	6	<1	<0.1	<1	<1	<1	<0.05	2	17	<10	<50	<100	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<5	<1	<20	<100	<1	-	<5	<1	<1	<1	<1	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	<0.01	<0.2	<0.15	<0.2	<0.2	<0.05	<0.01	<0.2	<PQL
AEC36SW1	<1	<0.1	<1	<1	<1	<0.05	1	6	1	<0.1	1	1	<1	<0.05	2	12	<10	<50	110	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<5	<1	<20	<100	<1	-	<5	<1	<1	<1	<1	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	<0.01	<0.2	<0.15	<0.2	<0.2	<0.05	<0.01	<0.2	<PQL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
intra-laboratory	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20230201	<1	0.1	<1	<1	<1	<0.05	14	35	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	<0.01	<0.2	<0.15	<0.2	<0.2	<0.05	<0.01	<0.2	<PQL
AEC36BH01	<1	0.1	<1	2	<1	<0.05	15	37	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	<0.01	<0.2	<0.15	<0.2	<0.2	<0.05	<0.01	<0.2	<PQL
	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	-	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
intra-laboratory	0%	0%	0%	0%	0%	0%	0%	0%	-	-	-	-	-	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD3/20230201	<1	<0.2	<1	<1	<1	<0.1	10	<5	-	-	-	-	-	-	-	-	<20	<50	<100	<100	<1	<1	<1	<1	<2	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<3	<10	<30	<30	-	<30	<10	<3	<3	<3	<3	<PQL	<0.2	<0.2	<2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<PQL	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<PQL
SMGW-BH-B313	<1	<0.1	<1	<1	<1	<0.05	11	3	-	-	-	-	-	-	-	-	<10	<50	<100	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<1	<1	<20	<20	<1	-	<5	<1	<1	<1	<1	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	<0.01	<0.2	<0.15	<0.2	<0.2	<0.05	<0.01	<0.2	<PQL
	0	0	0	0	0	0	1	0	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory	0%	0%	0%	0%	0%	0%	10%	0%	-	-	-	-	-	-	-	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD2/30230125	<1	<0.2	<1	<1	<1	<0.1	2	12	-	-	-	-	-	-	-	-	<20	60	300	<100	<1	<1	<1	<1	<2	<0.03	<0.01	<0.01	<0.01	<0.01	<PQL	<3	<10	<30	<30	-	<30	<10	<3	<3	<3	<3	<PQL	<0.2	<0.2	<2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<PQL	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<PQL
AEC36SW1	<1	<0.1	<1	<1	<1	<0.05	1	6	-	-	-	-	-	-	-	-	<10	<50	110	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<5	<1	<20	<100	<1	-	<5	<1	<1	<1	<1	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.02	<0.2	<0.01	<0.01	<0.2	<0.15	<0.2	<0.2	<0.05	<0.01	<0.2	<PQL
	0	0	0	0	0	0	1	6	-	-	-	-	-	-	-	-	0	10	190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	0	0
inter-laboratory	0%	0%	0%	0%	0%	0%	**67%**	**67%**	-	-	-	-	-	-	-	-	0%	18%	**93%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Table QA4: Relative Percentage Difference Results for Groundwater and Surface Water (continued)

	PCB			VOC																													PFAS						
	Aroclor 1242	Aroclor 1254	Other PCB	Isopropylbenzene	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	cis-1,3-Dichloropropene	Vinyl chloride	Tetrachloroethene	Trichloroethene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Chlorobenzene	1,1,2,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,2-Dichloroethane	Carbon tetrachloride	Chloroform	Bromodichloromethane	Dibromochloromethane	Bromoform	1,2-Dichloropropane	1,3-Dichloropropane	Styrene	Hexachlorobutadiene	Other VOC	Perfluorohexanesulfonic acid - PFHxS	Perfluorooctanesulfonic acid PFOS	Perfluorooctanoic acid PFOA	6:2 FTS	Perfluorohexanoic acid (PFHxA)	Perfluorobutanoic acid (PFBA)	Other PFAS
Sample ID	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
BD1/20230124	<0.1	<0.1	<PQL	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<PQL	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.002	<PQL
AEC38BH01	<0.1	<0.1	<PQL	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<PQL	<0.0002	<0.0002	<0.0002	0.0004	<0.0004	<0.002	<PQL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
intra-laboratory	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD1/20230125	<0.1	<0.1	<PQL	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<PQL	0.002	0.0088	0.0065	<0.0004	<0.002	<0.02	<PQL
AEC36SW1	<0.1	<0.1	<PQL	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<PQL	0.002	0.0081	0.0064	<0.0004	<0.002	<0.02	<PQL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0007	0.0001	0	0	0	0
intra-laboratory	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	8%	2%	0%	0%	0%	0%
BD1/20230201	<0.1	<0.1	<PQL	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<PQL	<0.0002	<0.0002	<0.0002	<0.0004	<0.0004	<0.02	<PQL
AEC36BH01	<0.1	<0.1	<PQL	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<PQL	<0.0002	<0.0002	<0.0002	0.0004	<0.0004	<0.02	<PQL
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
intra-laboratory	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BD3/20230201	<1	<1	<PQL	<1	<1	<1	<1	<1	<1	<5	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	<PQL	<0.001	<0.0005	< 0.01	< 0.005	< 0.01	<0.05	<PQL
SMGW-BH-B313	<0.1	<0.1	<PQL	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<PQL	0.0003	0.0007	0.0007	<0.0004	<0.0004	<0.02	<PQL
	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0.0002	0	0	0	0	0
inter-laboratory	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	**33%**	0%	0%	0%	0%	0%
BD2/30230125	<1	<1	<PQL	<1	<1	<1	<1	<1	<1	<5	<1	<1	-	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<1	<1	<1	<1	-	<PQL	0.002	0.008	0.005	<0.005	0.003	0.007	<PQL
AEC36SW1	<0.1	<0.1	<PQL	<1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<PQL	0.002	0.0081	0.0064	<0.0004	<0002	<0.02	<PQ:L
	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0.0001	0.0014	0	0.001	0	0
inter-laboratory	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	-	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	-	0%	0%	11%	25%	0%	**40%**	0%	0%

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Table QA5: Trip Blank Results - Water (µg/L)

Sample ID	Sampling Date	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene	Naphthalene
TB-240123	24-Jan-23	<1	<1	<1	<1	<2	<1
TB-250123	25-Jan-23	<1	<1	<1	<1	<2	<1
TB-010223	1-Feb-23	<1	<1	<1	<1	<2	<1

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Table QA6: Trip Spike Results – Water (% Recovery)

Sample ID	Sampling Date	Benzene	Toluene	Ethylbenzene	o-Xylene	m+p-Xylene
TS-240123	24-Jan-23	113	113	119	115	115
TS-250123	25-Jan-23	111	114	115	114	109
TS-010223	1-Feb-23	110	120	113	109	111

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Table QA7: Rinsate Results for Water Sampling

		Metals								TRH				BTEX					PAH							OCP											PFAS			
		Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	o-xylene	m+p-xylene	Naphthalene	Anthracene	Fluoranthene	Benzo(a)pyrene	Phenanthrene	Other PAH	Aldrin	Dieldrin	gamma-Chlordane	alpha-Chlordane	pp-DDT	Endosulfan I	Endosulfan II	Endrin	Heptachlor	Methoxychlor	Other OCP	Perfluorohexanesulfonic acid - PFHxS	Perfluorooctanesulfonic acid PFOS	Perfluorooctanoic acid PFOA	Other PFAS
Sample ID	Sampling Date	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
AECRINS01	24/01/2023	<1	<0.1	<1	<1	<1	<0.05	<1	<1	<10	**55**	<100	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	-	-	-	-
AECRINS02	25/01/2023	<1	<0.1	<1	<1	<1	<0.05	<1	<1	<10	**72**	<100	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.0002	<0.0002	<0.0002	<PQL
AECRINS03	1/02/2023	<1	<0.1	<1	<1	<1	<0.05	<1	<1	<10	<50	<100	<100	<1	<1	<1	<1	<2	<0.02	<0.01	<0.01	<0.01	<0.01	<PQL	<0.01	<0.01	<0.01	<0.01	<0.006	<0.01	<0.01	<0.01	<0.01	<0.01	<PQL	<0.0002	<0.0002	<0.0002	<PQL

Appendix K

Site Photographs



Photograph 1 - AST and shed (adjacent to site)



Photograph 2 - Aircraft hanger

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs - AEC 36, 37 & 38** **Sydney Metro Western Sydney Airport - SCAW, Elizabeth Drive, Badgerys Creek**	PROJECT: 204814.01 PLATE No: 1 REV: 0
	CLIENT: CPBUI JV	DATE: 31-Jan-23



Photograph 3 - Mounded soil at western site boundary at AEC 38



Photograph 4 - Mounded soil at eastern site boundary at AEC 38

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs - AEC 36, 37 & 38** **Sydney Metro Western Sydney Airport - SCAW, Elizabeth Drive, Badgerys Creek**	PROJECT: 204814.01 PLATE No: 2 REV: 0
	CLIENT: CPBUI JV	DATE: 31-Jan-23



Photograph 5 - Footprints of former bowsers



Photograph 6 -Stockpile of blue metal

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs - AEC 36, 37 & 38** **Sydney Metro Western Sydney Airport - SCAW, Elizabeth Drive, Badgerys Creek**	PROJECT: 204814.01 PLATE No: 3 REV: 0
	CLIENT: CPBUI JV	DATE: 31-Jan-23



Photograph 7 - Fibre-cement sheet at demolished structure at AEC 36

Douglas Partners Geotechnics / Environment / Groundwater	**Site Photographs - AEC 36, 37 & 38** **Sydney Metro Western Sydney Airport - SCAW, Elizabeth Drive, Badgerys Creek**	PROJECT: 204814.01 PLATE No: 4 REV: 0
	CLIENT: CPBUI JV	DATE: 31-Jan-23