Douglas Partners
Geotechnics / Environment / Groundwater

Integrated Practical Solutions

Report on
Detailed Site Investigation (Contamination) with Limited Sampling

PNRL Centre of Excellence and Community Facility
corner Kennedy Avenue and Stone Mason Drive,
Kellyville

Prepared for
Paramatta National Rugby League Club Pty Ltd

Project 207155.00
March 2022

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

	Signature		Date
Author			29 March 2022
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Report on Detailed Site Investigation (Contamination) with Limited Sampling PNRL Centre of Excellence and Community Facility corner Kennedy Avenue and Stone Mason Drive, Kellyville

1. Introduction

Douglas Partners Pty Ltd (DP) has been engaged by Mostyn Copper on behalf of Paramatta National Rugby League Club Pty Ltd to complete this detailed site investigation (DSI) undertaken for the proposed PNRL Centre of Excellence and Community Facility at corner Kennedy Avenue and Stone Mason Drive, Kellyville (the site). The site is shown on Drawing 1, Appendix A.

The investigation was undertaken in accordance with DP's proposal 207155.00 dated 20 July 2021. It is understood that the proposed development includes the construction of two buildings, a grandstand and a new carpark. It is understood that site works will be carried out in in two stages due to the presence of a compound associated with the adjacent Memorial Avenue roadworks restricting access to the northern part of the site.

The objective of the DSI is to assess the potential for contamination at the site based on past and present land uses and to comment on the need for further investigation and/or management with regards to the proposed development. It is understood that the report will be used to support a development application for the proposed development as a State Significant Development (Application Number-24452975). The following is stated as being required in the Planning Secretary's Environmental Assessment Requirements (SEARS):

> *"The EIS must include a preliminary investigation assessing and quantifying any soil or groundwater contamination, and demonstrating that the site is suitable (or may be made suitable after remediation) for the proposed use, in accordance with the State Environmental Planning Policy No 55 - Remediation of Land and the associated guidelines.*
>
> *Where recommended in the preliminary investigation, or requested by the Planning Secretary, the EIS must also include a detailed site investigation, a remediation action plan and/or a preliminary long-term environmental management plan."*

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* (NSW EPA, 2020).

DP carried out a geotechnical investigation in conjunction with this PSI, the results of which are presented in a separate report (DP Report Reference 207155.00.R.001.Rev0).

2. Scope of Works

The scope of works for the DSI comprised:

- Review of published geological, soil landscape, salinity and acid sulphate soil (ASS) maps;
- Search of the NSW Department of Primary Industries groundwater database for registered groundwater bores in the vicinity of the site;
- Review of current and historical land titles to identify previous owners that may indicate potentially contaminating activities;
- Review of readily available historical aerial photographs to identify previous land uses that may indicate potential contamination;
- Review of records from the NSW EPA Register for notices issued under the *Contaminated Land Management Act 1997* (CLM Act) and the *Protection of the Environment Operations Act 1997* (POEO Act);
- Review of records held by SafeWork NSW for any Hazardous Chemicals stored on premises;
- Review of Council Section 10.7 Planning Certificate;
- Preparation of a Conceptual Site Model (CSM);
- Site walkover to identify features and site uses, and areas of potential contamination;
- Site inspection of demountable structures by an occupational hygienist to inspect for hazardous materials;
- Sampling from 19 test locations across the site;
- Collection of soil samples from each test location. Samples were collected at regular depth intervals, change of strata or indicators of potential contamination based on field observation;
- Laboratory analysis of selected soil samples for a range of the following contaminants and physiochemical properties:
    - Metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc);
    - Polycyclic aromatic hydrocarbons (PAH);
    - Total recoverable hydrocarbons (TRH);
    - Benzene, toluene, ethylbenzene, and xylene (BTEX);
    - Phenols;
    - Organochlorine pesticides (OCP), organophosphorus pesticides (OPP);
    - Polychlorinated biphenyls (PCB);
    - pH; and
    - Asbestos.
- Interpretation of laboratory results in accordance with current NSW EPA endorsed guidelines; and
- Preparation of this DSI report detailing the methodology and results of the investigation. The report includes comments on identified areas of environmental concern (AEC), a conceptual site model (PCSM) and recommendations for further works if considered necessary.

3. Proposed Development

It is understood that the proposed development will include the construction of two buildings as described below:

- Building A – Grandstand and Sports Hub. The Sports Hub is to finished floor slab level at RL 63.95 and will include an excavation understood to be up to 5 m deep. Access through the Grandstand will be via three access tunnels with a Finished Floor Slab level ranging from 63.2 m AHD.
- Building B – Centre of Excellence – a two storey building. The ground floor finished floor level to be at RL 63.6 m AHD. The construction of this building will require up to 3 m of cut on its eastern side and up to 0.5 m of fill on its western side to form the building platform level.

4. Site Information

Site Address	corner Kennedy Avenue and Stone Mason Drive, Kellyville
Legal Description	Lot 60 Deposited Plan 10702
Area	Full development area 1.1 hectares (approximately)
Zoning	Public Recreation RE1
Local Council Area	The Hills Shire Council (THSC)
Current Use	Sports Fields/Park
Surrounding Uses	North – Memorial Avenue with residential properties beyond East – Stone Mason Drive with residential properties beyond South – Kennedy Avenue with sports fields beyond West – Sports Fields

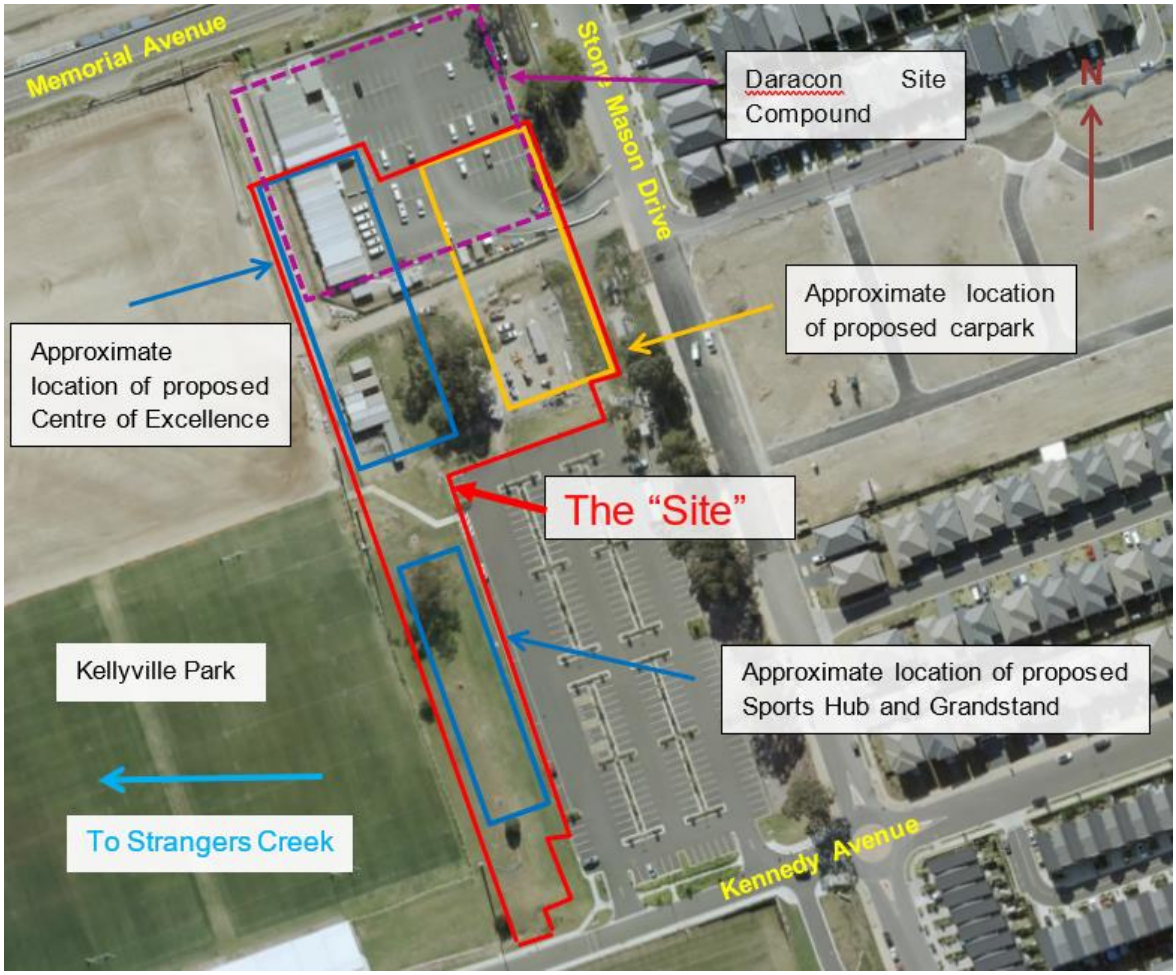


Figure 1: Site Location Plan (Source: Metro Map)

5. Environmental Setting

5.1 Topography

The regional topography generally comprises undulating hills with elevations to between 80 m and 90 m Australian Height Datum (AHD). Site surface levels generally fall towards the west with the site being relatively level. The overall difference in level is estimated to be about 8 m from the highest part of the site.

5.2 Site Geology

Reference to the Penrith 1: 100 000 scale Soil Landscape Series Sheet indicates that the site is located close to the boundary between the Blacktown and Luddenham soil landscape groups. The Blacktown Group is characterised by moderately reactive, highly plastic subsoil with poor drainage, whereas the Luddenham Group is characterised by moderately reactive, highly plastic subsoil with high soil erosion susceptibility.

Reference to the Penrith 1:100 000 scale Geological Series Sheet indicates that the site is predominantly underlain by Ashfield Shale of the Wianamatta Group of Triassic age. Ashfield Shale typically comprises dark grey to black shale, siltstone and laminate which weathers to a residual clay profile of medium to high plasticity.

5.3 Acid Sulphate Soils

Review of published mapping indicates that the site is in an area of 'no known occurrence of acid sulfate soils.' The NSW Acid Sulfate Soils Manual 1998 published by the Acid Sulfate Soils Management Advisory Committee (ASSMAC) indicates that ASS (and Potential Acid Sulfate Soils – PASS) normally occur in alluvial or estuarine soils below RL 5 m AHD although occasionally are encountered up to RL 12 m AHD. Considering the ASS mapping and given that the site soils are at site elevations above RL 60 m AHD, it is considered unlikely that ASS is present on-site.

5.4 Salinity

The Department of Infrastructure, Planning and Natural Resources (DIPNR) "Map of Salinity Potential in Western Sydney 2002" suggests that the site is in an area of "moderate salinity potential" with a higher potential in the lower elevation areas south-west of the site in close proximity to the Strangers Creek system.

5.5 Surface Water and Groundwater

The closest surface water receptor to the site is Strangers Creek located about 250 m west of the site.

Based on the local topography, groundwater is anticipated to flow to the west towards Strangers Creek.

A search of the NSW Department of Primary Industries Water (DPI Water) online map of registered groundwater works was undertaken as part of the investigation. The search carried out on 1 March 2022 identified no registered groundwater boreholes within 500 m of the site that contained groundwater information.

6. Site History

6.1 Title Deeds

A historical title deeds search was used to obtain ownership and occupancy information including company names and the occupations of individuals. The title information can assist in the identification of previous land uses by the company names or the site owners and can, therefore, assist in establishing whether there were potentially contaminating activities occurring at the site.

A summary of the title deeds and possible land uses (with reference to the aerial photographs and other historical searches) is presented in Table 1. A full copy of the search is included in Appendix C

Table 1: Historical Title Deeds

Date of Acquisition and Term Held	Registered Proprietor(s) & Occupations	Inferred Land Use
1926 to 1942	Sydney Williams (Labourer) (& his deceased estate)	Rural residential
1942 to 1943	Mary Esther King (Spinster)	Rural residential
1943 to 1947	Leslie Charles Williamson (Tyre Builder)	Rural residential
1947 to 1949	Miriam White (Married Woman)	Rural residential
1949 to 1957	Victor Thomas Barry (Steel Worker) Eleanor Elizabeth Barry (Married Woman)	Rural residential
1957 to 1962	Eleanor Elizabeth Barry (Widow)	Rural residential
1962 to 1973	Lillian Mary Clark (Married Woman)	Rural residential
1973 to date	Council of the Shire of Baulkham Hills	Park/Sports Fields

6.2 Historical Aerial Photography

A review of selected historical aerial photographs from 1943, 1955, 1970, 1991, 2000, 2011, 2020 and 2021 was carried out to identify changes to the site and surrounding areas which may include potential land contaminating activities. The aerial photographs are included in Drawings 2 to 5 in Appendix D. A summary of key features observed for the site and surrounding land is presented in Table 2.

Table 2: Summary of Historical Aerial Photographs

Year	Site	Surrounding Land Use
1943	The site appeared largely undeveloped with three structures observed approximately midway along the eastern boundary of the site. Market gardens appeared to be in the north-eastern corner.	The surrounding land to the north, south, east, and west appeared to be undeveloped and vegetated.

Year	Site	Surrounding Land Use
1955	The south-western corner of the site appeared to be moderately vegetated, and one structure appeared to have been removed from the eastern boundary.	The land to the north appeared to have a residence. Land to the east, west and south remain largely unchanged from the 1943 photograph.
1970	The vegetation in the south-western corner appeared to have been cleared and additional structures appeared to have been constructed along the eastern boundary.	The land to the west appeared to have a residence and most of the vegetation had been cleared. Land to the north, east and south remain largely unchanged from the 1955 photograph.
1991	The structures along the eastern boundary appeared to have been removed and a residence appeared to have been constructed in the north-eastern corner of the site. A large structure and tennis courts appeared to have been constructed in the northern portion of the site and some areas appeared to have been cleared.	The residence to the north had been removed and the land cleared. A residence appeared to have been constructed on the land to the north-west. The land to the west appeared to have been further developed with the construction of a carpark adjacent to the eastern boundary. Land to the east and south remain largely unchanged from the 1970 photograph.
2000	The site appeared to have remained largely unchanged from the 1991 photograph.	The land to the north appeared to have a residence. A baseball field had been constructed to the south-west. Land to the west, east and south remain largely unchanged from the 1991 photograph.
2011	A netball court appeared to have been constructed towards the centre of the site. The remainder of the site appeared to have remained largely unchanged from the 2000 photograph.	The land to the north and east appeared to have been developed with the construction of roads. Land to the west and south remain largely unchanged from the 2000 photograph.
2020	The large structure, tennis courts and netball courts appeared to have been removed. Site sheds appeared to have been constructed over the northern half of the site and a carpark constructed over the eastern portion of the southern half of the site.	The land to the north and east appeared to have been further developed with the construction of more roads and residential developments. The land to the south and west appeared to have been developed into sport fields with associated structures.
2021	The site appeared to have remained largely unchanged from the 2020 photograph except for an expansion of the site sheds and the construction of a carpark at the northern end of the site.	The northern half of the land to the west appeared to have been cleared. Land to the north, east and south remain largely unchanged from the 2020 photograph.

6.3 Public Registers and Planning Records

EPA Notices available under Section 58 of the Contaminated Lands Management Act (CLM Act) Database searched 8 September 2021	There were no records of notices for the site or adjacent sites.
Sites notified to EPA under Section 60 of the CLM Act Database searched 1 March 2022	The site and adjacent sites were not listed as a notified contaminated site.
Licences listed under Section 308 of the Protection of the Environment Operations Act 1997 (POEO Act) Database searched 1 March 2021	There were no records issued to the site or adjacent sites.
SafeWork NSW 2 September 2021	No records related to the storage of hazardous chemicals were reported in the NSW SafeWork search (provided in Appendix E)
Planning Certificate(s)	The site does not include or comprise critical habitat. The site not located in a conservation area. There is no item of environmental heritage on the site. The site is not affected by the operation of section 496B or 553B of the Local Government Act 1993 for coastal protection services. The site is not proclaimed to be a mine subsidence district. The site is not affected by any road widening or realignment. The site is subject to a bushfire related policy adopted by Council. The site is not affected by any other policies adopted by Council that restricts development due to likelihood of land slip, tidal inundation, subsidence, acid sulfate soils, land contamination. The site is subject to flood related development controls. The site is not reserved for acquisition under an environmental planning instrument or proposed planning instrument. The site is not biodiversity certified land. The site is not subject to any biobanking stewardship agreement.

	The site is not identified as bush fire prone land. The site is not subject to a property vegetation plan. (provided in Appendix E)
Council Records	No relevant records were available at the time of reporting

6.4 Anecdotal Information

Discussions with Daracon on 2 February 2022, the principal contractor who established the Transport for NSW compound, indicated some bonded asbestos containing material (ACM) fragments were identified over the footprint of their compound prior to establishment of the compound or placement of roadbase across its footprint. These ACM fragments were understood to be removed by an occupational hygienist. Documentation about the identification and removal of these ACM fragments was requested but not forwarded onto DP.

It is understood that at the completion of site works, estimated to be at the end of 2023, Daracon will remove the site compound including all demountables and the roadbase placed across the footprint of the site.

6.5 Site History Integrity Assessment

The information used to establish the history of the site was sourced from reputable and reliable reference documents, many of which were official records held by Government departments/agencies. The databases maintained by various Government agencies potentially can contain high quality information, but some of these do not contain any data at all.

In particular, aerial photographs provide high quality information that is generally independent of memory or documentation. They are only available at intervals of several years, so some gaps exist in the information from this source. The observed site features are open to different interpretations and can be affected by the time of day and/or year at which they were taken, as well as specific events, such as flooding. Care has been taken to consider different possible interpretations of aerial photographs and to consider them in conjunction with other lines of evidence.

6.6 Summary of Site History

The site history information suggests that the site was rural residential up until 1973 when the land was acquired by The Hills Shire Council (previously The Shire of Baulkham Hills). Information on historical aerial photographs suggest the site became a sports park sometime between 1973 and 1991 under the ownership of The Hills Shire Council. Since then, the site appears to have undergone some changes with the formation of various sports fields, courts, and associated structures. Most recently a carpark has been constructed sometime between 2019 and 2020.

7. Site Walkover

A site walkover was undertaken by an environmental scientist on 27 October 2021 and an occupational hygienist on 4 February 2021. The general site topography was consistent with that described in Section 5.1. The site layout appears to have remained unchanged from the August 2021 aerial photograph. The following key site features pertinent to the DSI were observed (refer to photographs in Appendix).

- Northern portion of site used as a compound area by a civil company, Daracon Group (Daracon) (Photograph 1). Most of the compound has been covered with roadbase of varying thicknesses with a sprayed seal surfacing. Several temporary demountable offices, associated with the civil construction compound, have been constructed in the north western portions of the site. The compound is also used for the storage of vehicles and equipment associated with their works;
- Asphalt sealed former netball courts located in the central portion of the site (Photograph 2). Some stockpiling of soil observed to the immediate north of the former netball courts;
- Several temporary demountable office buildings have been erected in the central western portion of the site (Photograph 3);
- Several shipping containers used for storage of equipment observed in central eastern portion of carpark (Photograph 4);
- Asphalt sealed carpark covering most of the southern portion of site (Photograph 5); and
- Unsealed grassed slope to the immediate west of carpark in southern portion of site (Photograph 6).
- The demountables on-site generally appear to be relatively new in construction.
- Demountables were constructed on brick columns with fibre cement packers beneath in-between the structure and the column. Some fibre cement fragments were observed beneath the demountable structures.
- Suspected Synthetic Mineral Fibres (SMF) insulation to hot water systems was observed. The insulation was contained within the associated demountable structures.
- Lead spot tests were carried out in the field by DP's occupational hygienist. No positives for lead were detected in the paint.
- Electrical backing boards in the Daracon compound appeared relatively new. Detailed observation of these boards could not be carried out due to WHS concerns.

8. Conceptual Site Model

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

Potential Sources

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

- S1: Fill: Associated with levelling, demolition of former buildings and site formation.
  - COPC include metals, total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylene (BTEX), polycyclic aromatic hydrocarbons (PAH), polychlorinated biphenyls (PCB), organochlorine pesticides (OCP), organophosphorus pesticides (OPP), phenols and asbestos.
- S2: Former buildings on site: Demolition of previous buildings impacting the surficial soils.
  - COPC include asbestos, synthetic mineral fibres (SMF), lead (in paint) and PCB.

Potential Receptors

The following potential human receptors have been identified:

- R1: Current users [sports park];
- R2: Construction and maintenance workers;
- R3: End users [sports park]; and
- R4: Adjacent site users [residential].

The following potential environmental receptors have been identified:

- R5: Surface water [Strangers Creek];
- R6: Groundwater; and
- R7: Terrestrial ecology.

Potential Pathways

The following potential pathways have been identified:

- P1: Ingestion and dermal contact;
- P2: Inhalation of dust and/or vapours;
- P3: Surface water run-off;
- P4: Lateral migration of groundwater providing base flow to water bodies;

- P5: Leaching of contaminants and vertical migration into groundwater; and
- P6: Contact with terrestrial ecology.

Summary of Potentially Complete Exposure Pathways

A 'source–pathway–receptor' approach has been used to assess the potential risks of harm being caused to human or environmental receptors from contamination sources on or in the vicinity of the site, via exposure pathways (potential complete pathways). The possible pathways between the above sources (S1 and S2) and receptors (R1 to R6) are provided in Table 3.

Table 3: Summary of Potentially Complete Exposure Pathways

Source and COPC	Transport Pathway	Receptor	Risk Management Action
S1: Fill, Metals, TRH, BTEX, PAH, OCP, OPP, phenols and asbestos S2: Former buildings, asbestos, SMF, lead (in paint) and PCB S3: Vehicle Storage. TRH, BTWEX, PAH	P1: Ingestion and dermal contact P2: Inhalation of dust and/or vapours P3: Surface water run-off P4: Lateral migration of groundwater providing base flow to water bodies P5: Leaching of contaminants and vertical migration into groundwater P6: Contact with terrestrial ecology	R1: Current users [sports park] R2: Construction and maintenance workers R3: End users [sports park] R4: Adjacent site users [residential].	An intrusive investigation is recommended to assess possible contamination including testing of the soils and possibly groundwater.

9. Sampling and Analysis Quality Plan

9.1 Data Quality Objectives

This PSI 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 (2013). The DQO process is outlined as follows:

- State the problem;
- Identify the decision;
- Identify inputs into the decision;
- Define the boundary of the assessment;
- Develop a decision rule;

- Specify acceptable limits on decision errors; and
- Optimise the design for obtaining data.

9.2 Data Quality Indicators

The performance of the assessment in achieving the DQO was assessed through the application of data quality indicators (DQI) as defined by:

Precision: A quantitative measure of the variability (reproducibility) of data;

Accuracy: A quantitative measure of the closeness of reported data to the "true" value;

Representativeness: The confidence (expressed qualitatively) that data are representative of each media present on the site;

Completeness: A measure of the useable data from a data collection activity; and

Comparability: The confidence (expressed qualitatively) that data can be considered equivalent for each sampling and analytical event.

9.3 Soil Sampling Locations and Rationale

Environmental field work including drilling and soil sampling was undertaken between 25 August 2021 and 3 February 2022 in conjunction with DP's geotechnical investigation.

The borehole locations are shown on Drawing 1, Appendix A. The boreholes were located in readily accessible areas of the site and provided a reasonable coverage of the soil profile and contamination status.

Soil samples for contamination purposes were collected from 19 boreholes. Selected soil samples were analysed for the chemicals of concern listed in Section 8. Samples were selected based on site observations (fill type), and their location within the subsoil strata (*i.e.* fill or natural).

9.4 Soil Sampling Procedures

Environmental sampling was performed with reference to standard operating procedures. All sampling data was recorded on borehole logs (Appendix I) and samples selected for laboratory analysis were recorded on DP chain-of-custody (CoC) sheets (Appendix J). The general soil sampling procedure comprised:

- Soil samples were recovered directly from the augers;
- Use of disposable sampling equipment including disposable nitrile gloves;
- Transfer of samples into laboratory-prepared glass jars and capping immediately with Teflon lined lids;
- Labelling of sampling containers with individual and unique identification details, including project number, sample location and sample depth; and

- Placement of sample containers and zip-lock bags for asbestos analysis into a cooled, insulated and sealed container for transport to the laboratory.

Envirolab Services Pty Ltd (Envirolab), accredited by National Association of Testing Authorities (NATA) for the analysis undertaken, was employed to conduct the sample analysis.

9.5 Analytical Rationale

The analytical scheme for soil samples was designed to obtain an indication of the potential presence and possible distribution of identified contaminants of potential concern identified by the CSM, being metals, TRH, BTEX, PAH, OCP, OPP, PCB, phenols and asbestos. The results of the analytical testing were compared with the adopted site assessment criteria (SAC) discussed in Section 9.

The surface and near surface samples were selected for analysis, being the most likely samples to contain contaminants at the sampled locations.

Samples from demountable structures were carried out by DP's occupational hygienist to assess for potential hazardous materials (asbestos and lead).

9.6 Quality Assurance and Quality Control

The field QA/QC procedures for sampling were undertaken with reference to Douglas Partners' *Field Procedures Manual*.

The analytical laboratory used is (NATA) accredited and is required to conduct in-house QA/QC procedures (as outlined in Appendix K). These results are included in the laboratory certificates presented in Appendix J and are evaluated in Appendix K.

10. Site Assessment Criteria

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

The investigation and screening levels applied in the current investigation comprise levels adopted for a generic public open space such parks and playing fields land use scenario. The derivation of the SAC is included in Appendix G and the adopted SAC are listed on the summary analytical results tables in Appendix H.

11. Results

11.1 Field Observations

The borehole logs from the investigation are provided in Appendix I. Notes defining classification methods and terms used to describe the soils and rocks are included in Appendix B.

- Topsoil:
  - Clayey silt, gravelly and silty clay to depths ranging between 0.1 m and 0.3 m in all boreholes except Boreholes 206, 210 and 211;
- Fill:
  - Pavement materials (asphaltic concrete and roadbase in Bore 206) to depths of 50 mm to 150 mm;
  - Gravelly clay and sandy gravel with sand, concrete fragments, plastic and ripped shale to depths of 0.5 m to 1.1 m in Bores 205, 207, 210 and 211;
- Natural Soil:
  - Typically stiff to hard silty clay to depths of 3.2 m and 0.9 m in all boreholes except Bores 201, 203 and 211 and where natural clay was not encountered. Bore 204 included firm to stiff clay to 2.0 m depth;
- Weathered Rock:
  - Very low strength, pale grey and red-brown siltstone was encountered below depths of 0.15 m to greater than 2.3 m. Some extremely low strength seams and medium and high strength ironstone bands were encountered within these layers;
- Very Low, Low and Medium Strength Siltstone
  - Alternating bands of very low, low and medium strength with clay seams, highly to slightly weathered, highly fractured to fractured, grey siltstone at depths of 1.9 m to 6.3 m. Numerous bedding planes and some joints and crushed zones were observed in this layer
- Medium and High Strength Siltstone
  - High strength, fresh stained to fresh, slightly fractured, dark grey, siltstone at depths of 3.6 m to 8.0 m in Bores 204 and 209.

Free groundwater was not observed during auger drilling of the boreholes. The use of water as a drilling fluid prevented groundwater observations during rotary drilling and coring of the boreholes.

Groundwater levels were measured by experienced geotechnical engineer in the monitoring wells on four subsequent occasions. A summary of the groundwater levels measured to date are provided in Table 4.

Table 4: Results of Groundwater Measurements

Bore No.	Surface RL (m AHD)	Standpipe Measurements – Water Level							
		16 September 2021		7 October 2021		9 November 2021		10 November 2021	
		Depth (m)	RL (m AHD)	Depth (m)	RL (m AHD)	Depth (m)	RL (m AHD)	Depth (m)	RL (m AHD)
202	67.6	3.9	63.7	4.5	63.1	3.2	64.4	3.4	64.2
209	65.5	3.5	62.0	3.6	61.9	4.4	61.1	4.4	61.1

No free groundwater was observed during augering and the use of water as a drilling fluid prevented groundwater observations during rotary drilling and coring. Backfilling of the boreholes at the completion of drilling precluded long-term monitoring of the groundwater levels. It is noted, however, that groundwater levels are affected by preceding climatic conditions and soil/rock permeability, and can therefore fluctuate spatially, and with time.

11.2 Soil Laboratory Testing Results

The results of the laboratory analysis undertaken are presented in the results summary table in Appendix H (Tables H1 and H2). The full NATA laboratory certificates of analysis together with the chain of custody and sample receipt information are attached in Appendix J.

Reported concentrations of metals/metalloids, PAHs, TRH, BTEX, OCP, OPP, PCB, phenols and asbestos in the soil samples were below the adopted SAC with the following exceptions

- Sample BH203/0.0-0.1 m which reported TRH >C10-C16 at 140 mg/kg, exceeding the adopted ESL of 120 mg/kg.
- Sample 218/0.1 – 0.2 m and 220/0.1 – 0.2 m which reported Benzo(a)Pyrene at 0.76 mg/kg and 1.1 mg/kg respectively, exceeding the adopted ESL of 0.7 mg/kg.

The analytical results for contaminants BTEX, naphthalene, benzo(a)pyrene TEQ, phenol and PCB in the soil samples were below the practical quantitation limit (PQL).

The analytical results for contaminants arsenic, cadmium, chromium, lead, mercury, nickel, manganese, benzo(a)pyrene (BaP), total PAH, OCP and OPP were reported within the relevant SAC.

11.3 Asbestos Testing Results

Reported concentrations of asbestos in the soil samples were below the laboratory limit of reporting of 0.1 g/kg in all samples tested. No asbestos was detected in fibre cement samples obtained from beneath the demountable buildings by DP's occupational hygienist.

12. Discussion

The site history review indicates that the site has predominantly been used for residential purposes until the site was developed into sports fields between 1973 and 1991. It is possible that asbestos containing materials were used in the construction of the residential and associated structures based on the construction being prior to the 1980s. In addition, based on aerial photography of the site, permanent structures appear to have been constructed or demolished on-site.

Neighbouring land and nearby properties appear to have been used historically for agricultural, recreational and residential purposes over the last 90 years.

Twenty-nine soil samples collected from test locations across the site were tested for a range of common contaminants. For the soil samples tested, all reported concentrations of contaminants were below the adopted SAC except for minor EIL/ESL exceedance of TRH/C10-C16 at BH203/0.0-0.1 m, and Benzo(a)Pyrene at 218/0.1-0.2 m and 220/0.1 – 0.2m. These minor exceedances are not considered statistically significant. Furthermore, this material is likely to be removed as part of construction works on-site.

13. Conclusions and Recommendations

The scope of the Detailed Site Investigation (Contamination) included a desktop study, a site walkover, a CSM and limited intrusive investigation. Preliminary results indicate that there is a low potential for contamination associated with fill at the site and the demolition of previous buildings. With the exception of some minor EIL/ESL exceedances the limited amount of laboratory testing of soil samples did not indicate exceedances of the SAC.

The current investigation identified two potential areas of environmental concern (PAEC) that required investigation to characterise whether or not they pose an actual contamination risk to the proposed development. It is noted that these potential sources of contamination observed at the site are typical for the region and are considered by DP to unlikely pose a contamination constraint to the proposed development at this time.

Based on the findings of this investigation, DP concludes that the potential for contamination constraints at the site is considered to be relatively low. Given the absence of any indicators of significant soil contamination at the site at this time, groundwater investigations are not considered to be required at this time.

As with any site, there is always the potential that concealed structures and / or materials may be present at the site and isolated pockets of contamination may potentially exist. To appropriately manage any unexpected potential contamination issues encountered during development works, DP recommends the development and implementation of an Unexpected Finds Protocol. In addition, following removal of the demountable buildings and the Daracon Compound (including the existing roadbase) it is recommended that site that an environmental scientist inspect and test the ground.

14. 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.

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

15. Limitations

Douglas Partners (DP) has prepared this report for this project at corner Kennedy Avenue and Stone Mason Drive, Kellyville in accordance with DP's proposal dated 20 July 2021 and acceptance received from Mr Kael Williams dated 18 August 2021. The work was carried out under DP's Conditions of Engagement. This report is provided for the exclusive use of Paramatta National Rugby League Club Pty Ltd for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

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

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

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

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

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

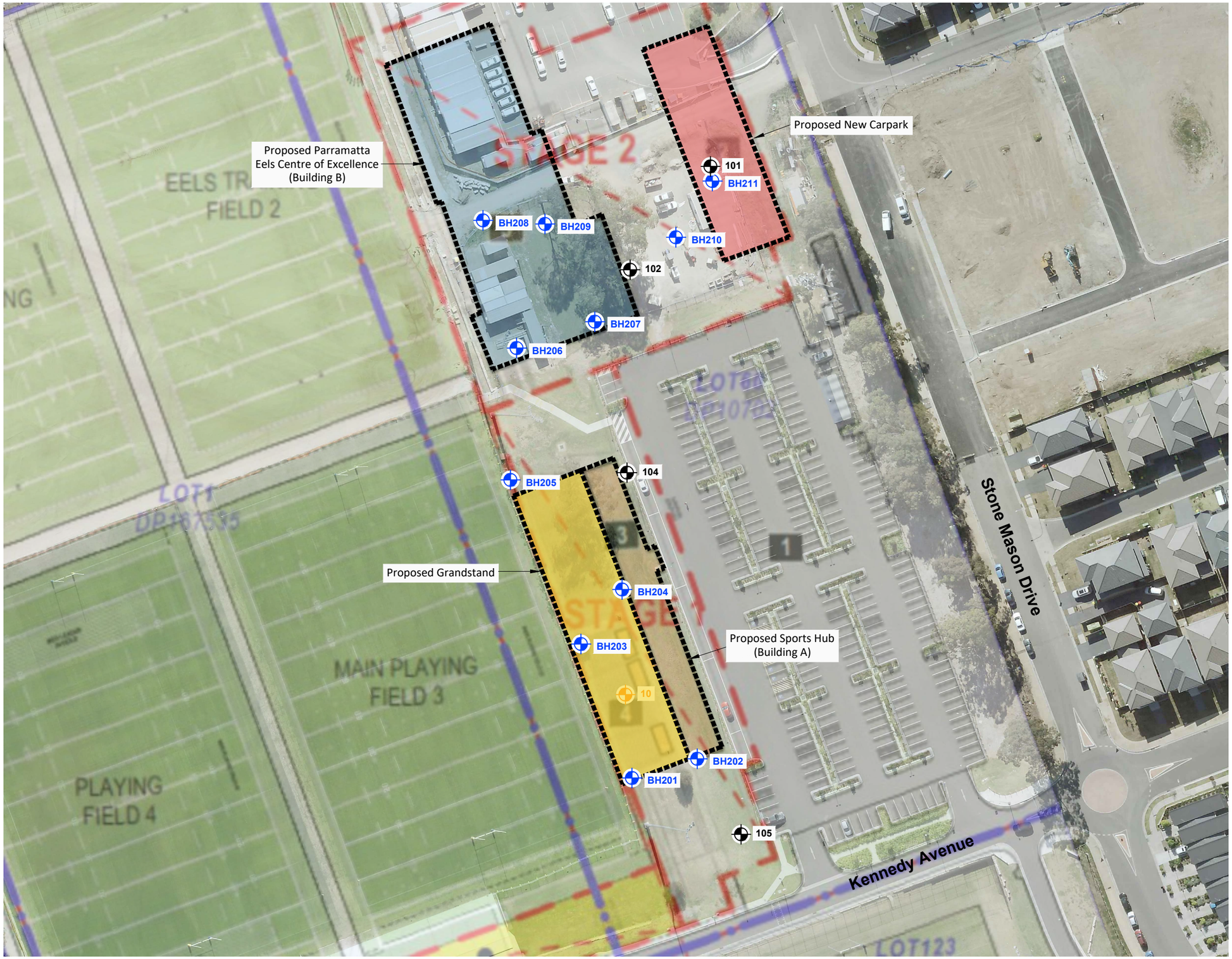
Asbestos has not been detected by observation or by laboratory analysis, either on the surface of the site, or in filling materials at the test locations sampled and analysed. Building demolition materials, such as concrete, brick, tile, were, however, located previously on-site, and these are considered as indicative of the possible presence of hazardous building materials (HBM), including asbestos.

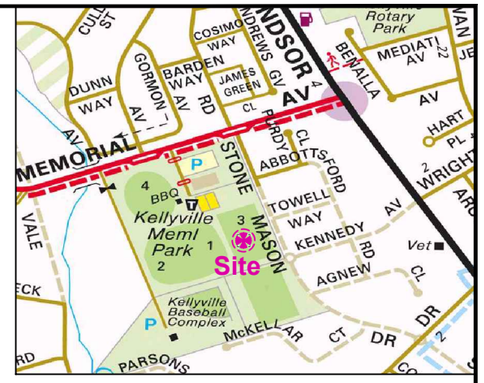
Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been sampled and analysed. This is either due to undetected variations in ground conditions or to budget constraints (as discussed above), or to parts of the site being inaccessible and not available for sampling, or to vegetation preventing visual inspection and reasonable access. It is therefore considered possible that 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 asbestos is not present.

Douglas Partners Pty Ltd

Appendix A

Drawings





Location Plan

N

0 10 20 30 40m

SCALE 1: 1,000 (A3)

LEGEND:-

- Borehole Location and Number
- Previous Bore Locations (2019)
- Previous Bore Location (2012)

NOTE:-

1. Test locations are approximate only and are shown with reference to existing site features.
2. Image obtained from Metromap. Date of imagery 16-08-2021.

Douglas Partners
Geotechnics | Environment | Groundwater

CLIENT: Paramatta National Rugby League Club Pty Ltd	
OFFICE: North West Sydney	DRAWN BY: JST
SCALE: As shown	DATE: 28 October 2021

TITLE: **Site and Test Location Plan**
PNRL Centre of Excellence and Community Facility
cnr Kennedy Avenue and Stone Mason Drive, Kellyville

PROJECT No:	207155.00
DRAWING No:	1
REVISION:	0

P:\NSW\207155.00\207155.00.D.001.Rev0.dwg

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

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.

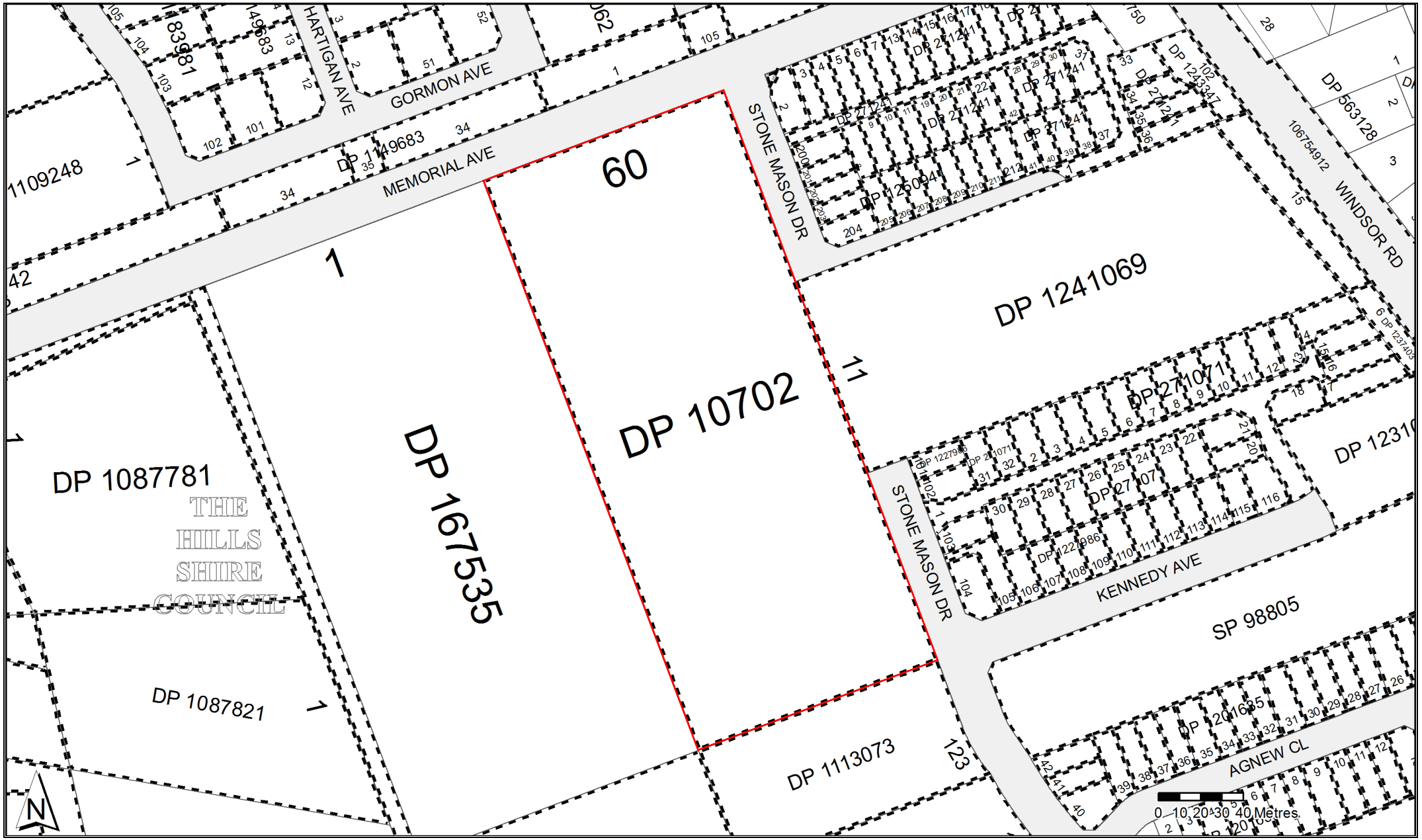
Appendix C

Historical Title Deeds

Cadastral Records Enquiry Report : Lot 60 DP 10702

Ref : Kellyville Park

Locality : KELLYVILLE
Parish : CASTLE HILL
LGA : THE HILLS SHIRE
County : CUMBERLAND

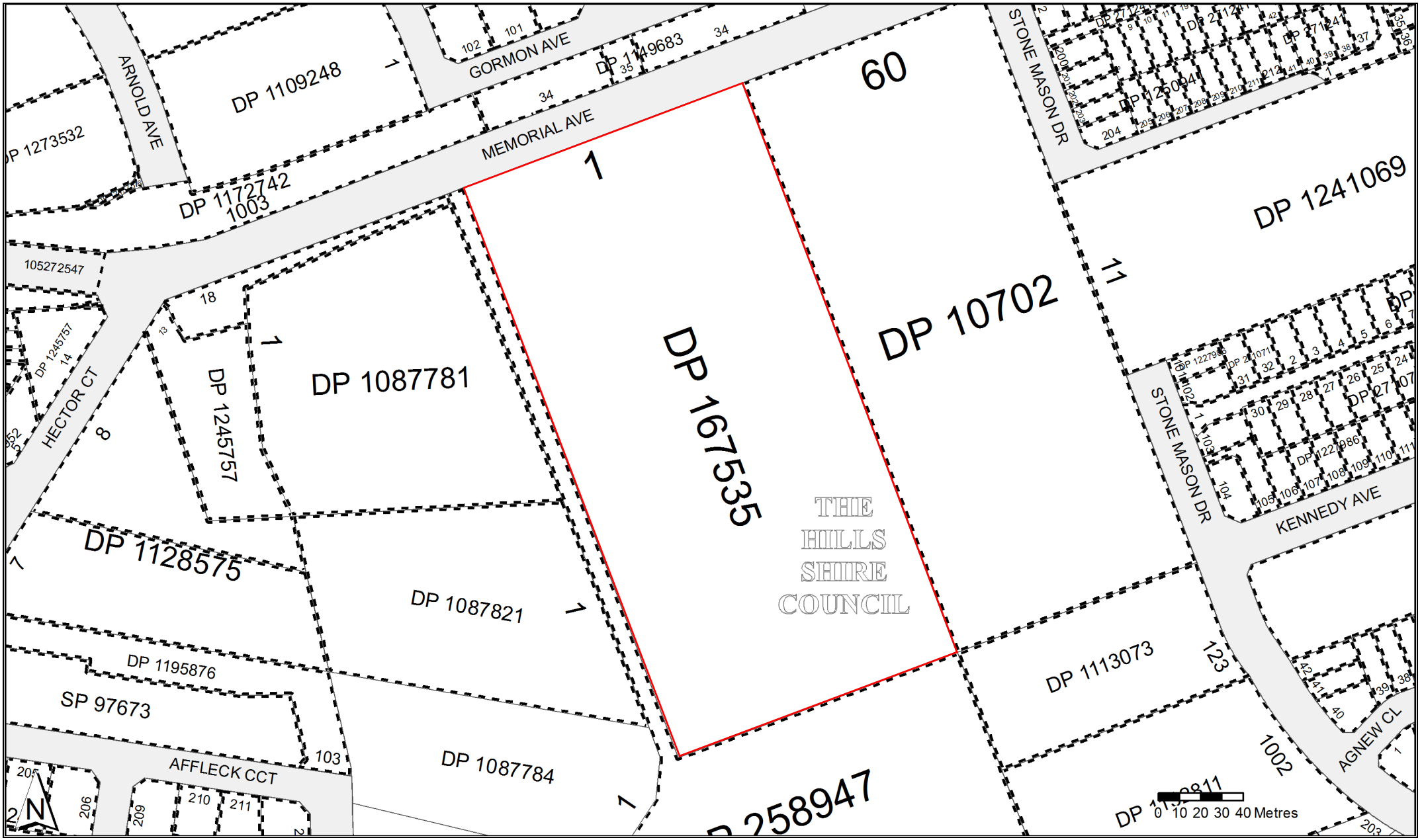


This information is provided as a searching aid only.Whilst every endeavour is made to ensure that current map, plan and titling information is accurately reflected, the Registrar General cannot guarantee the information provided. For ALL ACTIVITY PRIOR TO SEPTEMBER 2002 you must refer to the RGs Charting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

Cadastral Records Enquiry Report : Lot 1 DP 167535

Ref : Kellyville Park

Locality : KELLYVILLE
Parish : CASTLE HILL
LGA : THE HILLS SHIRE
County : CUMBERLAND



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

Baulkham Hills Shire

PLAN

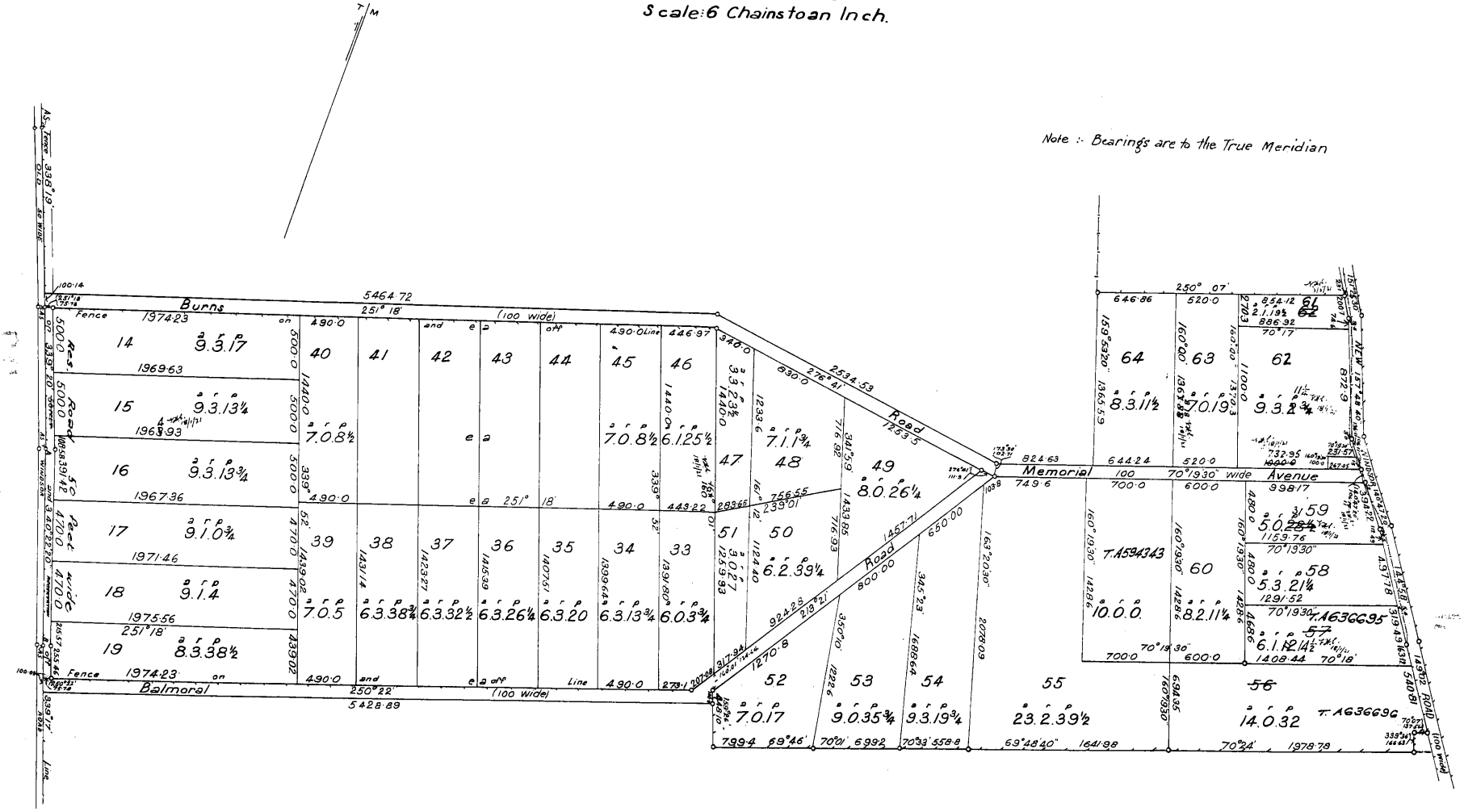
DP 10702

A654987
24-12-20

of subdivision of the Land Comprised in C.T. Vol: 1054 Fol: 137 & part of the Land in C.T. Vol: 1128 Fol: 77
" 3182 " 30

Parish of Castle Hill County of Cumberland

Scale: 6 Chains to an Inch.



Datum Line of Azimuth. A-B.

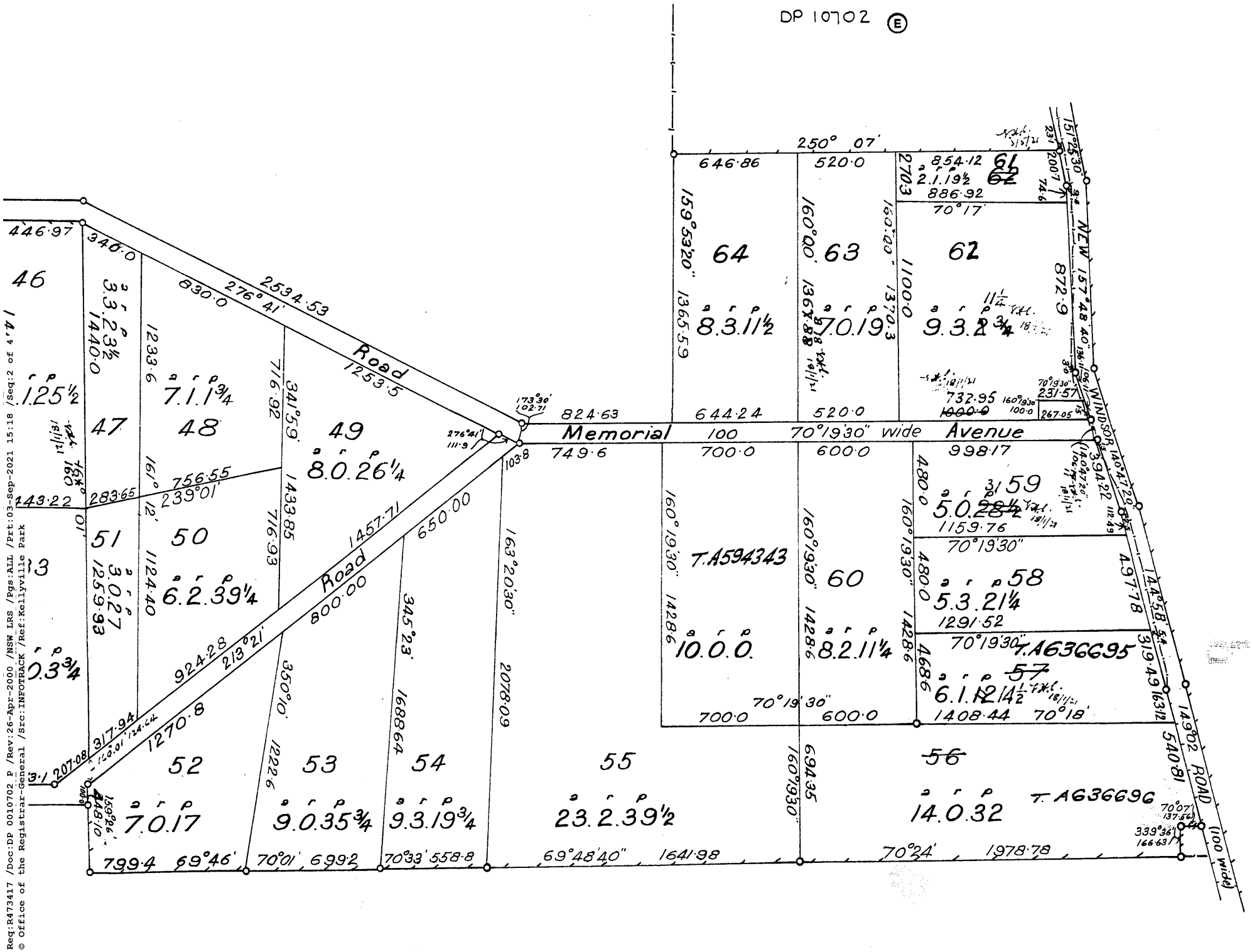
Subscribed and declared before me at Sydney
this Fifteenth day of December A.D. 1920

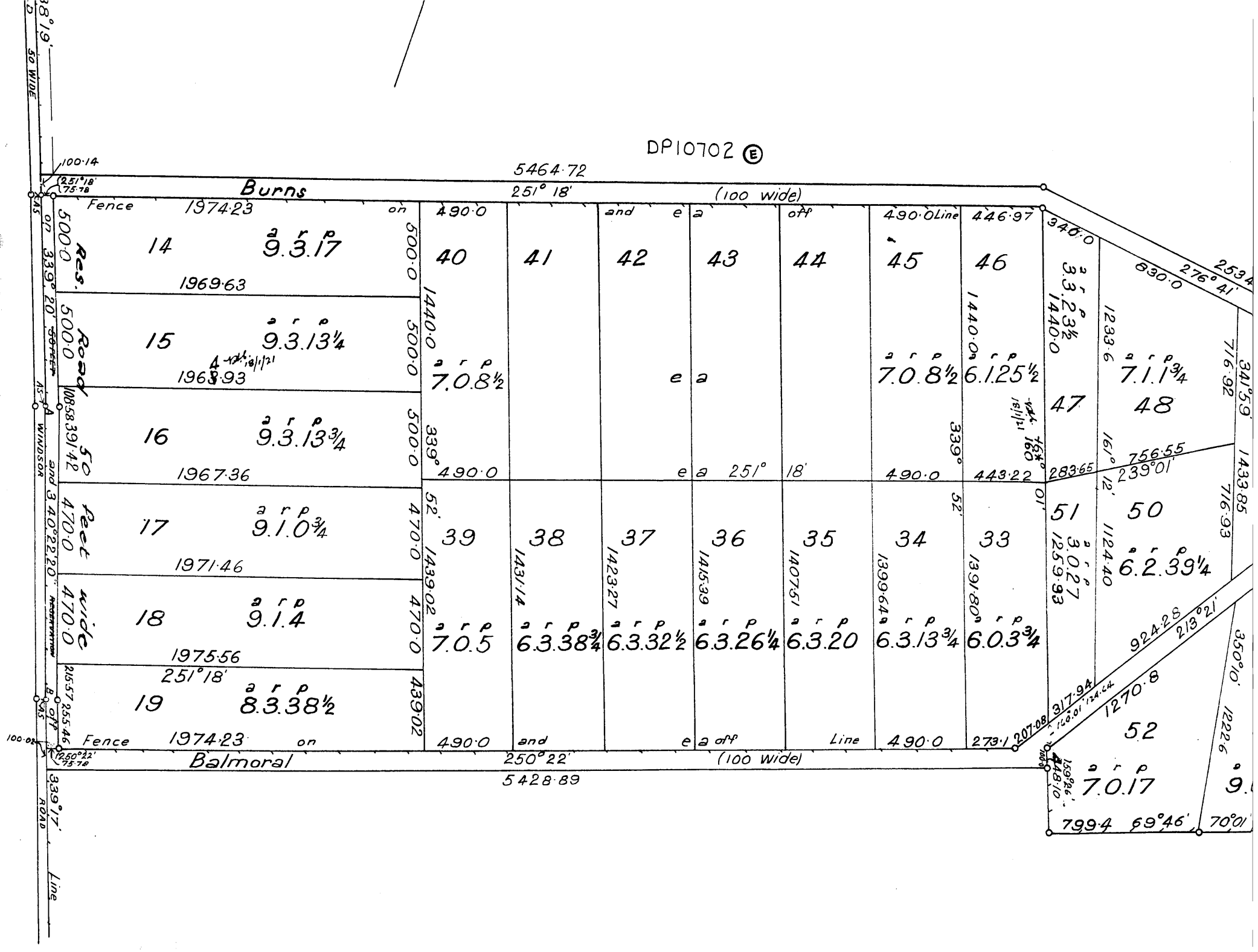
Alf. L. White J.P.

I Edward Henry Cowdery of Sydney
Licensed Surveyor, specially licensed under the Real Property Act do hereby solemnly and sincerely declare that the boundaries and measurements shown in this plan are correct for the purposes of the said Act, and that the survey of the land to which the plan relates has been made under my immediate supervision and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Oaths' Act, 1900.

E. H. Cowdery
Licensed Surveyor.

Date of Survey May 1920





A 594343

F.P. 167535

CONVERSION TABLE ADDED IN DEPARTMENT OF LANDS

DP 167535

LINKS	METRES
1.5	0.302
3	0.604
100	20.117
200.7	40.374
255.47	51.392
700	140.818
749.6	150.796
947.5	190.607
1428.6	287.389
1598.17	321.501
2824.6	568.219
5378.9	1082.063

AC	RD	P	HA
10	-	-	4.047

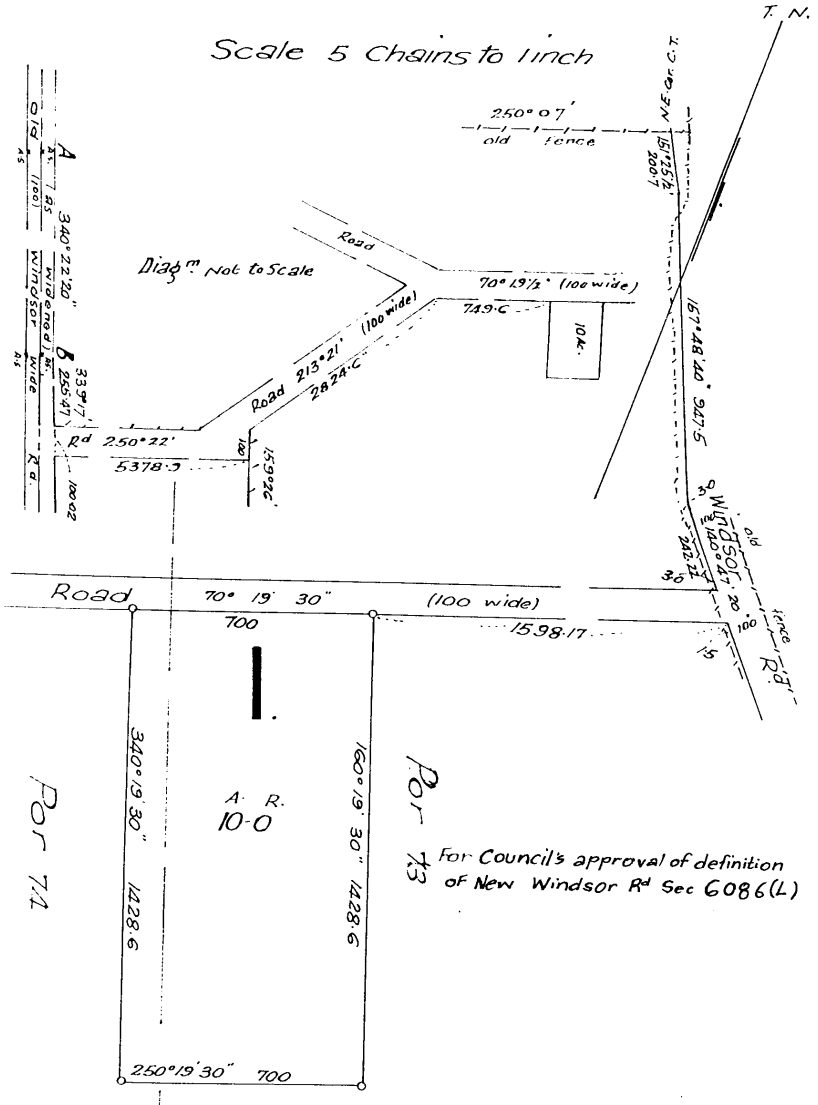
Baulkham Hills Shire

PLAN

of part of land comprised in Appn 5575

Parish of Castle Hill County of Cumberland

Scale 5 Chains to 1 inch



I Edward Henry Cowdery of Sydney Licensed Surveyor, specially Licensed under the Real Property Act, do hereby solemnly and, sincerely declare that the boundaries and measurements shown in this plan are correct for the purposes of the said Act, and that the survey of the land to which the plan relates has been made under my immediate supervision and I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the Oaths Act 1900.

Subscribed and declared before me at Sydney this [illegible] day of [illegible] A.D. 1920

Licensed Surveyor.

Date of Survey May 1920
Azimuth fr. Old Windsor Rd (Alias) line bearing 340°22'20"

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
3/9/2021 3:18PM

FOLIO: 60/10702

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 3867 FOL 47

Recorded	Number	Type of Instrument	C.T. Issue
16/2/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
25/7/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
7/5/1999	DP1001033	DEPOSITED PLAN	
27/5/1999	5782017	LEASE	
27/5/1999	5782018	LEASE	EDITION 1
23/8/1999	6049684	LEASE	EDITION 2
10/2/2000	6554044	DEPARTMENTAL DEALING	
7/2/2001	7393770	TRANSFER OF LEASE	
7/2/2001	7393771	TRANSFER OF LEASE	EDITION 3
16/8/2001	7415092	REJECTED - LEASE	
1/11/2001	7985892	SUB-LEASE	
1/11/2001	7985893	SUB-LEASE	
4/11/2002	9048558	LEASE	EDITION 4
7/5/2003	9553784	LEASE	EDITION 5
28/1/2004	AA9106	LEASE	EDITION 6
31/3/2004	AA408268	LEASE	EDITION 7
16/2/2006	AC117085	SUB-LEASE	
7/10/2009	AE968704	LEASE	
7/10/2009	AE968705	LEASE	EDITION 8
25/11/2009	AF144899	DEPARTMENTAL DEALING	
25/11/2009	AF44875	LEASE	
25/11/2009	AF44876	LEASE	EDITION 9

END OF PAGE 1 - CONTINUED OVER

SEARCH DATE
3/9/2021 3:18PM

FOLIO: 60/10702

Recorded	Number	Type of Instrument	C.T. Issue
2/3/2011	AG59730	LEASE	
2/3/2011	AG59731	LEASE	EDITION 10
20/6/2011	AG244539	LEASE	
20/6/2011	AG308432	LEASE	
20/6/2011	AG308433	LEASE	EDITION 11
11/10/2017	AM762987	SURRENDER OF LEASE	
11/10/2017	AM796925	DEPARTMENTAL DEALING	EDITION 12
15/9/2020	AP912711	DEPARTMENTAL DEALING	
9/7/2021	DP1275433	DEPOSITED PLAN	

*** END OF SEARCH ***

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 60/10702

SEARCH DATE	TIME	EDITION NO	DATE
3/9/2021	3:18 PM	12	11/10/2017

LAND

LOT 60 IN DEPOSITED PLAN 10702
AT KELLYVILLE
LOCAL GOVERNMENT AREA THE HILLS SHIRE
PARISH OF CASTLE HILL COUNTY OF CUMBERLAND
TITLE DIAGRAM DP10702

FIRST SCHEDULE

THE COUNCIL OF THE SHIRE OF BAULKHAM HILLS (T N434737)

SECOND SCHEDULE (4 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 AE968705 LEASE TO CROWN CASTLE AUSTRALIA PTY LIMITED OF THE PART SHOWN HATCHED IN PLAN (PAGE 27) WITH AE968705. COMMENCES: 1/1/2013. EXPIRES: 31/12/2017.
3 AF44876 LEASE TO CROWN CASTLE AUSTRALIA PTY LIMITED OF THE PART SHOWN HATCHED IN PLAN WITH AF44876. COMMENCES: 1/1/2013. EXPIRES: 31/12/2017.
4 AG308433 LEASE TO TELSTRA CORPORATION LIMITED OF THE PART SHOWN HATCHED IN PLAN WITH AG308433. COMMENCES 1.1.2013. EXPIRES: 31/12/2017.

NOTATIONS

DP1275433 PLAN OF PROPOSED EASEMENT

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

Historical Title

NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE
3/9/2021 3:18PM

FOLIO: 1/167535

First Title(s): SEE PRIOR TITLE(S)
Prior Title(s): VOL 3090 FOL 63

Recorded	Number	Type of Instrument	C.T. Issue
18/2/1989		TITLE AUTOMATION PROJECT	LOT RECORDED FOLIO NOT CREATED
26/6/1989		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED

*** END OF SEARCH ***

Received: 03/09/2021 15:18:55

Title Search

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 1/167535

SEARCH DATE	TIME	EDITION NO	DATE
3/9/2021	3:18 PM	-	-

VOL 3090 FOL 63 IS THE CURRENT CERTIFICATE OF TITLE

LAND

LOT 1 IN DEPOSITED PLAN 167535
LOCAL GOVERNMENT AREA THE HILLS SHIRE
PARISH OF CASTLE HILL COUNTY OF CUMBERLAND
TITLE DIAGRAM DP167535

FIRST SCHEDULE

THE COUNCIL OF THE SHIRE OF BAULKHAM HILLS (T A615817)

SECOND SCHEDULE (2 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 K200000P CAVEAT BY THE REGISTRAR GENERAL FORBIDDING UNAUTHORISED DEALINGS WITH PUBLIC RESERVES

NOTATIONS

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

Received: 03/09/2021 15:18:10

Appendix D

Historical Aerial Photographs

Legend

Approximate Site Boundary

1 January 1943

1 October 1955

70 0 70 140 210 280 m

Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: Paramatta National Rugby League Club Pty Ltd		TITLE: **Historical Aerial Photos**	PROJECT No:207155.00
OFFICE: NW Sydney	DRAWN BY: KN	**PNRL Centre of Excellence and Community Facility**	DRAWING No: 2
SCALE: 1:2510 @ A3	DATE: 28.08.21	**corner Kenny Avenue and Stone Mason Drive, Kellyville**	REVISION: 0

Legend

Approximate Site Boundary

1 January 1970

18 August 1991

70 0 70 140 210 280 m

Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: Paramatta National Rugby League Club Pty Ltd		
OFFICE: NW Sydney	DRAWN BY: KN	
SCALE: 1:2510 @ A3	DATE: 28.08.21	

TITLE: **Historical Aerial Photos**
PNRL Centre of Excellence and Community Facility
corner Kenny Avenue and Stone Mason Drive, Kellyville

PROJECT No:	207155.00
DRAWING No:	3
REVISION:	0

Legend

Approximate Site Boundary

1 January 2000

40 0 40 80 120 160 m

31 January 2011

Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: Paramatta National Rugby League Club Pty Ltd		TITLE:	**Historical Aerial Photos**
OFFICE: NW Sydney	DRAWN BY: KN		**PNRL Centre of Excellence and Community Facility**
SCALE: 1:1500 @ A3	DATE: 28.08.21		**corner Kenny Avenue and Stone Mason Drive, Kellyville**

PROJECT No:	207155.00
DRAWING No:	4
REVISION:	0

Legend

Approximate Site Boundary

40 0 40 80 120 160 m

Douglas Partners
Geotechnics / Environment / Groundwater

CLIENT: Paramatta National Rugby League Club Pty Ltd	
OFFICE: NW Sydney	DRAWN BY: KN
SCALE: 1:1500 @ A3	DATE: 28.08.21

TITLE: **Historical Aerial Photos**
PNRL Centre of Excellence and Community Facility
corner Kenny Avenue and Stone Mason Drive, Kellyville

PROJECT No:	207155.00
DRAWING No:	5
REVISION:	0

Appendix E

SafeWork Hazardous Chemicals Search, Council Planning Certificate

THE HILLS SHIRE COUNCIL
3 Columbia Court, Norwest NSW 2153
PO Box 7064, Norwest 2153
ABN 25 034 494 656 | DX 9966 Norwest

PLANNING CERTIFICATE UNDER SECTION 10.7 (2) & (5)

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 AS AMENDED.

Certificate Number:	**70744**
Reference:	207155.00:200671
Issue Date:	27 August 2021
Receipt No:	6653889
Fee Paid:	$ 133.00

ADDRESS:	Kellyville Memorial Park Reserve No 126, 6Z-8Z Memorial Avenue, KELLYVILLE NSW 2155
DESCRIPTION:	Lot 1 DP 167535, Lot 1002 DP 1132811, Lot 10 DP 258947, Lot 60 DP 10702, Lot 123 DP 1113073

The land is zoned:
Zone RE1 Public Recreation

The following prescribed matters apply to the land to which this certificate relates:

The Environmental Planning and Assessment Amendment Act 1997 commenced operation on 1 July 1998. As a consequence of this Act, the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment Regulation 2000.

PLEASE NOTE: THIS CERTIFICATE IS AUTOMATICALLY GENERATED. IT MAY CONTAIN EXCESSIVE SPACES AND/OR BLANK PAGES.

THIS CERTIFICATE IS DIRECTED TO THE FOLLOWING MATTERS PRESCRIBED UNDER SECTION 10.7 (2) OF THE ABOVE ACT.

1. Names of relevant planning instruments and DCPs

(1) The name of each environmental planning instrument that applies to the carrying out of development on the land.

(A) **Local Environmental Plans**

The Hills Local Environmental Plan 2019, as amended, applies to all land in the Shire unless otherwise stated in this certificate.

State Environmental Planning Policies

SEPP No.19 - Bushland In Urban Areas
SEPP No.21 - Caravan Parks
SEPP No.33 - Hazardous And Offensive Development
SEPP No.50 - Canal Estate Development
SEPP No.55 - Remediation Of Land
SEPP No.64 - Advertising And Signage
SEPP No.65 - Design Quality Of Residential Apartment Development
SEPP No.70 - Affordable Housing (Revised Schemes)
SEPP (Building Sustainability Index: Basix) 2004
SEPP (State Significant Precincts) 2005
SEPP (Mining, Petroleum Production And Extractive Industries) 2007
SEPP (Miscellaneous Consent Provisions) 2007
SEPP (Infrastructure) 2007
SEPP (Exempt and Complying Development Codes) 2008
SEPP (Affordable Rental Housing) 2009
SEPP (State and Regional Development) 2011
SEPP (Vegetation in Non-Rural Areas) 2017
SEPP (Educational Establishments and Child Care Facilities) 2017
SEPP (Primary Production and Rural Development) 2019
Sydney Regional Environmental Plan No. 9 Extractive Industry (No.2 - 1995)
Sydney Regional Environmental Plan No. 20 Hawkesbury – Nepean River (No.2 – 1997)
SEPP (Western Sydney Aerotropolis) 2020

The following SEPP's may apply to the land. Please refer to **'Land to which Policy applies'** for each individual SEPP.

SEPP (Housing For Seniors Or People With A Disability) 2004

(2) The name of each **proposed environmental planning instrument** that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (unless the Secretary has notified the council that the making of the proposed instrument has been deferred indefinitely or has not been approved).

(A) **Proposed Local Environmental Plans**

No Proposed Local Environmental Plans apply to this land.

(B) **Proposed State Environmental Planning Policies**

Draft State Environmental Planning Policy (Environment)
Draft Remediation of Land State Environmental Planning Policy
Draft State Environmental Planning Policy (Short-term Rental Accommodation) 2019
Draft Activation Precincts State Environmental Planning Policy
Draft Housing Diversity State Environmental Planning Policy
Draft State Environmental Planning Policy (Housing) 2021

(3) The name of each development control plan that applies to the carrying out of development on the land.

The Hills Development Control Plan 2012

Note: the land is within The Hills Development Control Plan 2012 Part D map sheet. Refer Council's website www.thehills.nsw.gov.au to view the map sheet.

(4) In this clause, proposed environmental planning instrument includes a planning proposal for a LEP or a draft environmental planning instrument.

2. Zoning and land use under relevant LEPs

For each environmental planning instrument or proposed instrument referred to in clause 1 (other than a SEPP or proposed SEPP).

(A) The Hills Local Environmental Plan 2019 applies to the land unless otherwise stated in this certificate and identifies the land to be:

Zone RE1 Public Recreation

(B) The purposes for which the instrument provides that development may be carried out within the zone without development consent:

Refer Attachment 2(B)

Also refer to the applicable instrument for provisions regarding Exempt Development

(C) The purposes for which the instrument provides that development may not be carried out within the zone except with development consent:

Refer Attachment 2(B)

Also refer to the applicable instrument for provisions regarding Complying Development

(D) The purposes for which the instrument provides that development is prohibited in the zone:

Refer Attachment 2(B)

(E) Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed?

The Hills Local Environmental Plan 2019?

NO

Any other Planning Proposal?

NO

(F) Whether the land includes or comprises critical habitat?

The Hills Local Environmental Plan 2019?

NO

Any other Planning Proposal?

NO

(G) Whether the land is in a conservation area (however described)?

The Hills Local Environmental Plan 2019?

NO

Any Other Planning Proposal?

NO

(H) Whether an item of environmental heritage (however described) is situated on the land?

The Hills Local Environmental Plan 2019?

NO

Any other Planning Proposal?

NO

2A. Zoning and land use under State Environmental Planning Policy (Sydney Region Growth Centres) 2006

To the extent that the land is within any zone (however described) under:

(a) Part 3 of the *State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (the 2006 SEPP), or*

(b) a Precinct Plan (within the meaning of the 2006 SEPP), or

(c) a proposed Precinct Plan that is or has been the subject of community consultation or on public exhibition under the ACT.

(A) State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan) applies to the land unless otherwise stated in this certificate and identifies the land to be:

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan) does not apply.

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan) applies to the land unless otherwise stated in this certificate and identifies the land to be:

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan) does not apply.

Note: This precinct plan applies to land within the Box Hill Precinct or Box Hill Industrial Precinct.

(B) The purposes for which the instrument provides that development may be carried out within the zone without development consent:

Refer Attachment 2(B)

Also refer to the applicable instrument for provisions regarding Exempt Development.

(C) The purposes for which the instrument provides that development may not be carried out within the zone except with development consent:

Refer Attachment 2(B)

Also refer to the applicable instrument for provisions regarding Complying Development

(D) The purposes for which the instrument provides that development is prohibited in the zone:

Refer Attachment 2(B)

(E) Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed?

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan)?

NO

Any amendments to State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan)?

NO

Any amendments to State Environmental Planning Policy (Sydney Region Growth Centres 2006 (Appendix 11 The Hills Growth Centre Precincts Plan)?

NO

(F) Whether the land includes or comprises critical habitat?

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan)?

NO

(G) Whether the land is in a conservation area (however described)?

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan)?

NO

(H) Whether an item of environmental heritage (however described) is situated on the land?

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct Plan)?

NO

State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 11 The Hills Growth Centre Precincts Plan)?

NO

3. Complying Development

(1) The extent to which the land is land on which complying development may be carried out under each of the codes for complying development because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1)

(c3) and 1.19 of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*.

(2) The extent to which complying development may not be carried out on that land because of the provisions of clauses 1.17A (1) (c) to (e), (2), (3) and (4), 1.18 (1) (c3) and 1.19 of that Policy and the reasons why it may not be carried out under those clauses.

(3) If the council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land, a statement that a restriction applies to the land, but it may not apply to all of the land, and that council does not have sufficient information to ascertain the extent to which complying development may or may not be carried out on the land.

Housing Code, Rural Housing Code, Low Rise Housing Diversity Code and Greenfield Housing Code
Complying development under the Housing Code, Rural Housing Code, Low Rise Housing Diversity Code and Greenfield Housing Code **may not** be carried out on the land **unless** the development is carried out on any part of the lot that is not affected by the following specific land exemption/s:

The land is reserved for a public purpose in the environmental planning instrument. Refer to the Land Zoning Map of the applicable instrument.

Housing Alterations Code and General Development Code
Complying Development under the Housing Alterations Code and General Development Code **may be** carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code
Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on the land **unless** the development is carried out on any part of the lot that is not affected by the following specific land exemption/s:

The land is reserved for a public purpose in the environmental planning instrument. Refer to the Land Zoning Map of the applicable instrument.

Commercial and Industrial Alterations, Container Recycling Facilities, Subdivision, Demolition and Fire Safety Codes
Complying Development under the Commercial and Industrial Alterations, Container Recycling Facilities, Subdivision, Demolition and Fire Safety Codes **may be** carried out on the land.

Note: Where reference is made to an applicable map, this information can be sourced from the following websites:

The Hills Local Environmental Plan 2019 - www.thehills.nsw.gov.au
State Environmental Planning Policy (Sydney Region Growth Centres) 2006 (Appendix 2 North Kellyville Precinct) or (Appendix 11 The Hills Growth Centre Precincts Plan) – http://www.planning.nsw.gov.au/Plans-for-your-area/Priority-Growth-Areas-and-Precincts/North-West-Priority-Growth-Area

4, 4A **(Repealed)**

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

Whether the owner (or any previous owner) of the land has consented in writing to the land being subject to annual charges under section 496B of the *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

NO

Note. "Existing coastal protection works" are works to reduce the impact of coastal hazards on land (such as seawalls, revetments, groynes and beach nourishment) that existed before the commencement of section 553B of the *Local Government Act 1993*.

5. Mine subsidence

Whether or not the land is proclaimed to be a mine subsidence district within the meaning of section 15 of the *Coal Mine Subsidence Compensation Act 2017*?

NO

6. Road widening and road realignment

Whether or not the land is affected by any road widening or road realignment under -

(A) Division 2 of Part 3 of the *Roads Act 1993*; or

NO

(B) any environmental planning instrument; or

NO

(C) any resolution of council?

a) The Hills Development Control Plan 2012?

YES

The Hills Development Control Plan 2012 identifies the land as being affected by a proposed road or road widening. Refer Part 1(3) of this certificate for the applicable map sheet.

b) Any other resolution of council?

NO

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

Whether or not the land is affected by a policy:

(a) adopted by council, or

(b) adopted by any other public authority and notified to the council for the express purpose of its adoption by that authority being referred to in planning certificates issued by the council,

that restricts the development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding)?

Council's policies on hazard risk restrictions are as follows:

(i) Landslip

a) By The Hills Local Environmental Plan 2019 zoning?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

b) By The Hills Local Environmental Plan 2019 local provision?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

c) By The Hills Development Control Plan 2012 provision?

NO

No resolution has been adopted but attention is directed to the fact that there are areas within the Shire liable to landslip.

(ii) Bushfire

YES

Please note this is a statement of policy only and NOT a statement on whether or not the property is affected by bushfire. That question is answered in Section 11 of this certificate.

The NSW Rural Fire Service Guidelines entitled 'Planning for Bushfire Protection 2018'. Development subject to bushfire risk will be required to address the requirements in these guidelines and can be downloaded off the RFS web site www.rfs.nsw.gov.au

The Development Control Plan may also contain provisions for development on Bushfire Prone Land and Bushfire Hazard Management. Refer Part 1(3) of this certificate for the applicable Development Control Plan.

(iii) Tidal inundation

NO

Please note this is a statement of Council policy only and NOT a statement on whether or not the property is affected by tidal inundation.

(iv) Subsidence

NO

Please note this is a statement of Council policy only and NOT a statement on whether or not the property is affected by subsidence.

(v) Acid sulphate soils

NO

(vi) Land contamination

NO

Please note this is a statement of Council policy only and NOT a statement on whether or not the property is affected by contamination or potential contamination.

(vii) Any other risk

NO

7A. Flood related development controls

(1) If the land or part of the land is within the flood planning area and subject to flood related development controls.

YES

(2) If the land or part of the land is between the flood planning area and the probable maximum flood and subject to flood related development controls.

UNKNOWN

Please contact Council's Waterways team on 9843 0555 for information on the flood planning area and probable maximum flood.

(3) In this clause—
***flood planning area* has the same meaning as in the Floodplain Development Manual.**
***Floodplain Development Manual* means the *Floodplain Development Manual* (ISBN 0 7347 5476 0) published by the NSW Government in April 2005.**
***probable maximum flood* has the same meaning as in the Floodplain Development Manual.**

8. Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

The Hills Local Environmental Plan 2019?

NO

Any other Planning Proposal?

NO

State Environmental Planning Policy?

NO

Proposed State Environmental Planning Policy?

NO

9. Contributions plans

The name of each contributions plan applying to the land:

THE HILLS SECTION 7.12
12 - BALMORAL RD

9A. Biodiversity Certified Land

Whether the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*?

NO

Note: Biodiversity certified land includes land certified under Part 7AA of the *Threatened Species Conservation Act 1995* that is taken to be certified under Part 8 of the *Biodiversity Conservation Act 2016*.

10. Biodiversity stewardship sites

Whether the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* (but only if the council has been notified of the existence of the agreement by the Chief Executive of the Office of Environment and Heritage)?

NO

Note: Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardship agreements under Part 5 of the *Biodiversity Conservation Act 2016*.

10A. Native vegetation clearing set asides

Whether the land contains a set aside area under section 60ZC of the *Local Land Services Act 2013* (but only if the council has been notified of the existence of the set aside area by Local Land Services or it is registered in the public register under that section)?

NO

11. Bush fire prone land

Has the land been identified as bush fire prone land?

NO

12. Property vegetation plans

Has the council been notified that a property vegetation plan approved under Part 4 of the *Native Vegetation Act 2003* (and that continues in force) applies to this land?

NO

13. Orders under Trees (Disputes Between Neighbours) Act 2006

Whether an order has been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on this land (but only if the council has been notified of the order)?

NO

14. Directions under Part 3A

Whether there is a direction by the Minister in force under section 75P (2)(c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect?

NO

15. Site compatibility certificates and conditions for seniors housing

(a) Whether there is a current site compatibility certificate (seniors housing) of which council is aware, issued under *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* in respect of proposed development on the land?

NO

(b) Whether there are any terms of a kind referred to in clause 18(2) of *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* that have been imposed as a condition of consent to a development application granted after 11 October 2007 in respect of the land?

NO

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

Whether there is a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools or TAFE establishments), of which the council is aware, in respect of proposed development on the land?

NO

17. Site compatibility certificates and conditions for affordable rental housing

(1) Whether there is a current site compatibility certificate (affordable rental housing), of which the council is aware, in respect of proposed development on the land?

NO

(2) Whether there are any terms of a kind referred to in clause 17(1) or 38(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that have been imposed as a condition of consent to a development application in respect of the land?

NO

18. Paper subdivision information

(1) The name of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.

NO DEVELOPMENT PLAN APPLIES

(2) The date of any subdivision order that applies to the land.

NO SUBDIVISION ORDER APPLIES

(3) Words and expressions used in this clause have the same meaning as they have in Part 16C of this Regulation.

19. Site verification certificates

Whether there is a current site verification certificate, of which the council is aware, in respect of the land?

NO

Note. A site verification certificate sets out the Secretary's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land - see Division 3 of Part 4AA of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.*

20. Loose-fill asbestos insulation

Does the land include any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989*) that is listed on the Loose-Fill Asbestos Insulation Register that is required to be maintained under that Division?

Council has **not** been notified by NSW Fair Trading that the land includes any residential premises that are listed on the register. Refer to the NSW Fair Trading website at www.fairtrading.nsw.gov.au to confirm that the land is not listed on this register.

Note: There is potential for loose-fill asbestos insulation in residential premises that are not listed on the Register. Contact NSW Fair Trading for further information.

21. Affected building notices and building product rectification orders

(1) Whether there is any affected building notice of which the council is aware that is in force in respect of the land?

NO

(2) (a) Whether there is any building product rectification order of which the council is aware that is in force in respect of the land and has not been fully complied with?

NO

(b) Whether any notice of intention to make a building product rectification order of which the council is aware has been given in respect of the land and is outstanding?

NO

(3) In this clause:

affected building notice has the same meaning as in Part 4 of the *Building Products (Safety) Act 2017*.
building product rectification order has the same meaning as in the *Building Products (Safety) Act 2017*.

22. State Environmental Planning Policy (Western Sydney Aerotropolis) 2020

For land to which State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 applies, whether the land is—

(a) in an ANEF or ANEC contour of 20 or greater as referred to in clause 19 of that Policy, or

NO

(b) shown on the Lighting Intensity and Wind Shear Map under that Policy, or

NO

(c) shown on the Obstacle Limitation Surface Map under that Policy, or

NO

(d) in the "public safety area" on the Public Safety Area Map under that Policy, or

NO

(e) in the "3 kilometre wildlife buffer zone" or the "13 kilometre wildlife buffer zone" on the Wildlife Buffer Zone Map under that Policy.

NO

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

(a) that the land to which the certificate relates is significantly contaminated land within the meaning of that Act – if the land (or part of the land) is significantly contaminated land at the date when the certificate is issued,

NO

(b) that the land to which the certificate relates is subject to a management order within the meaning of that Act – if it is subject to such an order at the date when the certificate is issued,

NO

(c) that the land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of that Act – if it is the subject of such an approved proposal at the date when the certificate is issued,

NO

(d) that the land to which the certificate relates is subject to an ongoing maintenance order within the meaning of the Act – if it is subject to such an order at the date when the certificate is issued,

NO

(e) that the land to which the certificate relates is the subject of a site audit statement within the meaning of the Act – if a copy of such a statement has been provided at any time to the local authority issuing the certificate.

NO

THIS PART IS DIRECTED TO THE FOLLOWING MATTERS PRESCRIBED UNDER SECTION 10.7 (5) OF THE ABOVE ACT

NOTE: "When information pursuant to Section 10.7 (5) is requested the council is under no obligation to furnish any of the information supplied herein pursuant to that Section. Council draws your attention to Section 10.7 (6), which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate."

A. Whether there are any provisions applying to the land that control the management of trees and bushland?

YES

Part C Section 3 of The Hills Development Control Plan 2012 contain provisions for the control and management of actions in respect of trees and bushland.

B. Does the land contain a foreshore area as identified on The Hills Local Environmental Plan 2019 Foreshore Building Line map?

NO

C. Is the land subject to a listing on a public register maintained by Council under the Protection of the Environment Operations Act 1997?
Note: This information relates specifically to the land and includes any existing or in force environmental notice, civil proceedings or prosecutions under the Act (where notified to Council).

NO

D. Is the land affected by any special provisions of Sydney Regional Environmental Plan No 9 – Extractive Industry (No 2 – 1995)?

NO

E. Is the land affected by a restricted development area as identified under The Hills Development Control Plan 2012?

NO

F. Is the land within an area where a Special Infrastructure Contribution, as determined by the Minister for Planning and Infrastructure, applies?

YES

The land is within the Special Infrastructure Contribution – Western Sydney Growth Areas under the *Environmental Planning and Assessment Act 1979*.

Refer to the Department of Planning and Infrastructure for further information www.planning.nsw.gov.au

G. Is the land in the vicinity of a heritage item or heritage conservation area as described in The Hills Local Environmental Plan 2019 **OR** State Environmental Planning Policy (Sydney Region Growth Centres) 2006?

NO

H. Whether Council has executed a Voluntary Planning Agreement within the meaning of S7.4 of the Environmental Planning and Assessment Act 1979, as amended, in relation to the land?

NO

I. Is the land within or adjacent to the Sydney Metro Northwest as identified on the maps prepared by Transport NSW?

NO

J. Does the land contain a proposed road as identified within a Development Control Plan under State Environmental Planning Policy (Sydney Region Growth Centres) 2006?

NO

K. Has Council been notified by NSW Land and Property Information that the land is affected by a plan of acquisition for railway purposes (Sydney Metro Northwest)?

NO

L. Has Council been notified of the land being listed on the NSW Government's Combustible Cladding Register under the Environmental Planning and Assessment Regulation 2000?

NO

Note: There is potential for combustible cladding to be present on premises that are not listed on the Register. Contact Council's Regulatory Team for further information.

THE HILLS SHIRE COUNCIL

This land has frontage to a "Classified Road". Roads and Maritime Services, 27-31 Argyle St, Parramatta, is the responsible authority for classified roads and should be consulted for any road widening proposals.

MICHAEL EDGAR
GENERAL MANAGER

Per:

PLEASE NOTE: COUNCIL RETAINS THE ELECTRONIC ORIGINAL OF THIS CERTIFICATE. WHERE THIS CERTIFICATE REFERS TO INFORMATION DISPLAYED ON COUNCIL'S WEBSITE OR TO ANY EXTERNAL WEBSITE, IT REFERS TO INFORMATION DISPLAYED ON THE WEBSITE ON THE DATE THIS CERTIFICATE IS ISSUED.

ATTACHMENT 2(B)

Zone RE1 Public Recreation

1 Objectives of zone

- To enable land to be used for public open space or recreational purposes.
- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

2 Permitted without consent

Environmental protection works

3 Permitted with consent

Aquaculture; Boat launching ramps; Building identification signs; Business identification signs; Car parks; Centre-based child care facilities; Community facilities; Emergency service facilities; Environmental facilities; Information and education facilities; Jetties; Kiosks; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres; Restaurants or cafés; Roads; Take away food and drink premises; Water recreation structures

4 Prohibited

Any development not specified in item 2 or 3

NOTE: This land use table should be read in conjunction with the Dictionary at the end of The Hills LEP 2019 which defines words and expressions for the purpose of the plan.

NOTE: Activities permitted without development consent are still subject to other provisions in Environmental Planning Instruments and/or Acts.

Locked Bag 2906, Lisarow NSW 2252
Customer Experience 13 10 50
ABN 81 913 830 179 | www.safework.nsw.gov.au

Our Ref: D21/143809

2 September 2021

Gavin Boyd
Douglas Partners Pty Ltd
gavin.boyd@douglaspartners.com.au

Dear Gavin,

RE SITE: 6Z-8Z Memorial Avenue Kellyville NSW 2155

I refer to your site search request received by SafeWork NSW requesting information on Storage of Hazardous Chemicals for the above sites.

A search of the records held by SafeWork NSW has not located any records pertaining to the above-mentioned premises.

For further information or if you have any questions, please call us on 13 10 50 or email licensing@safework.nsw.gov.auw

Yours sincerely

May Neill

Licensing Representative, Licensing and Funds
Licensing and Funds | Better Regulation Division
Department of Customer Service
p 13 10 50
www.customerservice.nsw.gov.au
Level 3, 32 Mann Street, Gosford NSW 2250

Appendix F

Site Photographs

Photo 1 - Northern portion of site used as a compound area by a civil company

Photo 2 - Asphalt sealed former netball courts located in the central portion of the site

Douglas Partners Geotechnics / Environment / Groundwater	Site Photographs	PROJECT:	207155.00
	PNRL Centre of Excellence and Community Facility	PLATE No:	1
	Cnr Kennedy Ave and Stone Maon Drive, Kellyville	REV:	A
	CLIENT: Parramatta National Rugby League Club Pty Ltd	DATE:	Nov-21

Photo 3 - Several temporary demountable office buildings have been erected in the central western portion of the site

Photo 4 - Several shipping containers used for storage of equipment observed in central eastern portion of carpark

Douglas Partners Geotechnics / Environment / Groundwater	Site Photographs	PROJECT:	207155.00
	PNRL Centre of Excellence and Community Facility	PLATE No:	2
	Cnr Kennedy Ave and Stone Maon Drive, Kellyville	REV:	A
	CLIENT: Parramatta National Rugby League Club Pty Ltd	DATE:	Nov-21

Photo 5 - Asphalt sealed carpark covering most of the southern portion of site

Photo 6 - Unsealed grassed slope to the immediate west of carpark in southern portion of site

Douglas Partners Geotechnics / Environment / Groundwater	Site Photographs	PROJECT:	207155.00
	PNRL Centre of Excellence and Community Facility	PLATE No:	3
	Cnr Kennedy Ave and Stone Maon Drive, Kellyville	REV:	A
	CLIENT: Parramatta National Rugby League Club Pty Ltd	DATE:	Nov-21

Appendix G

Site Assessment Criteria

Appendix G
Site Assessment Criteria
corner Kennedy Avenue and Stone Mason Drive, Kellyville

G1.0 Introduction

G1.1 Guidelines

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

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

G1.2 General

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

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

- Land use: recreational
  - Corresponding to land use category 'C', public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate.
- Soil type: clay.

G2.0 Soils

G2.1 Health Investigation and Screening Levels

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

Table 1: Health Investigation Levels (mg/kg)

Contaminant	HIL-C
Metals	
Arsenic	300
Cadmium	90
Chromium (VI)	300
Copper	17 000
Lead	600
Mercury (inorganic)	80
Nickel	1200
Zinc	30 000
PAH	
B(a)P TEQ	3
Total PAH	300
Phenols	
Phenol	40 000
Pentachlorophenol	120
OCP	
DDT+DDE+DDD	400
Aldrin and dieldrin	10
Chlordane	70
Endosulfan	340
Endrin	20
Heptachlor	10
HCB	10
Methoxychlor	400
OPP	
Chlorpyrifos	250
PCB	
PCB	1

Table 2: Health Screening Levels (mg/kg)

Contaminant	HSL-C
CLAY	**0 m to <1 m**
Benzene	NL
Toluene	NL
Ethylbenzene	NL
Xylenes	NL
Naphthalene	NL
TRH F1	NL
TRH F2	NL

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

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

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

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

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

Contaminant	DC HSL-C
Benzene	120
Toluene	18 000
Ethylbenzene	5300
Xylenes	15 000
Naphthalene	1900
TRH F1	5100
TRH F2	3800
TRH F3	5300
TRH F4	7400

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

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

G2.2 Asbestos in Soil

Based on the CSM and/or current site access limitations, a detailed asbestos assessment was not considered to be warranted at this stage. However, due to the history of widespread use of ACM products across Australia, ACM can be encountered unexpectedly and sporadically at a site. Therefore,

the presence or absence of asbestos at a limit of reporting of 0.1 g/kg (AS:4964) has been adopted for this investigation / assessment as an initial screen.

G2.3 Ecological Investigation Levels

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

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

Variable	Input	Rationale
Age of contaminants	"Aged" (>2 years)	Given the potential sources of soil contamination are from historic use, the contamination is considered as "aged" (>2 years)
pH	5.5	Based on an average of 11 samples collected as part of this investigation.
CEC	5 $cmol_c/kg$	Conservative value assumed based on soil type for initial screening
Clay content	10%	Conservative value for initial screening
Traffic volumes	high	The site is located within a high traffic area
State / Territory	NSW	

Table 5: Ecological Investigation Levels (mg/kg)

Contaminant	EIL-A-B-C
Metals	
Arsenic	100
Copper	75
Nickel	60
Chromium III	670
Lead	1100
Zinc	190
PAH	
Naphthalene	170
OCP	
DDT	180

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

G2.4 Ecological Screening Levels

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

Table 6: Ecological Screening Levels (mg/kg)

Contaminant	Soil Type	EIL-A-B-C
Benzene	Fine	65
Toluene	Fine	105
Ethylbenzene	Fine	125
Xylenes	Fine	45
TRH F1	Coarse/ Fine	180*
TRH F2	Coarse/ Fine	120*
TRH F3	Fine	1300
TRH F4	Fine	5600
B(a)P	Fine	0.7

Notes: ESL are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability
TRH F1 is TRH C_6-C_{10} minus BTEX
TRH F2 is TRH >C_{10}-C_{16} including naphthalene
EIL-A-B-C urban residential and public open space

G2.5 Management Limits

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

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

The adopted management limits are in Table 7.

Table 7: Management Limits (mg/kg)

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

Notes: TRH F1 is TRH C_6-C_{10} including BTEX
TRH F2 is TRH >C_{10}-C_{16} including naphthalene
ML-A-B-C residential, parkland and public open space

G3.0 References

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

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

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Appendix H

Summary of Laboratory Test Results

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Table H1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH

			Metals								TRH						BTEX				PAH			
			Arsenic	Cadmium	Total Chromium	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	F1 (C6-C10)-BTEX)	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene [b]	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs
		PQL	4	0.4	1	1	1	0.1	1	1	25	50	25	50	100	100	0.2	0.5	1	1	1	0.05	0.5	0.05
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
202/0.1	0 m	25/08/2021	<4	<0.4	9	7	11	<0.1	5	32	<25	55	<25	55	150	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
204/0.1	0 m	25/08/2021	5	<0.4	21	10	18	<0.1	7	32	<25	50	<25	50	180	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
204/0.5	0 m	25/08/2021	7	<0.4	19	12	18	<0.1	6	20	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
209/0.1	0 m	25/08/2021	4	<0.4	12	15	19	<0.1	6	42	<25	<50	<25	<50	160	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
209/0.5	0 m	25/08/2021	5	<0.4	16	10	16	<0.1	5	17	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
BD1-160921	0 m	16/09/21	<4	<0.4	3	1	2	<0.1	<1	5	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
BD1-220921	0 m	22/09/21	8	<0.4	12	25	70	<0.1	7	79	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.09	<0.5	0.4
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
201	0 - 0.1 m	22/09/21	7	<0.4	12	21	55	<0.1	6	69	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	0.1	<0.5	0.78
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
205	0 - 0.1 m	22/09/21	<4	<0.4	2	<1	1	<0.1	<1	4	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
203	0 - 0.1 m	22/09/21	7	<0.4	14	19	53	<0.1	7	94	<25	140	<25	140	770	180	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
208	0 - 0.1 m	16/09/21	7	<0.4	14	16	23	<0.1	7	69	<25	<50	<25	<50	150	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
208	0.3 - 0.4 m	16/09/21	8	<0.4	14	20	21	<0.1	7	44	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
210	0.2 - 0.3 m	16/09/21	<4	<0.4	28	20	12	<0.1	16	44	<25	<50	<25	<50	<100	110	<0.2	<0.5	<1	<1	<1	0.08	<0.5	0.97
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
210	0.4 - 0.6 m	16/09/21	8	<0.4	29	22	16	<0.1	15	28	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300
206	0.05 - 0.15 m	16/09/21	<4	<0.4	13	28	4	<0.1	49	27	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
206	0.2 - 0.5 m	16/09/21	6	<0.4	11	26	19	<0.1	10	44	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
211	0.2 - 0.3 m	16/09/21	<4	<0.4	35	25	25	<0.1	19	57	<25	<50	<25	<50	120	<100	<0.2	<0.5	<1	<1	<1	0.1	<0.5	1.3
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
211	0.5 - 0.6 m	16/09/21	<4	<0.4	15	21	26	<0.1	8	36	<25	<50	<25	<50	<100	<100	<0.2	<0.5	<1	<1	<1	<0.05	<0.5	<0.05
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
211 - [TRIPLICATE]	0.5 - 0.6 m	16/09/21	5	<0.4	11	23	65	<0.1	7	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
TS	0 m	25/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97	97	97	195	-	-	-	-
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -
TB	0 m	25/08/2021	-	-	-	-	-	-	-	-	<25	-	<25	-	-	-	<0.2	<0.5	<1	<1	<1	-	-	-
			300 160	90 -	300 670	17000 75	600 1800	80 -	1200 60	30000 190	- -	- 170	NL 215	NL -	- 1700	- 3300	NL 75	NL 135	NL 165	NL 180	NL 370	- 1.4	3 -	300 -

Lab result

HIL/HSL value EIL/ESL value

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

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

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

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

Notes:

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

b Reported naphthalene laboratory result obtained from BTEXN suite

c Criteria applies to DDT only

Site Assessment Criteria (SAC):

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

SAC based on generic land use thresholds for Recreational C including public open space

HIL C	Recreational / Open Space (NEPC, 2013)
HSL C	Recreational / Open Space (vapour intrusion) (NEPC, 2013)
DC HSL C	Direct contact HSL C Recreational /Open space (direct contact) (CRC CARE, 2011)
EIL/ESL C/Ind	Commercial and Industrial (NEPC, 2013)
ML C/Ind	Commercial and Industrial (NEPC, 2013)

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Table H2: Summary of Laboratory Results – Phenol, OCP, OPP, PCB, Asbestos

			Phenol	OCP												OPP	PCB								Asbestos		
			Phenol	DDD	DDT+DDE+DDD [c]	DDE	DDT	Aldrin & Dieldrin	Total Chlordane	Endrin	Total Endosulfan	Heptachlor	Hexachlorobenzene	Methoxychlor	Chlorpyriphos	Arochlor 1016	Total PCB	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	Asbestos ID in soil >0.1g/kg	Trace Analysis	Asbestos (50 g)
		PQL	5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
Sample ID	Depth	Sample Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	-	-	-
202/0.1	0 m	25/08/2021	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
204/0.1	0 m	25/08/2021	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
204/0.5	0 m	25/08/2021	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
209/0.1	0 m	25/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
209/0.5	0 m	25/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
TS	0 m	25/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
TB	0 m	25/08/2021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
BD1-160921	0 m	16/09/21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
BD1-220921	0 m	22/09/21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
201	0 - 0.1 m	22/09/21	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
205	0 - 0.1 m	22/09/21	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
203	0 - 0.1 m	22/09/21	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
208	0 - 0.1 m	16/09/21	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
208	0.3 - 0.4 m	16/09/21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
210	0.2 - 0.3 m	16/09/21	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
210	0.4 - 0.6 m	16/09/21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
206	0.05 - 0.15 m	16/09/21	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
206	0.2 - 0.5 m	16/09/21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
211	0.2 - 0.3 m	16/09/21	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
211	0.5 - 0.6 m	16/09/21	<5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NAD	NAD	NAD
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			
211 - [TRIPLICATE]	0.5 - 0.6 m	16/09/21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			120 -	- -	400 640	- -	- 640	10 -	70 -	20 -	340 -	10 -	10 -	400 -	250 -	- -	1 -	- -	- -	- -	- -	- -	- -			

Lab result
HIL/HSL value EIL/ESL value

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

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

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

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

Notes:

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

b Reported naphthalene laboratory result obtained from BTEXN suite

c Criteria applies to DDT only

Site Assessment Criteria (SAC):

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

SAC based on generic land use thresholds for Recreational C including public open space

HIL C	Recreational / Open Space (NEPC, 2013)
HSL C	Recreational / Open Space (vapour intrusion) (NEPC, 2013)
DC HSL C	Direct contact HSL C Recreational /Open space (direct contact) (CRC CARE, 2011)
EIL/ESL C/Ind	Commercial and Industrial (NEPC, 2013)
ML C/Ind	Commercial and Industrial (NEPC, 2013)

Appendix I

Borehole Logs

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 63.1
COORDINATE **E:**310837.7 **N:** 6267122.5
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 201
PROJECT No: 207155.00
DATE: 22/07/21
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	63 / 0.0	FILL/ (CL) Silty CLAY; brown; with vegetation throughout (Topsoil)		FILL	NA	<PL						
	0.15			XWM	XWR	NA						
	0.2	SILTSTONE; grey; very low strength, Ashfield Shale										
		Borehole discontinued at 0.20m depth Limit of investigation										
	62 / 1									1		
	61 / 2									2		
	60 / 3									3		
	59 / 4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand Tools
METHOD: Hand Auger to 0.3 m
REMARKS:

OPERATOR:
CASING:

LOGGED: Boyd

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BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 67.5
COORDINATE **E:**310854.5 **N:** 6267127.5
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 202
PROJECT No: 207155.00
DATE: 24/08/21
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(*) DENSITY.(*)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	ROCK RECOVERY (%)	ROCK RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	SAMPLE DEPTH (m)	TESTING TEST TYPE	TESTING RESULTS AND REMARKS
	67	0.0	FILL/ (CI) Gravelly CLAY; grey brown; with vegetation throughout (Topsoil)		FILL	NA	<PL									A		0.1		
		0.2	(CH) Silty CLAY; red brown mottled grey		RES	ST TO VST	<PL									A		0.5		
		1														A		1.0		
																SPT			S	10,12,15 N=27
	66	1.4	(CH) Silty CLAY; light grey mottled red		RES	VST TO H	<PL											1.45		
																A		1.5		
		2.0	SILTSTONE; grey brown; very low strength with clay seams; Ashfield Shale		XWM	XWR	NA									A		2.0		
	65															A		2.5		
																SPT		2.6	S	40/100
		2.7	SILTSTONE; dark grey; alternating bands of very low and high strength with clay seams; High Strength bands appear ironstained; Ashfield Shale					HW	2.7	H								2.7	PLT	2.6
		3						XW	3.12	SEAM	100	0				C		3		
								HW	3.15	H										
								XW	3.2	VL										
								HW	3.24	H										
								XW	3.34	VL										
	64							HW	3.48	H				3.45m: J 45° ST, RO, FE						
								XW	3.65	VL										
								HW	3.72	H				3.8m: J 55° PL, RO, FE						
								XW	3.83	CL										
		4						HW	3.85	H								4		
								XW	3.94	SEAM										
								HW	3.97	H										
								XA-HW	4.06	VL										
								HW	4.15	H										
								XW	4.29	L	100	10								
								HW	4.35	H				4.4m: J 30° ST, RO, FE						
	63							MW	4.38	VL-L				4.45m: J 70° PL, RO, FE						
								HW	4.44	H										
								HW	4.6	VL-L				4.6m: J 65° CU, RO, FE HE						
								XW	4.72	VL										
								MW		VL									PLT	0.10

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Multi Drill
OPERATOR: Traccess
LOGGED: Boyd

METHOD: Solid Flight Auger to 2.7 m then NMLC coring to 6.0 m
CASING:

REMARKS: Well construction details: 3.0m slotted, 3.0m blank, 0.5m bentonite, 0.9m stick up

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 67.5
COORDINATE **E:**310854.5 **N:** 6267127.5
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 202
PROJECT No: 207155.00
DATE: 24/08/21
SHEET: 2 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(*) DENSITY.(*)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	ROCK RECOVERY (%)	ROCK RQD	ROCK FRACTURE SPACING (m)	ROCK DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING TEST TYPE	TESTING RESULTS AND REMARKS
	62	5.0	SILTSTONE; dark grey; alternating bands of very low and high strength with clay seams; High Strength bands appear ironstained; Ashfield Shale *(continued)*						5.0												
		5.35	SILTSTONE; dark grey; low strength; Ashfield Shale					HW	5.18	L				5.18-5.24m: CZ						
								XW	5.25	VL										
									5.32					5.32m: J 30° PL, RO, FE						
														5.41m: J 42° PL, RO, FE						
								MW-SW		L	82	10							PLT	0.21
		6.0	Borehole discontinued at 6.00m depth Limit of investigation						6.0					5.7m: J 55° PL, RO, FE				6		
	61																	7		
	60																	8		
	59																	9		
	58																			

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Multi Drill
OPERATOR: Traccess
LOGGED: Boyd
METHOD: Solid Flight Auger to 2.7 m then NMLC coring to 6.0 m
CASING:
REMARKS: Well construction details: 3.0m slotted, 3.0m blank, 0.5m bentonite, 0.9m stick up

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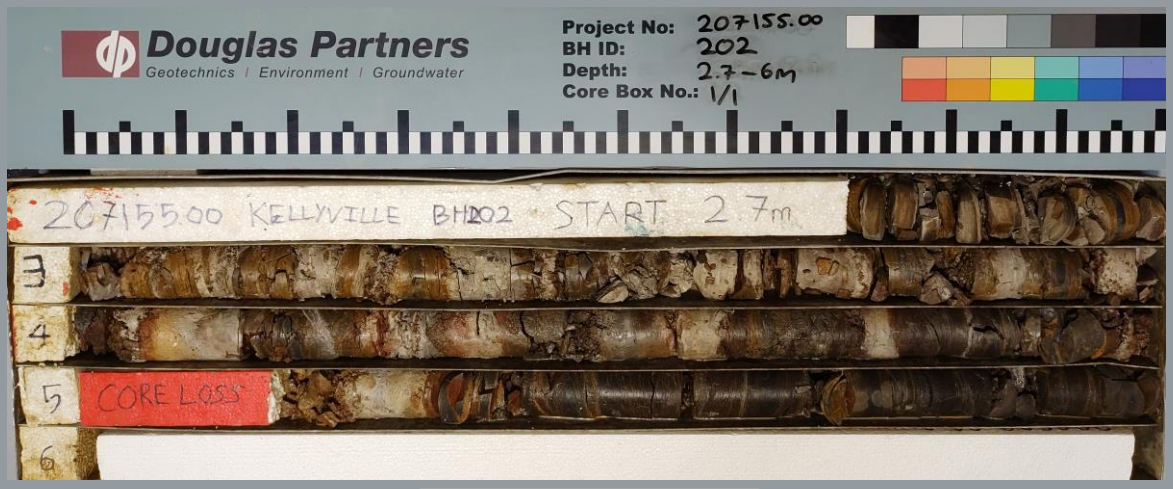
BORE: BH202 **PROJECT: 207155.00** **August 2021**



2.7 m – 6.0m

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 62.6
COORDINATE **E:**310824.5 **N:** 6267157.1
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 203
PROJECT No: 207155.00
DATE: 22/07/21
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	0.0	FILL/ (CL) Gravelly CLAY; brown; with vegetation throughout (Topsoil)		FILL	NA	<PL						
	0.3			XWM	XWR	NA						
	0.35	SILTSTONE; very low strength, Ashfield Shale										
		Borehole discontinued at 0.35m depth Limit of investigation										

62 61 60 59 58

1 2 3 4

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NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand Tools
METHOD: Hand Auger to 0.45 m
REMARKS:

OPERATOR:
CASING:

LOGGED: Boyd

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 66.9
COORDINATE **E:**310835.1 **N:** 6267171.1
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 204
PROJECT No: 207155.00
DATE: 25/08/21
SHEET: 1 of 3

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(*) DENSITY.(*)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	ROCK RECOVERY (%)	ROCK RQD	ROCK FRACTURE SPACING (m)	ROCK DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING TEST TYPE	TESTING RESULTS AND REMARKS
25/08/21, No free groundwater observed	66	0.0	FILL/ (Cl) Silty CLAY; brown; medium plasticity; with vegetation throughout (Topsoil)		FILL	NA	<PL									A	0.0–0.1	0.0		
		0.2	(Cl) Silty CLAY, trace gravel; grey orange; medium plasticity													A	0.4–0.5	0.4		
		1			RES	F TO ST	<PL									A	0.9–1.0	0.9		
																SPT			S	3,5,3 N=8
																A	1.45–1.5	1.4		
	65	2.0	(Cl-CH) CLAY; orange brown; medium to high plasticity													A	1.9–2.0	1.9		
																A	2.4–2.5	2.4		
																SPT			S	5,16,12 N=28
	64	3			RES	VST	<PL									A	2.95–3.0	2.9		
																A	3.4–3.5	3.4		
	63	4														A	3.9–4.0	3.9		
		4.1	(Cl-CH) Silty CLAY; grey orange; high plasticity; (possibly extremely low strength siltstone)													SPT			S	6,11,17 N=28
					RES	VST TO H	<PL									A	4.45–4.5	4.4		
	62															A		4.9		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

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PLANT: Multi Drill
METHOD: Solid Flight Auger to 5.8m then NMLC coring to 10.0m
REMARKS:

OPERATOR: Traccess
CASING: NW to 5.8m

LOGGED: KA

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 66.9
COORDINATE **E:**310835.1 **N:** 6267171.1
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 204
PROJECT No: 207155.00
DATE: 25/08/21
SHEET: 2 of 3

CONDITIONS ENCOUNTERED																		SAMPLE				TESTING	
				SOIL			ROCK																
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH VL L M H VH EH	RECOVERY (%)	RQD	FRACTURE SPACING (m) 0.01 0.05 0.10 0.50 1.00 5.00	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
			(CI-CH) Silty CLAY; grey orange; high plasticity; (possibly extremely low strength siltstone) *(continued)*		RES	VST TO H	<PL							Note: Unless otherwise noted all defects are bedding dipping at 0-10°		A SPT		5.0 5.4 5.5 5.6		
	61	5.8	SILTSTONE; grey; fine; very low and low strength, Ashfield Shale					XW-HW	5.8	VL-L										S	11,22/150
	60	6 6.28	SILTSTONE; grey; fine; medium and high strength with clay seams, Ashfield Shale						6.28					5.9-6.29m: CS CLY INF, 1060mm 6.15-6.21m: CZ 6.3-6.33m: CZ 6.5-6.56m: CZ 6.62-6.7m: CZ					6		
	59	7						SW	6.8	L	100	15		6.82-6.89m: A 40°-50° PL, SM, CLn 6.89-6.91m: CZ 6.92-6.96m: CZ					7	PLT	PL(A)=0.75
		8							8.0	M-H				7.39-7.4m: CZ 7.47-7.55m: CZ 7.66-7.7m: A 45°-50° PL, SM, CLn STN 7.7-7.74m: A 55°-60° PL, SM, CLn STN					8	PLT	PL(A)=1.0
	58	9						FR			100	84							9	PLT	PL(A)=0.94
	57	9.55	SILTSTONE; grey; fine; high strength with sandstone laminations, Ashfield Shale						9.7	H										PLT	PL(A)=2.4
		10.0	Borehole discontinued at 10.00m depth Limit of investigation																		

NOTES: (#) Soil Origin "probable" unless otherwise stated (*) Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Multi Drill
OPERATOR: Traccess
LOGGED: KA

METHOD: Solid Flight Auger to 5.8m then NMLC coring to 10.0m
CASING: NW to 5.8m

REMARKS:

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BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 66.9
COORDINATE **E:**310835.1 **N:** 6267171.1
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 204
PROJECT No: 207155.00
DATE: 25/08/21
SHEET: 3 of 3

CONDITIONS ENCOUNTERED																		SAMPLE				TESTING	
				SOIL			ROCK																
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH VL L M H VH EH	RECOVERY (%)	RQD	FRACTURE SPACING (m) 0.01 0.05 0.10 0.50 1.00 5.00	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	56	11							10.0									11		
	55	12																12		
	54	13																13		
	53	14																14		
	52																			

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Multi Drill
METHOD: Solid Flight Auger to 5.8m then NMLC coring to 10.0m
REMARKS:

OPERATOR: Traccess
CASING: NW to 5.8m

LOGGED: KA

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BORE: BH204 **PROJECT: 207155.00** **August 2021**

5.8m – 10.0m

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 62
COORDINATE **E:**310806.3 **N:** 6267199.3
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 205
PROJECT No: 207155.00
DATE: 22/07/21
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	0.0	FILL/ Clayey SILT; brown; with vegetation throughout (Topsoil)		FILL	NA	<PL						
	0.2	FILL/ (CL) Gravelly CLAY; brown grey		FILL	PC	<PL						
	0.6	(CH) Silty CLAY; orange brown mottled grey; hard		RES	H	<PL						
	0.8	SILTSTONE; very low strength, Ashfield Shale		XWM	XWR	NA						
	0.85	Borehole discontinued at 0.85m depth Limit of investigation										
	61 1									1		
	60 2									2		
	59 3									3		
	58 4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Hand Tools
METHOD: Hand Auger to 0.45 m
REMARKS:

OPERATOR:
CASING:

LOGGED: Boyd

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BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 66
COORDINATE **E:**310828.1 **N:** 6267240.1
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 207
PROJECT No: 207155.00
DATE: 25/08/21
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
25/08/21, No free groundwater observed	0.0	FILL/ (CI) Silty CLAY; brown; medium plasticity; with rootlets throughout		FILL	NA	<PL		A		0.0 0.1		
	0.5	FILL/ (CI) Silty; brown mottled orange; with rootlets throughout		FILL	ST TO VST	<PL		A		0.4 0.5		
	65 1							A		0.9 1.0		
	1.1	(CI-CH) Silty CLAY; orange; medium to high plasticity		RES	ST	<PL	4,8,12	A		1.4 1.45 1.5		
	1.7	(CI-CH) Silty CLAY; pale grey; medium to high plasticity		RES	ST TO H			A		1.9 2.0		
	64 2											
	2.3	Borehole discontinued at 2.30m depth Limit of investigation										
	63 3									3		
	62 4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Multi Drill
METHOD: Solid Flight Auger to 2.3m
REMARKS:

OPERATOR: Traccess
CASING: Not used

LOGGED: KA

EXPORTED 02/11/21 12:17. TEMPLATE ID: DP_101.02.00_SOILLOG

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 64.1
COORDINATE **E:**310799.3 **N:** 6267266.2
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 208
PROJECT No: 207155.00
DATE: 16/09/21
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	64	0.0	FILL/ Clayey SILT; with vegetation throughout (Topsoil)		FILL	NA	<PL		A		0.0 - 0.1		
		0.3	(CH) Silty CLAY; grey mottled orange; trace ironstone gravel		RES	H	<PL		A A		0.3 - 0.4		
		0.7	SILTSTONE; grey mottled orange; very low strength, Ashfield Shale		XWM	XWR	M				0.7		
	63	1.0	Borehole discontinued at 1.00m depth Limit of investigation								1		
	62	2									2		
	61	3									3		
	60	4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Multi Drill
METHOD: Solid Flight Auger to 1.0m
REMARKS:

OPERATOR: Traccess
CASING:

LOGGED: Boyd

EXPORTED 02/11/21 12:17. TEMPLATE ID: DP_101.02.00_SOILLOG

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 65.5
COORDINATE **E:**310815.3 **N:** 6267265.3
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 209
PROJECT No: 207155.00
DATE: 25/08/21
SHEET: 1 of 2

GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	SOIL ORIGIN(#)	SOIL CONSIS.(*) DENSITY.(*)	SOIL MOISTURE	ROCK WEATH.	ROCK DEPTH (m)	ROCK STRENGTH	RECOVERY (%)	RQD	FRACTURE SPACING (m)	DEFECTS & REMARKS	SAMPLE REMARKS	SAMPLE TYPE	SAMPLE INTERVAL	DEPTH (m)	TESTING TEST TYPE	TESTING RESULTS AND REMARKS
25/08/21, No free groundwater observed	65	0.0	FILL/ Clayey SILT; brown; with vegetation througout (Topsoil)		FILL	NA	NA									A	0.0-0.1	0.0		
		0.1	FILL/ (CI) Silty CLAY; brown; medium plasticity		FILL	VC	<PL									A	0.4-0.5	0.4		
		0.7	(CI-CH) Silty CLAY; pale grey; medium to high plasticity		RES	VST	<PL									A	0.9-1.0	0.9		
	64	1												Note: Unless stated otherwise all defects are bedding parting, then are planar smooth and dipping between 5-10°		SPT		1.0	SPT	4,10,16 N=26
		1.3	(CI-CH) Silty CLAY; pale grey yellow; medium to high plasticity		RES	VST TO H	<PL									A	1.4-1.5	1.4		
		1.7	SILTSTONE; grey; very low strength with clay seams, Ashfield Shale		XWM	XWR	NA											1.45		
	63	1.9	SILTSTONE; grey mottled orange; low strength, with clay seams, Ashfield Shale						1.9					1.9-2.06m: CZ				1.9		
		2																2		
								HW-MW		L	100	78		2.48-2.54m: CZ 2.57-2.6m: A 40°-50° PL, SM, FE STN 2.64-2.67m: A 40°-50° PL, SM, FE STN		C			PLT	0.23
		3																3		
	62	3.6	SILTSTONE; high strength, Ashfield Shale						3.6					3.1-3.15m: A 40°-50° PL, SM, HE 3.18-3.21m: A 50°-60° PL, SM, CLY STN 3.41-3.48m: CZ				3.32		
		4						SW-FR		H	100	65				C			PLT	1.7
	61	4.7	SILTSTONE; grey; high strength, Ashfield Shale					FR	4.7	H	100	99						4.78	PLT	2.1

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Multi Drill
OPERATOR: Traccess
LOGGED: KA

METHOD: Solid Flight Auger to 1.7m, Rotary to 1.9m then NMLC coring to 5.82m
CASING: NW

REMARKS: Well construction details: 3.0m slotted, 3.0m blank, 0.5m bentonite, 0.9m stick up

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BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 65.5
COORDINATE **E:**310815.3 **N:** 6267265.3
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 209
PROJECT No: 207155.00
DATE: 25/08/21
SHEET: 2 of 2

CONDITIONS ENCOUNTERED																		SAMPLE				TESTING	
				SOIL				ROCK															
GROUNDWATER	RL (m)	DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	WEATH.	DEPTH (m)	STRENGTH VL L M H VH EH	RECOVERY (%)	RQD	FRACTURE SPACING (m) 0.01 0.05 0.10 0.50 1.00 5.00	DEFECTS & REMARKS	SAMPLE REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
			SILTSTONE; grey; high strength, Ashfield Shale *(continued)*					FR		H	100	99				C			PLT	2.3
	60	5.82	Borehole discontinued at 5.82m depth Limit of investigation						5.82									5.82		
	59	6																6		
	58	7																7		
	57	8																8		
	56	9																9		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Multi Drill
OPERATOR: Traccess
LOGGED: KA

METHOD: Solid Flight Auger to 1.7m, Rotary to 1.9m then NMLC coring to 5.82m
CASING: NW

REMARKS: Well construction details: 3.0m slotted, 3.0m blank, 0.5m bentonite, 0.9m stick up

BORE: BH209 **PROJECT: 207155.00** **August 2021**

1.9m – 5.82m

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 66.6
COORDINATE **E:**310849 **N:** 6267261.9
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 210
PROJECT No: 207155.00
DATE: 16/09/21
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	0.05	ASPHALTIC CONCRETE;			NA	NA						
		FILL/ (CL) Gravelly CLAY; brown; with sand and ripped shale gravel		FILL	WC	<PL		A		0.2 – 0.3		
	66							A		0.5 – 0.6		
	0.7	(CH) Silty CLAY; brown grey; (possibly extremely weathered siltstone)		RES	H	<PL		B		0.7 – 1.0		
	1.0	SILTSTONE; grey; very low strength, Ashfield Shale		XWM	NA	NA						
	1.1	Borehole discontinued at 1.10m depth Limit of investigation										
	65											
	2									2		
	64											
	3									3		
	63											
	4									4		
	62											

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Multi Drill
METHOD: Solid Flight Auger to 1.1m
REMARKS:

OPERATOR: Traccess
CASING:

LOGGED: Boyd

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BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL: 66.6
COORDINATE **E:**310858.4 **N:** 6267276.4
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 211
PROJECT No: 207155.00
DATE: 16/09/21
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
	0.05	ASPHALTIC CONCRETE;			NA	NA				0.1		
		FILL/ (GP) Sandy GRAVEL; brown and grey; fraction with concrete fragments, plastic and ripped shale gravel and cobbles		FILL	VC	<PL		A B		0.2 0.3		
	0.5 66	SILTSTONE; grey; low strength, Ashfield Shale (possibly medium strength)		XWM	XWR	NA		A		0.5 0.6		
	0.7	Borehole discontinued at 0.70m depth Limit of investigation										
	1 65									1		
	2									2		
	64											
	3									3		
	63											
	4									4		
	62											

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: Multi Drill
METHOD: Solid Flight Auger to 0.7m
REMARKS:

OPERATOR: Traccess
CASING:

LOGGED: Boyd

EXPORTED 02/11/21 12:17. TEMPLATE ID: DP_101.02.00_SOILLOG

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 212
PROJECT No: 207155.00
DATE: 04/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.0	FILL/ (CL-CI) Silty CLAY; dark grey; low to medium plasticity; trace sand, gravel and rootlets		FILL		<PL		A	0.0 - 0.1	0.0		
	0.1	FILL/ (CL-CI) Silty CLAY; dark grey; low to medium plasticity; trace sand, gravel and rootlets		FILL		=PL		A	0.2 - 0.3	0.1		
	0.4	(CI) Silty CLAY; reddish brown clay; medium plasticity; ironstone/sandstone		RES		=PL		A	0.5 - 0.6	0.2		
	1.0	Borehole discontinued at 1.00m depth								0.3		
	2									0.5		
	3									0.6		
	4									1		
										2		
										3		
										4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2.5 Tonne excavator
METHOD: Solid Flight Auger to 1.0m
REMARKS: BD1 20220204 taken at 0.5-0.6m

OPERATOR:
CASING: Not used

LOGGED: SR

EXPORTED 16/02/22 19:03. TEMPLATE ID: DP_101.02.00_SOILLOG

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 213
PROJECT No: 207155.00
DATE: 04/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.0	ASPHALTIC CONCRETE;				NA		A		0.1		
	0.3	FILL/ (CL) grey; low plasticity; sandy gravel		FILL		<PL				0.2		
	0.4	(CL) Silty CLAY; grey; low plasticity; sandy gravel with shale		RES		<PL		A		0.6		
	0.9	Borehole discontinued at 0.90m depth								0.7		
	1									1		
	2									2		
	3									3		
	4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2.5 Tonne excavator
METHOD: Solid Flight Auger to 0.9m
REMARKS:

OPERATOR:
CASING: Not used

LOGGED: SR

EXPORTED 16/02/22 19:03. TEMPLATE ID: DP_101.02.00_SOILLOG

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 214
PROJECT No: 207155.00
DATE: 04/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.0	FILL/ (CL) Silty SAND; dark grey; low plasticity; gravelly sand		FILL		<PL		A		0.0		
	0.1	FILL/ (CL-CI) Silty CLAY; reddish brown clay; low to medium plasticity; with trace sand, gravel and sandstone		FILL		=PL		A		0.1 0.4 0.5		
	0.7	Borehole discontinued at 0.70m depth										
	1									1		
	2									2		
	3									3		
	4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2.5 Tonne excavator
METHOD: Solid Flight Auger to 0.7m
REMARKS:

OPERATOR:
CASING: Not used

LOGGED: SR

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Refer to explanatory notes for symbol and abbreviation definitions

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 215
PROJECT No: 207155.00
DATE: 04/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.0	FILL/ (CL) Silty CLAY; pale grey; low plasticity; sandy gravel		FILL		<PL		A		0.0		
	0.1	FILL/ (CL) Silty CLAY; orange brown; low plasticity; with gravel, sand		FILL		<PL		A		0.1 0.2 0.3		
	0.4	(CL-CI) Silty CLAY; red brown; low to medium plasticity; with trace ironstone/sandstone, gravel and sand		RES		=PL		A		0.7 0.8		
	0.9 1	(CI) Silty CLAY; pale grey with mottled yellow; medium plasticity		RES		=PL		A		1.0 1.1		
	1.4	Borehole discontinued at 1.40m depth										
	2									2		
	3									3		
	4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2.5 Tonne excavator
METHOD: Solid Flight Auger to 1.4m
REMARKS:

OPERATOR:
CASING: Not used

LOGGED: SR

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BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 216
PROJECT No: 207155.00
DATE: 04/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.0	FILL/ (CI-CH) Silty CLAY; dark grey and brown; medium to high plasticity; with wooden chunks, gravel		FILL		=PL		A	0.0 - 0.1	0.0		
	0.4	FILL/ (CI-CH) Silty CLAY; red brown; medium to high plasticity; with rootlets, gravel, plastics 0.8m: dark grey, with trace gravel		FILL		=PL		A A	0.5 - 0.6 0.9 - 1.0	0.1 0.5 0.6 0.9 1.0		
	1.4	(CI) Silty CLAY; pale grey with mottled yellow; medium plasticity		RES		=PL		A	1.5 - 1.6	1.5 1.6		
	2.0	Borehole discontinued at 2.00m depth								2		
	3									3		
	4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2.5 Tonne excavator
METHOD: Solid Flight Auger to 2.0m
REMARKS: BD3 20220204 taken at 1.5-1.6m

OPERATOR:
CASING: Not used

LOGGED: SR

EXPORTED 16/02/22 19:03. TEMPLATE ID: DP_101.02.00_SOILLOG

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 217
PROJECT No: 207155.00
DATE: 04/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.0	FILL/ (CL-CI) Silty CLAY; dark brown; low to medium plasticity; sandy gravel with trace rootlets		FILL		<PL		A		0.0		
	0.1	FILL/ (CL-CI) Silty CLAY; dark brown; low to medium plasticity; with trace sand and rootlets		FILL		<PL		A		0.1 0.3 0.4		
	0.5	(CL-CI) Silty CLAY; pale grey; low to medium plasticity; with shale material		RES		<PL		A		0.7 0.8		
	1.0	Borehole discontinued at 1.00m depth								1		
	2									2		
	3									3		
	4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: 2.5 Tonne excavator
METHOD: Solid Flight Auger to 1.0m
REMARKS: BD2 20220204 taken at 0.0-0.1m

OPERATOR:
CASING: Not used

LOGGED: SR

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Refer to explanatory notes for symbol and abbreviation definitions

Douglas Partners
Geotechnics / Environment / Groundwater

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 218
PROJECT No: 207155.00
DATE: 05/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.03	ASPHALTIC CONCRETE;				NA						
		FILL/ (CL) Silty CLAY; pale grey; low plasticity; gravelly sand		FILL		<PL		A		0.1 0.2		
	0.4	FILL/ (CL-CI) Silty CLAY; red brown; low to medium plasticity; with trace rootlets, sandstone, ironstone and sand		FILL		=PL		A		0.5 0.6		
		0.8m: red brown and dark grey										
	1							A		1.0 1.1		
	1.2	(CL) Silty CLAY; pale grey, pale brown; low plasticity; shale material		RES		<PL		A		1.4 1.5		
	1.7	Borehole discontinued at 1.70m depth										
	2									2		
	3									3		
	4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: HITACHI 5 Tonne excavator
METHOD:
REMARKS:

OPERATOR:
CASING: Not used

LOGGED: SR

EXPORTED 16/02/22 19:03. TEMPLATE ID: DP_101.02.00_SOILLOG

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 219
PROJECT No: 207155.00
DATE: 05/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.03	ASPHALTIC CONCRETE;				NA				0.1		
		FILL/ (CL) Silty CLAY; pale grey or yellow, orange brown; low plasticity		FILL		<PL		A		0.2		
	0.4	(CL-CI) Silty CLAY; red brown, dark brown; low to medium plasticity		RES		=PL		A		0.5 0.6		
	1.0	(CL-CI) Silty CLAY; red brown, grey and mottled yellow; low to medium plasticity		RES		=PL		A		1 1.1 1.2		
	1.5	Borehole discontinued at 1.50m depth										
	2									2		
	3									3		
	4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: HITACHI 5 Tonne excavator
METHOD:
REMARKS: BD4 20220205 taken at 0.1-0.2m

OPERATOR:
CASING: Not used

LOGGED: SR

EXPORTED 16/02/22 19:03. TEMPLATE ID: DP_101.02.00_SOILLOG

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 220
PROJECT No: 207155.00
DATE: 05/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.03	ASPHALTIC CONCRETE;				NA						
		FILL/ (CL) Silty CLAY; pale grey, orange brown; low plasticity; gravelly sand		FILL		<PL		A		0.1 0.2		
	0.4	FILL/ (CL) Silty CLAY; dark brown; low plasticity; trace sand, rootlets		FILL		<PL		A		0.5 0.6		
	0.7	(CI) Silty CLAY; red brown with mottled yellow; medium plasticity; trace rootlets		RES		=PL		A		0.9		
	1.2	Borehole discontinued at 1.20m depth										

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: HITACHI 5 Tonne excavator
METHOD: Solid Flight Auger to 1.2m
REMARKS:

OPERATOR:
CASING: Not used

LOGGED: SR

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Refer to explanatory notes for symbol and abbreviation definitions

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BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 221
PROJECT No: 207155.00
DATE: 05/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.03	ASPHALTIC CONCRETE;				NA		A		0.0		
		FILL/ (CL) Silty CLAY; pale grey, orange brown; low plasticity; gravelly sand		FILL		<PL				0.1		
	0.4	(CL) Silty CLAY; dark brown; low plasticity; trace sand		RES		<PL		A		0.5		
	0.7	(CH) Silty CLAY; redbrownwith mottled yellow; medium plasticity; trace rootlets		RES		<PL		A		0.6		
	1									0.8		
	1.2	Borehole discontinued at 1.20m depth								0.9		
	2									1		
	3									2		
	4									3		
										4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: HITACHI 5 Tonne excavator
METHOD: Solid Flight Auger to 1.2m
REMARKS: BD5 20220205 taken at 0.5-0.6m

OPERATOR:
CASING: Not used

LOGGED: SR

EXPORTED 16/02/22 19:04. TEMPLATE ID: DP_101.02.00_SOILLOG

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 222
PROJECT No: 207155.00
DATE: 05/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.03	ASPHALTIC CONCRETE;								0.1		
		FILL/ (CL) Silty SAND; pale yellow; low plasticity; gravelly sand		FILL		<PL		A		0.2		
	0.3	FILL/ (CL) Silty SAND; yellow brown; low plasticity; with gravel		FILL				A		0.4		
	0.5	Borehole discontinued at 0.50m depth								0.5		
	1									1		
	2									2		
	3									3		
	4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT: HITACHI 5 Tonne excavator
METHOD: Solid Flight Auger to 0.5m
REMARKS:

OPERATOR:
CASING: Not used

LOGGED: SR

EXPORTED 16/02/22 19:04. TEMPLATE ID: DP_101.02.00_SOILLOG

BOREHOLE LOG

CLIENT: Paramatta National Rugby League Club Pty Ltd
PROJECT: PNRL Centre of Excellence and Community Facility
LOCATION: cnr Kennedy Avenue and Stone Mason Drive, Kellyville

SURFACE LEVEL:
COORDINATE E: N:
DATUM/GRID: GDA2020 Zone 56
DIP/AZIMUTH: 90°/---

LOCATION ID: 223
PROJECT No: 207155.00
DATE: 04/02/22
SHEET: 1 of 1

CONDITIONS ENCOUNTERED								SAMPLE				TESTING AND REMARKS	
GROUNDWATER	RL (m) / DEPTH (m)	DESCRIPTION OF STRATA	GRAPHIC	ORIGIN(#)	CONSIS.(*) / DENSITY.(*)	MOISTURE	REMARKS	TYPE	INTERVAL	DEPTH (m)	TEST TYPE	RESULTS AND REMARKS
No free groundwater observed whilst augering	0.1											
	1									1		
	2									2		
	3									3		
	4									4		

NOTES: (#)Soil origin is "probable" unless otherwise stated. (*)Consistency/Relative density shading is for visual reference only - no correlation between cohesive and granular materials is implied.

PLANT:
METHOD:
REMARKS:

OPERATOR:
CASING: Not used

LOGGED: SR

EXPORTED 16/02/22 19:04. TEMPLATE ID: DP_101.02.00_SOILLOG

Refer to explanatory notes for symbol and abbreviation definitions

Douglas Partners
Geotechnics / Environment / Groundwater

Appendix J

Laboratory Certificates of Analysis, Chain of Custody Documentation and Sample Receipt Advice

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

CERTIFICATE OF ANALYSIS 288445

Client Details

Client	Douglas Partners Pty Ltd
Attention	Gavin Boyd, Kristine Nicodemus
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**2070155.00, Kellyville**
Number of Samples	23 Soil
Date samples received	09/02/2022
Date completed instructions received	09/02/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	14/02/2022
Date of Issue	14/02/2022

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By
Analysed by Asbestos Approved Analyst: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Hannah Nguyen, Metals Supervisor
Lucy Zhu, Asbestos Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		288445-1	288445-2	288445-3	288445-4	288445-5
Your Reference	UNITS	212	212	213	213	214
Depth		0.0-0.1	0.2-0.3	01-0.2	0.6-0.7	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	96	76	92	99	85

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		288445-6	288445-7	288445-8	288445-9	288445-10
Your Reference	UNITS	215	215	215	216	216
Depth		0.0-0.1	0.2-0.3	0.7-0.8	0.0-0.1	0.5-0.6
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	97	92	83	93	88

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		288445-11	288445-12	288445-13	288445-15	288445-16
Your Reference	UNITS	216	217	217	218	218
Depth		1.5-1.6	0.0-0.1	0.7-0.8	0.1-0.2	1.4-1.5
Date Sampled		4/02/2022	4/02/2022	4/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	94	81	94	96	91

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		288445-17	288445-18	288445-19	288445-20	288445-21
Your Reference	UNITS	219	219	220	221	222
Depth		0.1-0.2	1.1-1.2	0.1-0.2	0.0-0.1	0.1-0.2
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	12/02/2022	12/02/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	93	92	94	99	97

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		288445-22
Your Reference	UNITS	223
Depth		0.0-0.1
Date Sampled		5/02/2022
Type of sample		Soil
Date extracted	-	10/02/2022
Date analysed	-	12/02/2022
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	97

svTRH (C10-C40) in Soil						
Our Reference		288445-1	288445-2	288445-3	288445-4	288445-5
Your Reference	UNITS	212	212	213	213	214
Depth		0.0-0.1	0.2-0.3	01-0.2	0.6-0.7	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	100	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	150	<100	<100	<100	150
Total +ve TRH (>C10-C40)	mg/kg	150	<50	<50	<50	150
Surrogate o-Terphenyl	%	84	82	84	81	83

svTRH (C10-C40) in Soil						
Our Reference		288445-6	288445-7	288445-8	288445-9	288445-10
Your Reference	UNITS	215	215	215	216	216
Depth		0.0-0.1	0.2-0.3	0.7-0.8	0.0-0.1	0.5-0.6
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	100	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	160	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	160	<50	<50	<50	<50
Surrogate o-Terphenyl	%	90	81	81	81	79

svTRH (C10-C40) in Soil						
Our Reference		288445-11	288445-12	288445-13	288445-15	288445-16
Your Reference	UNITS	216	217	217	218	218
Depth		1.5-1.6	0.0-0.1	0.7-0.8	0.1-0.2	1.4-1.5
Date Sampled		4/02/2022	4/02/2022	4/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	110	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	180	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	290	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	220	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	220	110
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	440	110
Surrogate o-Terphenyl	%	80	80	80	91	86

svTRH (C10-C40) in Soil						
Our Reference		288445-17	288445-18	288445-19	288445-20	288445-21
Your Reference	UNITS	219	219	220	221	222
Depth		0.1-0.2	1.1-1.2	0.1-0.2	0.0-0.1	0.1-0.2
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	140	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	170	<100	120
Total +ve TRH (C10-C36)	mg/kg	<50	<50	310	<50	120
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	240	<100	120
TRH >C_{34} -C_{40}	mg/kg	120	<100	210	<100	170
Total +ve TRH (>C10-C40)	mg/kg	120	<50	450	<50	290
Surrogate o-Terphenyl	%	85	85	84	79	81

svTRH (C10-C40) in Soil		
Our Reference		288445-22
Your Reference	UNITS	223
Depth		0.0-0.1
Date Sampled		5/02/2022
Type of sample		Soil
Date extracted	-	10/02/2022
Date analysed	-	11/02/2022
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	82

PAHs in Soil						
Our Reference		288445-1	288445-2	288445-3	288445-4	288445-5
Your Reference	UNITS	212	212	213	213	214
Depth		0.0-0.1	0.2-0.3	01-0.2	0.6-0.7	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.1	<0.05	0.5	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	84	87	86	80	89

PAHs in Soil						
Our Reference		288445-6	288445-7	288445-8	288445-9	288445-10
Your Reference	UNITS	215	215	215	216	216
Depth		0.0-0.1	0.2-0.3	0.7-0.8	0.0-0.1	0.5-0.6
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	83	83	89	86	90

PAHs in Soil						
Our Reference		288445-11	288445-12	288445-13	288445-15	288445-16
Your Reference	UNITS	216	217	217	218	218
Depth		1.5-1.6	0.0-0.1	0.7-0.8	0.1-0.2	1.4-1.5
Date Sampled		4/02/2022	4/02/2022	4/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	0.4	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	1.4	0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	1.8	0.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	1.2	0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.6	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	1	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.76	0.08
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.5	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.7	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	9.0	0.5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	1.2	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	1.2	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	1.2	<0.5
Surrogate p-Terphenyl-d14	%	91	92	93	87	90

PAHs in Soil						
Our Reference		288445-17	288445-18	288445-19	288445-20	288445-21
Your Reference	UNITS	219	219	220	221	222
Depth		0.1-0.2	1.1-1.2	0.1-0.2	0.0-0.1	0.1-0.2
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.4	<0.1	0.1
Acenaphthene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	2.7	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	1	<0.1	0.1
Fluoranthene	mg/kg	0.4	<0.1	3.4	<0.1	<0.1
Pyrene	mg/kg	0.5	<0.1	3.2	<0.1	0.1
Benzo(a)anthracene	mg/kg	0.2	<0.1	2.2	<0.1	0.2
Chrysene	mg/kg	0.2	<0.1	1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.3	<0.2	2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.2	<0.05	1.1	<0.05	0.08
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.6	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	0.9	<0.1	0.1
Total +ve PAH's	mg/kg	2.1	<0.05	19	<0.05	0.76
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	1.8	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	1.8	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	1.8	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	87	87	92	90	87

PAHs in Soil		
Our Reference		288445-22
Your Reference	UNITS	223
Depth		0.0-0.1
Date Sampled		5/02/2022
Type of sample		Soil
Date extracted	-	10/02/2022
Date analysed	-	10/02/2022
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	92

Organochlorine Pesticides in soil						
Our Reference		288445-1	288445-2	288445-3	288445-5	288445-6
Your Reference	UNITS	212	212	213	214	215
Depth		0.0-0.1	0.2-0.3	01-0.2	0.0-0.1	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	90	91	94	88

Organochlorine Pesticides in soil						
Our Reference		288445-7	288445-9	288445-10	288445-12	288445-15
Your Reference	UNITS	215	216	216	217	218
Depth		0.2-0.3	0.0-0.1	0.5-0.6	0.0-0.1	0.1-0.2
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	92	94	90	86

Organochlorine Pesticides in soil						
Our Reference		288445-17	288445-19	288445-20	288445-21	288445-22
Your Reference	UNITS	219	220	221	222	223
Depth		0.1-0.2	0.1-0.2	0.0-0.1	0.1-0.2	0.0-0.1
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	87	89	91	88

Organophosphorus Pesticides in Soil						
Our Reference		288445-1	288445-2	288445-3	288445-5	288445-6
Your Reference	UNITS	212	212	213	214	215
Depth		0.0-0.1	0.2-0.3	01-0.2	0.0-0.1	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	90	91	94	88

Organophosphorus Pesticides in Soil						
Our Reference		288445-7	288445-9	288445-10	288445-12	288445-15
Your Reference	UNITS	215	216	216	217	218
Depth		0.2-0.3	0.0-0.1	0.5-0.6	0.0-0.1	0.1-0.2
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	92	94	90	86

Organophosphorus Pesticides in Soil						
Our Reference		288445-17	288445-19	288445-20	288445-21	288445-22
Your Reference	UNITS	219	220	221	222	223
Depth		0.1-0.2	0.1-0.2	0.0-0.1	0.1-0.2	0.0-0.1
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	87	89	91	88

PCBs in Soil						
Our Reference		288445-1	288445-2	288445-3	288445-5	288445-6
Your Reference	UNITS	212	212	213	214	215
Depth		0.0-0.1	0.2-0.3	01-0.2	0.0-0.1	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	90	91	94	88

PCBs in Soil						
Our Reference		288445-7	288445-9	288445-10	288445-12	288445-15
Your Reference	UNITS	215	216	216	217	218
Depth		0.2-0.3	0.0-0.1	0.5-0.6	0.0-0.1	0.1-0.2
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	92	94	90	86

PCBs in Soil						
Our Reference		288445-17	288445-19	288445-20	288445-21	288445-22
Your Reference	UNITS	219	220	221	222	223
Depth		0.1-0.2	0.1-0.2	0.0-0.1	0.1-0.2	0.0-0.1
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	87	89	91	88

Acid Extractable metals in soil						
Our Reference		288445-1	288445-2	288445-3	288445-4	288445-5
Your Reference	UNITS	212	212	213	213	214
Depth		0.0-0.1	0.2-0.3	01-0.2	0.6-0.7	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Arsenic	mg/kg	<4	7	<4	7	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	18	56	11	12
Copper	mg/kg	46	25	27	35	51
Lead	mg/kg	5	62	9	16	7
Mercury	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	52	10	54	16	56
Zinc	mg/kg	31	68	46	82	39
Manganese	mg/kg	400	330	360	35	420

Acid Extractable metals in soil						
Our Reference		288445-6	288445-7	288445-8	288445-9	288445-10
Your Reference	UNITS	215	215	215	216	216
Depth		0.0-0.1	0.2-0.3	0.7-0.8	0.0-0.1	0.5-0.6
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Arsenic	mg/kg	<4	7	8	5	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	18	21	12	15
Copper	mg/kg	38	19	23	19	21
Lead	mg/kg	4	21	23	15	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	55	17	10	11	10
Zinc	mg/kg	26	34	36	35	35
Manganese	mg/kg	340	420	28	200	160

Acid Extractable metals in soil						
Our Reference		288445-11	288445-12	288445-13	288445-15	288445-16
Your Reference	UNITS	216	217	217	218	218
Depth		1.5-1.6	0.0-0.1	0.7-0.8	0.1-0.2	1.4-1.5
Date Sampled		4/02/2022	4/02/2022	4/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Arsenic	mg/kg	5	7	5	<4	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	16	7	14	11
Copper	mg/kg	12	16	22	56	31
Lead	mg/kg	18	20	18	19	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	6	7	8	16
Zinc	mg/kg	15	42	35	45	69
Manganese	mg/kg	130	270	34	310	82

Acid Extractable metals in soil						
Our Reference		288445-17	288445-18	288445-19	288445-20	288445-21
Your Reference	UNITS	219	219	220	221	222
Depth		0.1-0.2	1.1-1.2	0.1-0.2	0.0-0.1	0.1-0.2
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Arsenic	mg/kg	5	13	<4	9	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	25	18	12	21	14
Copper	mg/kg	30	28	27	20	46
Lead	mg/kg	13	22	19	27	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	28	3	8	11	38
Zinc	mg/kg	34	18	38	41	40
Manganese	mg/kg	310	4	360	520	500

Acid Extractable metals in soil			
Our Reference		288445-22	288445-24
Your Reference	UNITS	223	216 - [TRIPLICATE]
Depth		0.0-0.1	1.5-1.6
Date Sampled		5/02/2022	4/02/2022
Type of sample		Soil	Soil
Date prepared	-	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022
Arsenic	mg/kg	8	5
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	17	8
Copper	mg/kg	23	13
Lead	mg/kg	19	19
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	6	4
Zinc	mg/kg	25	14
Manganese	mg/kg	65	80

Misc Soil - Inorg						
Our Reference		288445-1	288445-2	288445-3	288445-5	288445-6
Your Reference	UNITS	212	212	213	214	215
Depth		0.0-0.1	0.2-0.3	01-0.2	0.0-0.1	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		288445-7	288445-9	288445-10	288445-12	288445-15
Your Reference	UNITS	215	216	216	217	218
Depth		0.2-0.3	0.0-0.1	0.5-0.6	0.0-0.1	0.1-0.2
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		288445-17	288445-19	288445-20	288445-21	288445-22
Your Reference	UNITS	219	220	221	222	223
Depth		0.1-0.2	0.1-0.2	0.0-0.1	0.1-0.2	0.0-0.1
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Moisture						
Our Reference		288445-1	288445-2	288445-3	288445-4	288445-5
Your Reference	UNITS	212	212	213	213	214
Depth		0.0-0.1	0.2-0.3	01-0.2	0.6-0.7	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Moisture	%	3.6	16	5.3	5.6	3.5

Moisture						
Our Reference		288445-6	288445-7	288445-8	288445-9	288445-10
Your Reference	UNITS	215	215	215	216	216
Depth		0.0-0.1	0.2-0.3	0.7-0.8	0.0-0.1	0.5-0.6
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Moisture	%	2.4	11	25	13	12

Moisture						
Our Reference		288445-11	288445-12	288445-13	288445-15	288445-16
Your Reference	UNITS	216	217	217	218	218
Depth		1.5-1.6	0.0-0.1	0.7-0.8	0.1-0.2	1.4-1.5
Date Sampled		4/02/2022	4/02/2022	4/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Moisture	%	12	14	8.2	9.1	8.8

Moisture						
Our Reference		288445-17	288445-18	288445-19	288445-20	288445-21
Your Reference	UNITS	219	219	220	221	222
Depth		0.1-0.2	1.1-1.2	0.1-0.2	0.0-0.1	0.1-0.2
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Moisture	%	8.9	15	8.9	15	8.6

Moisture		
Our Reference		288445-22
Your Reference	UNITS	223
Depth		0.0-0.1
Date Sampled		5/02/2022
Type of sample		Soil
Date prepared	-	10/02/2022
Date analysed	-	11/02/2022
Moisture	%	14

Asbestos ID - soils						
Our Reference		288445-1	288445-2	288445-3	288445-5	288445-6
Your Reference	UNITS	212	212	213	214	215
Depth		0.0-0.1	0.2-0.3	01-0.2	0.0-0.1	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Sample mass tested	g	Approx. 60g	Approx. 45g	Approx. 80g	Approx. 80g	Approx. 95g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		288445-7	288445-9	288445-10	288445-12	288445-15
Your Reference	UNITS	215	216	216	217	218
Depth		0.2-0.3	0.0-0.1	0.5-0.6	0.0-0.1	0.1-0.2
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Sample mass tested	g	Approx. 35g	Approx. 65g	Approx. 80g	Approx. 50g	Approx. 50g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		288445-17	288445-19	288445-20	288445-21	288445-22
Your Reference	UNITS	219	220	221	222	223
Depth		0.1-0.2	0.1-0.2	0.0-0.1	0.1-0.2	0.0-0.1
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Sample mass tested	g	Approx. 50g	Approx. 60g	Approx. 40g	Approx. 45g	Approx. 20g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	105	106
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	105	106
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	103	104
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	104	106
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	102	103
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	108	108
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	107	108
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	99	1	96	98	2	98	98

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	12/02/2022
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	11	<25	<25	0	119	115
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	11	<25	<25	0	119	115
Benzene	mg/kg	0.2	Org-023	[NT]	11	<0.2	<0.2	0	110	105
Toluene	mg/kg	0.5	Org-023	[NT]	11	<0.5	<0.5	0	110	104
Ethylbenzene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	120	117
m+p-xylene	mg/kg	2	Org-023	[NT]	11	<2	<2	0	127	124
o-Xylene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	120	116
Naphthalene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	11	94	83	12	103	96

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Date analysed	-			[NT]	21	12/02/2022	12/02/2022		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	21	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	21	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	21	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	21	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	21	97	100	3	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			11/02/2022	1	11/02/2022	11/02/2022		11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	96	90
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	92	79
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	100	160	46	109	119
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	96	90
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	150	40	92	79
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	150	240	46	109	119
Surrogate o-Terphenyl	%		Org-020	80	1	84	89	6	99	113

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	11	11/02/2022	11/02/2022		11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	11	<50	<50	0	94	91
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	91	80
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	106	127
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	11	<50	<50	0	94	91
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	91	80
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	106	127
Surrogate o-Terphenyl	%		Org-020	[NT]	11	80	81	1	99	102

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Date analysed	-			[NT]	21	11/02/2022	11/02/2022		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	21	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	21	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	21	120	160	29	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	21	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	21	120	150	22	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	21	170	250	38	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	21	81	84	4	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	92
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	99
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	103
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	94
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	94
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	95
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	73	67
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	106	96
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.2	67	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	94	1	84	95	12	92	88

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	95	97
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	99	117
Fluorene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	95	116
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	106	112
Anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	94	104
Pyrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	97	105
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	65	73
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	11	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	11	<0.05	<0.05	0	104	114
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	11	91	85	7	85	90

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	21	0.1	0.2	67	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	21	0.1	0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	0.2	67	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	21	0.1	0.3	100	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	21	0.2	0.3	40	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	21	0.08	0.08	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	21	0.1	0.2	67	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	21	87	98	12	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	100
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	96
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	91
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	101
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	94
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	94
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	90
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	84
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	88
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	100
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	100	1	87	93	7	84	90

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	88	110
HCB	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	85	103
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	87	101
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	103	111
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	96	110
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	94	105
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	90	93
Endrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	90	94
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	92	102
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	110	126
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	21	91	100	9	85	97

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	123
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	91
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	79	75
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	105
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	100
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	89	84
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	82
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	100	1	87	93	7	84	90

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	128	123
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	99	108
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	83	103
Malathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	108	136
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	110	118
Parathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	101	105
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	88	102
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	21	91	100	9	85	97

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	108	100
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	100	1	87	93	7	84	90

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	101	100
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	21	91	100	9	85	97

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date prepared	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	99	82
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	97	72
Chromium	mg/kg	1	Metals-020	<1	1	16	15	6	99	82
Copper	mg/kg	1	Metals-020	<1	1	46	45	2	98	104
Lead	mg/kg	1	Metals-020	<1	1	5	5	0	101	79
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	120	104
Nickel	mg/kg	1	Metals-020	<1	1	52	46	12	99	78
Zinc	mg/kg	1	Metals-020	<1	1	31	30	3	98	84
Manganese	mg/kg	1	Metals-020	<1	1	400	420	5	103	89

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date prepared	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Arsenic	mg/kg	4	Metals-020	[NT]	11	5	6	18	100	86
Cadmium	mg/kg	0.4	Metals-020	[NT]	11	<0.4	<0.4	0	98	77
Chromium	mg/kg	1	Metals-020	[NT]	11	10	12	18	101	83
Copper	mg/kg	1	Metals-020	[NT]	11	12	13	8	100	101
Lead	mg/kg	1	Metals-020	[NT]	11	18	17	6	102	79
Mercury	mg/kg	0.1	Metals-021	[NT]	11	<0.1	<0.1	0	130	115
Nickel	mg/kg	1	Metals-020	[NT]	11	5	5	0	100	83
Zinc	mg/kg	1	Metals-020	[NT]	11	15	14	7	99	88
Manganese	mg/kg	1	Metals-020	[NT]	11	130	75	54	106	73

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	21	6	5	18	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	21	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	21	14	15	7	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	21	46	50	8	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	21	12	11	9	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	21	38	38	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	21	40	38	5	[NT]	[NT]
Manganese	mg/kg	1	Metals-020	[NT]	21	500	470	6	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	288445-2
Date prepared	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	108	108

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	21	<5	<5	0	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 288445-11 for Cd. Therefore a triplicate result has been issued as laboratory sample number 288445-24.

Asbestos: Excessive sample volumes were provided for asbestos analysis.
A portion of the supplied samples were sub-sampled according to Envirolab procedures.
We cannot guarantee that these sub-samples are indicative of the entire sample.
Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.
Note: Samples 288445-1-13,16-22 were sub-sampled from bags provided by the client.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample.
Envirolab recommends supplying 40-50g of sample in its own container.
Note: Sample 288445-15 was sub-sampled from a jar provided by the client.

Douglas Partners
Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	207155.00	**Suburb:**	Kellyville	**To:**	Envirolab Services
Project Manager:	Gavin Boyd	**Order Number:**		**Sampler:**	12 Ashley Street, Chatswood, NSW 2067
Email:	gavin.boyd@douglaspartners.com.au; kristine.nicodemus@douglaspartners.com.au			**Attn:**	Aileen Hie
Turnaround time:	☐ Standard ☑ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day			**Contact:**	02 9910 6200 Ahie@envirolab.com.au
Prior Storage:	☑ Fridge ☐ Freezer ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water	Container Type: G - glass P - plastic	Analytes: Combo 8a	Combo 3	Soil Aggressivity	OCP/OPP/PCB	Phenols	Asbestos (AS)	Asbestos (NEPM)	PFAS	pH, CEC			Notes/ Preservation/ Additional Requirements
1	212.	0.0	0.1	4/2.	S	G/P	•											
2	212.	0.2	0.3	4/2	S	G/P	•											
3	213	0.1	0.2	4/2	S	G/P	•											
4	213	0.6	0.7	4/2.	S	G/P		•										
5	214	0.0	0.1		S	G/P	•											
6	215	0.0	0.1		S	G/P	•											
7	215	0.2	0.3		S	G/P	•											
8	215	0.7	0.8		S	G/P		•										
9	216.	0.0	0.1		S	G/P	•											
10	216	0.5	0.6		S	G/P	•											
11	216	1.5	1.6		S	G/P		•										
12	217	0.0	0.1		S	G/P	•											
13	217.	0.7	0.8		S	G/P		•										
14	BD 2-2-2022				S	G/P			•									

Environment Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Lab No: 288945
Date Received: 9-2-22
Time Received: 1730
Received by: TJH
Temp: Cool/Ambient
Cooling: Ice/Icepack 22°
Security: Intact/Broken/None

Metals to analyse:	HM9 (As, Cd, Cr, Cu, Pb, Hg, Mn, Ni, Zn)		
Number of samples in container:		**Transported to laboratory by:**	Hunter Express
Send results to:	Douglas Partners Pty Ltd		
Address:	96 Hermitage Rd, West Ryde, 2114	**Phone:**	02 9809 0666
Relinquished by:		**Date:**	**Signed:**

LAB RECEIPT

Lab Ref. No:	288945
Received by:	TJHN
Date & Time:	9.2.22 1730
Signed:	

Douglas Partners
Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	207155.00	**Suburb:**	Kellyville	**To:**	Envirolab Services
Project Manager:	Gavin Boyd	**Order Number:**		**Sampler:**	12 Ashley Street, Chatswood, NSW 2067
Email:	gavin.boyd@douglaspartners.com.au; kristine.nicodemus@douglaspartners.com.au			**Attn:**	Aileen Hie
Turnaround time:	☐ Standard ☑ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day			**Contact:**	02 9910 6200 Ahie@envirolab.com.au
Prior Storage:	☑ Fridge ☐ Freezer ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water	Container Type: G - glass P - plastic	Analytes: Combo 8a	Combo 3	Soil Aggressivity	OCP/OPP/PCB	Phenols	Asbestos (AS)	Asbestos (NEPM)	PFAS	pH, CEC			Notes/ Preservation/ Additional Requirements
15	218	0.1	0.2	5/2	S	G/P	•											
NR	218	1.0	1.1	5/2	S	G/P	•											
16	218	1.4	1.5	5/2	S	G/P		•										
17	219	0.9	0.2	5/2	S	G/P	•											
18	219	1.1	1.2	5/2	S	G/P		•										
19	220	0.9	0.2	5/2	S	G/P	•											
20	221	0.0	0.1	5/2	S	G/P	•											
NR	221	0.8	0.9		S	G/P		•										
21	222	0.1	0.2		S	G/P	•											
22	223	0.0	0.1		S	G/P	•											
					S	G/P												
					S	G/P												
					S	G/P												
23	BD420	220205			S	G/P		•										

Metals to analyse:	HM9 (As, Cd, Cr, Cu, Pb, Hg, Mn, Ni, Zn)		
Number of samples in container:		**Transported to laboratory by:**	Hunter Express
Send results to:	Douglas Partners Pty Ltd		
Address:	96 Hermitage Rd, West Ryde, 2114	**Phone:**	02 9809 0666
Relinquished by:		**Date:**	**Signed:**

LAB RECEIPT

Lab Ref. No:	288495
Received by:	TSHAW
Date & Time:	9/2/22 1730
Signed:	TS

Envirolab Services Pty Ltd
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customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 277378

Client Details

Client	Douglas Partners Pty Ltd (Riverstone)
Attention	Gavin Boyd, Kristine Nicodemus
Address	43 Hobart St, Riverstone, NSW, 2765

Sample Details

Your Reference	**207155.00, Kellyville**
Number of Samples	29 Soil
Date samples received	02/09/2021
Date completed instructions received	07/09/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	14/09/2021
Date of Issue	14/09/2021

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Asbestos Approved By
Analysed by Asbestos Approved Analyst: Ridwan Wijaya
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Hannah Nguyen, Metals Supervisor
Lucy Zhu, Asbestos Supervisor
Priya Samarawickrama, Senior Chemist
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		277378-1	277378-7	277378-8	277378-24	277378-25
Your Reference	UNITS	202/0.1	204/0.1	204/0.5	209/0.1	209/0.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Date analysed	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	107	101	98	93	86

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		277378-28	277378-29
Your Reference	UNITS	TS	TB
Date Sampled		25/08/2021	25/08/2021
Type of sample		Soil	Soil
Date extracted	-	08/09/2021	08/09/2021
Date analysed	-	09/09/2021	09/09/2021
TRH C_6 - C_9	mg/kg	[NA]	<25
TRH C_6 - C_{10}	mg/kg	[NA]	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	[NA]	<25
Benzene	mg/kg	97%	<0.2
Toluene	mg/kg	97%	<0.5
Ethylbenzene	mg/kg	97%	<1
m+p-xylene	mg/kg	98%	<2
o-Xylene	mg/kg	97%	<1
naphthalene	mg/kg	[NA]	<1
Total +ve Xylenes	mg/kg	[NA]	<3
Surrogate aaa-Trifluorotoluene	%	92	108

svTRH (C10-C40) in Soil						
Our Reference		277378-1	277378-7	277378-8	277378-24	277378-25
Your Reference	UNITS	202/0.1	204/0.1	204/0.5	209/0.1	209/0.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	120	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	100	130	<100	130	<100
TRH >C_{10} -C_{16}	mg/kg	55	50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	55	50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	150	180	<100	160	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	200	230	<50	160	<50
Surrogate o-Terphenyl	%	104	91	83	95	81

PAHs in Soil						
Our Reference		277378-1	277378-7	277378-8	277378-24	277378-25
Your Reference	UNITS	202/0.1	204/0.1	204/0.5	209/0.1	209/0.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021	10/09/2021	10/09/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	101	102	97	105	108

Organochlorine Pesticides in soil				
Our Reference	UNITS	277378-1	277378-7	277378-8
Your Reference		202/0.1	204/0.1	204/0.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil
Date extracted	-	08/09/2021	08/09/2021	08/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	115	111

Organophosphorus Pesticides in Soil				
Our Reference		277378-1	277378-7	277378-8
Your Reference	UNITS	202/0.1	204/0.1	204/0.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil
Date extracted	-	08/09/2021	08/09/2021	08/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	115	111

PCBs in Soil				
Our Reference		277378-1	277378-7	277378-8
Your Reference	UNITS	202/0.1	204/0.1	204/0.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil
Date extracted	-	08/09/2021	08/09/2021	08/09/2021
Date analysed	-	10/09/2021	10/09/2021	10/09/2021
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	119	115	111

Acid Extractable metals in soil						
Our Reference		277378-1	277378-7	277378-8	277378-24	277378-25
Your Reference	UNITS	202/0.1	204/0.1	204/0.5	209/0.1	209/0.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Date analysed	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Arsenic	mg/kg	<4	5	7	4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	21	19	12	16
Copper	mg/kg	7	10	12	15	10
Lead	mg/kg	11	18	18	19	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	7	6	6	5
Zinc	mg/kg	32	32	20	42	17

Misc Soil - Inorg				
Our Reference		277378-1	277378-7	277378-8
Your Reference	UNITS	202/0.1	204/0.1	204/0.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil
Date prepared	-	09/09/2021	09/09/2021	09/09/2021
Date analysed	-	09/09/2021	09/09/2021	09/09/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Moisture						
Our Reference		277378-1	277378-7	277378-8	277378-24	277378-25
Your Reference	UNITS	202/0.1	204/0.1	204/0.5	209/0.1	209/0.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Date analysed	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Moisture	%	8.7	18	17	22	18

Asbestos ID - soils				
Our Reference		277378-1	277378-7	277378-8
Your Reference	UNITS	202/0.1	204/0.1	204/0.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil
Date analysed	-	13/09/2021	13/09/2021	13/09/2021
Sample mass tested	g	Approx. 30g	Approx. 30g	Approx. 35g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected

Misc Inorg - Soil						
Our Reference		277378-1	277378-2	277378-3	277378-4	277378-5
Your Reference	UNITS	202/0.1	202/0.5	202/1.0	202/1.5	202/2.0
Date Sampled		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Date analysed	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
pH 1:5 soil:water	pH Units	5.5	5.1	5.6	5.6	5.6
Chloride, Cl 1:5 soil:water	mg/kg	[NA]	[NA]	[NA]	10	[NA]
Sulphate, SO4 1:5 soil:water	mg/kg	[NA]	[NA]	[NA]	50	[NA]

Misc Inorg - Soil						
Our Reference		277378-6	277378-19	277378-20	277378-21	277378-22
Your Reference	UNITS	202/2.5	207/0.1	207/0.5	207/1.0	207/1.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
Date analysed	-	09/09/2021	09/09/2021	09/09/2021	09/09/2021	09/09/2021
pH 1:5 soil:water	pH Units	5.8	5.6	5.4	5.3	5.5
Chloride, Cl 1:5 soil:water	mg/kg	[NA]	[NA]	<10	[NA]	[NA]
Sulphate, SO4 1:5 soil:water	mg/kg	[NA]	[NA]	35	[NA]	[NA]

Misc Inorg - Soil		
Our Reference		277378-23
Your Reference	UNITS	207/2.0
Date Sampled		25/08/2021
Type of sample		Soil
Date prepared	-	09/09/2021
Date analysed	-	09/09/2021
pH 1:5 soil:water	pH Units	5.5

Texture and Salinity*						
Our Reference		277378-1	277378-2	277378-3	277378-4	277378-5
Your Reference	UNITS	202/0.1	202/0.5	202/1.0	202/1.5	202/2.0
Date Sampled		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Date analysed	-	08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Electrical Conductivity 1:5 soil:water	µS/cm	250	47	40	55	93
Texture Value	-	9.0	7.0	7.0	7.0	7.0
Texture	-	CLAY LOAM	MEDIUM CLAY	MEDIUM CLAY	MEDIUM CLAY	MEDIUM CLAY
ECe	dS/m	2.3	<2	<2	<2	<2
Class	-	SLIGHTLY SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*						
Our Reference		277378-6	277378-19	277378-20	277378-21	277378-22
Your Reference	UNITS	202/2.5	207/0.1	207/0.5	207/1.0	207/1.5
Date Sampled		25/08/2021	25/08/2021	25/08/2021	25/08/2021	25/08/2021
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Date analysed	-	08/09/2021	08/09/2021	08/09/2021	08/09/2021	08/09/2021
Electrical Conductivity 1:5 soil:water	µS/cm	52	61	42	73	58
Texture Value	-	7.0	9.0	9.0	9.0	7.0
Texture	-	MEDIUM CLAY	CLAY LOAM	CLAY LOAM	CLAY LOAM	MEDIUM CLAY
ECe	dS/m	<2	<2	<2	<2	<2
Class	-	NON SALINE	NON SALINE	NON SALINE	NON SALINE	NON SALINE

Texture and Salinity*		
Our Reference		277378-23
Your Reference	UNITS	207/2.0
Date Sampled		25/08/2021
Type of sample		Soil
Date prepared	-	08/09/2021
Date analysed	-	08/09/2021
Electrical Conductivity 1:5 soil:water	µS/cm	33
Texture Value	-	7.0
Texture	-	MEDIUM CLAY
ECe	dS/m	<2
Class	-	NON SALINE

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25°C in accordance with APHA latest edition 2510 and Rayment & Lyons.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA latest edition, 4110-B. Waters samples are filtered on receipt prior to analysis. Alternatively determined by colourimetry/turbidity using Discrete Analyser.
INORG-123	Determined using a "Texture by Feel" method.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	277378-7
Date extracted	-			08/09/2021	1	08/09/2021	08/09/2021		08/09/2021	08/09/2021
Date analysed	-			09/09/2021	1	09/09/2021	09/09/2021		09/09/2021	09/09/2021
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	117	103
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	117	103
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	127	110
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	122	107
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	110	98
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	112	100
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	116	104
naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	98	1	107	99	8	109	90

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	277378-7
Date extracted	-			08/09/2021	1	08/09/2021	08/09/2021		08/09/2021	08/09/2021
Date analysed	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	107	111
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	96	109
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	100	100	0	82	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	55	<50	10	107	111
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	150	120	22	96	109
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	<100	<100	0	82	[NT]
Surrogate o-Terphenyl	%		Org-020	96	1	104	100	4	96	98

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	277378-7
Date extracted	-			08/09/2021	1	08/09/2021	08/09/2021		08/09/2021	08/09/2021
Date analysed	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	93
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	91	87
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	97	101
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	100
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	112	100
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	113	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	87	79
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	110	96
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	106	1	101	94	7	104	99

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	277378-7
Date extracted	-			08/09/2021	1	08/09/2021	08/09/2021		08/09/2021	08/09/2021
Date analysed	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	82
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	89
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	93	85
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	95
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	100
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	94
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	98
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	117
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	94	96
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	90	88
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	123	1	119	113	5	123	118

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	277378-7
Date extracted	-			08/09/2021	1	08/09/2021	08/09/2021		08/09/2021	08/09/2021
Date analysed	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	91	91
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	101
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	85	95
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	116
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	110
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	72	84
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	86
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	123	1	119	113	5	123	118

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	277378-7
Date extracted	-			08/09/2021	1	08/09/2021	08/09/2021		08/09/2021	08/09/2021
Date analysed	-			10/09/2021	1	10/09/2021	10/09/2021		10/09/2021	10/09/2021
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	100	100
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	123	1	119	113	5	123	118

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-11	277378-7
Date prepared	-			08/09/2021	1	08/09/2021	08/09/2021		08/09/2021	08/09/2021
Date analysed	-			09/09/2021	1	09/09/2021	09/09/2021		09/09/2021	09/09/2021
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	93	89
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	98	105
Chromium	mg/kg	1	Metals-020	<1	1	9	10	11	101	94
Copper	mg/kg	1	Metals-020	<1	1	7	8	13	99	94
Lead	mg/kg	1	Metals-020	<1	1	11	13	17	101	85
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	87	87
Nickel	mg/kg	1	Metals-020	<1	1	5	5	0	98	104
Zinc	mg/kg	1	Metals-020	<1	1	32	33	3	101	113

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	277378-7
Date prepared	-			09/09/2021	1	09/09/2021	09/09/2021		09/09/2021	09/09/2021
Date analysed	-			09/09/2021	1	09/09/2021	09/09/2021		09/09/2021	09/09/2021
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	101	103

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			09/09/2021	20	09/09/2021	09/09/2021		09/09/2021	[NT]
Date analysed	-			09/09/2021	20	09/09/2021	09/09/2021		09/09/2021	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	20	5.4	5.4	0	101	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	<10	20	<10	<10	0	90	[NT]
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	<10	20	35	40	13	100	[NT]

QUALITY CONTROL: Texture and Salinity*					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			08/09/2021	20	08/09/2021	08/09/2021		08/09/2021	[NT]
Date analysed	-			08/09/2021	20	08/09/2021	08/09/2021		08/09/2021	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	<1	20	42	47	11	106	[NT]
Texture Value	-		INORG-123	[NT]	20	9.0	[NT]		[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

pH/EC Samples were out of the recommended holding time for this analysis.

TRH Soil C10-C40 NEPM - # Percent recovery for the surrogate/matrix spike is not possible to report as the high concentration of analytes in sample #7 have caused interference.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.
Note: Samples 277378-1, 7, 8 were sub-sampled from jars provided by the client.

COC rec'd: 7/9/21, 1250

Douglas Partners
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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	207155.00	**Suburb:**	Kellyville	**To:**	Envirolab Services
Project Name:	Proposed Centre of Excellence and Community Facility	**Order Number**			12 Ashley St, Chatswood, NSW, 2067
Project Manager:	Gavin Boyd	**Sampler:**	Koray Adali		
Emails:	gavin.boyd@douglaspartners.com.au	kristine.nicodemus@douglaspartners.com.au			
Date Required:	Same day ☐ 24 hours ☐ 48 hours ☐ 72 hours ☐ Standard ☐				
Prior Storage:	☐ Esky ☐ Fridge ☐ Shelved	Do samples contain 'potential' HBM?	Yes ☐ No ☐ (If YES, then handle, transport and store in accordance with FPM HAZID)		

Sample ID	Lab ID	Date Sampled	Sample Type (S - soil W - water)	Container Type (G - glass P - plastic)	Analytes: Ph, ece	Chlorides & Sulphates	Combo 8a	Combo 3						Notes/preservation
202/ 0.1	1	25/08/21	S	P/G	•		•							
202/ 0.5	2	25/08/21	S	P/G	•									
202/ 1.0	3	25/08/21	S	P/G	•									
202/ 1.5	4	25/08/21	S	P/G	•	•								
202/ 2.0	5	25/08/21	S	P/G	•									
202/ 2.5	6	25/08/21	S	P/G	•									
204/ 0.1	7	25/08/21	S	P/G			•							
204/ 0.5	8	25/08/21	S	P/G			•							
204/ 1.0	9	25/08/21	S	P/G										

ENVIROLAB GROUP
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 277378
Date Received: 10/9/21
Time Received: 10:50
Received By: CH
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	207155.00	**Suburb:** Kellyville	**To:** Envirolab Services
Project Name:	Proposed Centre of Excellence and Community Facility	**Order Number**	12 Ashley St, Chatswood, NSW, 2067
Project Manager:	Gavin Boyd	**Sampler:** Koray Adali	
Emails:	gavin.boyd@douglaspartners.com.au	kristine.nicodemus@douglaspartners.com.au	
Date Required:	Same day ☐ 24 hours ☐ 48 hours ☐ 72 hours ☐ Standard ☐		
Prior Storage:	☐ Esky ☐ Fridge ☐ Shelved	Do samples contain 'potential' HBM? Yes ☐ No ☐ (If YES, then handle, transport and store in accordance with FPM HAZID)	

204/ 1.5	10	25/08/21	S	P/G											
204/ 2.0	11	25/08/21	S	P/G											
204/ 2.5	12	25/08/21	S	P/G											
204/ 3.0	13	25/08/21	S	P/G											
204/ 3.5	14	25/08/21	S	P/G											
204/ 4.0	15	25/08/21	S	P/G											
204/ 4.5	16	25/08/21	S	P/G											
204/ 5.0	17	25/08/21	S	P/G											
204/ 5.5	18	25/08/21	S	P/G											
207/ 0.1	19	25/08/21	S	P/G	•										
207/ 0.5	20	25/08/21	S	P/G	•	•									

#277378
CH 02/09/21

Douglas Partners
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CHAIN OF CUSTODY DESPATCH SHEET

Project No:	207155.00	**Suburb:**	Kellyville	**To:**	Envirolab Services
Project Name:	Proposed Centre of Excellence and Community Facility	**Order Number**			12 Ashley St, Chatswood, NSW, 2067
Project Manager:	Gavin Boyd	**Sampler:**	Koray Adali		
Emails:	gavin.boyd@douglaspartners.com.au	kristine.nicodemus@douglaspartners.com.au			
Date Required:	Same day ☐ 24 hours ☐ 48 hours ☐ 72 hours ☐ Standard ☐				
Prior Storage:	☐ Esky ☐ Fridge ☐ Shelved	Do samples contain 'potential' HBM?	Yes ☐	No ☐	(If YES, then handle, transport and store in accordance with FPM HAZID)

207/ 1.0	21	25/08/21	S	P/G	•										
207/ 1.5	22	25/08/21	S	P/G	•										
207/ 2.0	23	25/08/21	S	P/G	•										
209/ 0.1	24	25/08/21	S	P/G					•						
209/ 0.5	25	25/08/21	S	P/G					•						
209/ 1.0	26	25/08/21	S	P/G											
209/ 1.5	27	25/08/21	S	P/G											
PQL (S) mg/kg													**ANZECC PQLs req'd for all water analytes** ☐		

PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit

Metals to Analyse: 8HM unless specified here:

Lab Report/Reference No:

Total number of samples in container:	**Relinquished by:** KA	**Transported to laboratory by:**	
Send Results to: Douglas Partners Pty Ltd	**Address** 43 Hobart St, Riverstone, NSW, 2765	**Phone:**	**Fax:**
Signed:	**Received by:**	**Date & Time:**	

28 ~~FB~~ CH TS
29 ~~FS~~ TB.

#277378
CH 02/09/21

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

CERTIFICATE OF ANALYSIS 278877

Client Details

Client	Douglas Partners Pty Ltd
Attention	Gavin Boyd
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**207155.00, Kellyville**
Number of Samples	15 Soil
Date samples received	23/09/2021
Date completed instructions received	24/09/2021

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	01/10/2021
Date of Issue	01/10/2021

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By
Analysed by Asbestos Approved Analyst: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Josh Williams, LC Supervisor
Lucy Zhu, Asbestos Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		278877-1	278877-2	278877-3	278877-4	278877-5
Your Reference	UNITS	BD1-160921	BD1-220921	201	205	203
Depth		-	-	0-0.1	0-0.1	0-0.1
Date Sampled		16/09/21	22/09/21	22/09/21	22/09/21	22/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	78	84	75	87	82

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		278877-6	278877-7	278877-8	278877-9	278877-10
Your Reference	UNITS	208	208	210	210	206
Depth		0-0.1	0.3-0.4	0.2-0.3	0.4-0.6	0.05-0.15
Date Sampled		16/09/21	16/09/21	16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	80	85	84	86	92

vTRH(C6-C10)/BTEXN in Soil				
Our Reference		278877-11	278877-12	278877-13
Your Reference	UNITS	206	211	211
Depth		0.2-0.5	0.2-0.3	0.5-0.6
Date Sampled		16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	84	83	91

svTRH (C10-C40) in Soil						
Our Reference		278877-1	278877-2	278877-3	278877-4	278877-5
Your Reference	UNITS	BD1-160921	BD1-220921	201	205	203
Depth		-	-	0-0.1	0-0.1	0-0.1
Date Sampled		16/09/21	22/09/21	22/09/21	22/09/21	22/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	400
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	540
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	950
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	140
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	140
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	770
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	180
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	1,100
Surrogate o-Terphenyl	%	100	101	104	96	83

svTRH (C10-C40) in Soil						
Our Reference		278877-6	278877-7	278877-8	278877-9	278877-10
Your Reference	UNITS	208	208	210	210	206
Depth		0-0.1	0.3-0.4	0.2-0.3	0.4-0.6	0.05-0.15
Date Sampled		16/09/21	16/09/21	16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	150	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	110	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	150	<50	110	<50	<50
Surrogate o-Terphenyl	%	75	106	115	103	100

svTRH (C10-C40) in Soil				
Our Reference		278877-11	278877-12	278877-13
Your Reference	UNITS	206	211	211
Depth		0.2-0.5	0.2-0.3	0.5-0.6
Date Sampled		16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	120	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	120	<50
Surrogate o-Terphenyl	%	79	101	96

PAHs in Soil						
Our Reference		278877-1	278877-2	278877-3	278877-4	278877-5
Your Reference	UNITS	BD1-160921	BD1-220921	201	205	203
Depth		-	-	0-0.1	0-0.1	0-0.1
Date Sampled		16/09/21	22/09/21	22/09/21	22/09/21	22/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	30/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	0.3	<0.1	<0.1
Pyrene	mg/kg	<0.1	0.2	0.3	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.09	0.1	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	0.4	0.78	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	97	86	90	80	88

PAHs in Soil						
Our Reference		278877-6	278877-7	278877-8	278877-9	278877-10
Your Reference	UNITS	208	208	210	210	206
Depth		0-0.1	0.3-0.4	0.2-0.3	0.4-0.6	0.05-0.15
Date Sampled		16/09/21	16/09/21	16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	28/09/2021	29/09/2021	29/09/2021	30/09/2021	30/09/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.08	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	0.97	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	100	88	93	88	91

PAHs in Soil				
Our Reference		278877-11	278877-12	278877-13
Your Reference	UNITS	206	211	211
Depth		0.2-0.5	0.2-0.3	0.5-0.6
Date Sampled		16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	30/09/2021	30/09/2021	30/09/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.3	<0.1
Pyrene	mg/kg	<0.1	0.3	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.2	<0.1
Chrysene	mg/kg	<0.1	0.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.1	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	1.3	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	82	82	85

Organochlorine Pesticides in soil						
Our Reference		278877-3	278877-4	278877-5	278877-6	278877-8
Your Reference	UNITS	201	205	203	208	210
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0.2-0.3
Date Sampled		22/09/21	22/09/21	22/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	29/09/2021
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	88	88	90	89

Organochlorine Pesticides in soil				
Our Reference		278877-10	278877-12	278877-13
Your Reference	UNITS	206	211	211
Depth		0.05-0.15	0.2-0.3	0.5-0.6
Date Sampled		16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	30/09/2021	30/09/2021	30/09/2021
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	81	78	77

Organophosphorus Pesticides in Soil						
Our Reference		278877-3	278877-4	278877-5	278877-6	278877-8
Your Reference	UNITS	201	205	203	208	210
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0.2-0.3
Date Sampled		22/09/21	22/09/21	22/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	29/09/2021
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	88	88	90	89

Organophosphorus Pesticides in Soil				
Our Reference		278877-10	278877-12	278877-13
Your Reference	UNITS	206	211	211
Depth		0.05-0.15	0.2-0.3	0.5-0.6
Date Sampled		16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	30/09/2021	30/09/2021	30/09/2021
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	81	78	77

PCBs in Soil						
Our Reference		278877-3	278877-4	278877-5	278877-6	278877-8
Your Reference	UNITS	201	205	203	208	210
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0.2-0.3
Date Sampled		22/09/21	22/09/21	22/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	29/09/2021
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	88	88	90	89

PCBs in Soil				
Our Reference		278877-10	278877-12	278877-13
Your Reference	UNITS	206	211	211
Depth		0.05-0.15	0.2-0.3	0.5-0.6
Date Sampled		16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil
Date extracted	-	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	30/09/2021	30/09/2021	30/09/2021
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	81	78	77

Acid Extractable metals in soil						
Our Reference		278877-1	278877-2	278877-3	278877-4	278877-5
Your Reference	UNITS	BD1-160921	BD1-220921	201	205	203
Depth		-	-	0-0.1	0-0.1	0-0.1
Date Sampled		16/09/21	22/09/21	22/09/21	22/09/21	22/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021
Arsenic	mg/kg	<4	8	7	<4	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	3	12	12	2	14
Copper	mg/kg	1	25	21	<1	19
Lead	mg/kg	2	70	55	1	53
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	7	6	<1	7
Zinc	mg/kg	5	79	69	4	94

Acid Extractable metals in soil						
Our Reference		278877-6	278877-7	278877-8	278877-9	278877-10
Your Reference	UNITS	208	208	210	210	206
Depth		0-0.1	0.3-0.4	0.2-0.3	0.4-0.6	0.05-0.15
Date Sampled		16/09/21	16/09/21	16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021
Arsenic	mg/kg	7	8	<4	8	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	14	28	29	13
Copper	mg/kg	16	20	20	22	28
Lead	mg/kg	23	21	12	16	4
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	7	16	15	49
Zinc	mg/kg	69	44	44	28	27

Acid Extractable metals in soil					
Our Reference		278877-11	278877-12	278877-13	278877-16
Your Reference	UNITS	206	211	211	211 - [TRIPLICATE]
Depth		0.2-0.5	0.2-0.3	0.5-0.6	0.5-0.6
Date Sampled		16/09/21	16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	30/09/2021	30/09/2021	30/09/2021	30/09/2021
Arsenic	mg/kg	6	<4	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	35	15	11
Copper	mg/kg	26	25	21	23
Lead	mg/kg	19	25	26	65
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	10	19	8	7
Zinc	mg/kg	44	57	36	77

Misc Soil - Inorg						
Our Reference		278877-3	278877-4	278877-5	278877-6	278877-8
Your Reference	UNITS	201	205	203	208	210
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0.2-0.3
Date Sampled		22/09/21	22/09/21	22/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg				
Our Reference		278877-10	278877-12	278877-13
Your Reference	UNITS	206	211	211
Depth		0.05-0.15	0.2-0.3	0.5-0.6
Date Sampled		16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil
Date prepared	-	29/09/2021	29/09/2021	29/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Moisture						
Our Reference		278877-1	278877-2	278877-3	278877-4	278877-5
Your Reference	UNITS	BD1-160921	BD1-220921	201	205	203
Depth		-	-	0-0.1	0-0.1	0-0.1
Date Sampled		16/09/21	22/09/21	22/09/21	22/09/21	22/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021
Moisture	%	7.9	10	9.9	6.4	13

Moisture						
Our Reference		278877-6	278877-7	278877-8	278877-9	278877-10
Your Reference	UNITS	208	208	210	210	206
Depth		0-0.1	0.3-0.4	0.2-0.3	0.4-0.6	0.05-0.15
Date Sampled		16/09/21	16/09/21	16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/09/2021	28/09/2021	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021	29/09/2021	29/09/2021
Moisture	%	16	13	6.7	11	6.1

Moisture				
Our Reference		278877-11	278877-12	278877-13
Your Reference	UNITS	206	211	211
Depth		0.2-0.5	0.2-0.3	0.5-0.6
Date Sampled		16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil
Date prepared	-	28/09/2021	28/09/2021	28/09/2021
Date analysed	-	29/09/2021	29/09/2021	29/09/2021
Moisture	%	11	9.1	12

Asbestos ID - soils						
Our Reference		278877-3	278877-4	278877-5	278877-6	278877-8
Your Reference	UNITS	201	205	203	208	210
Depth		0-0.1	0-0.1	0-0.1	0-0.1	0.2-0.3
Date Sampled		22/09/21	22/09/21	22/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	30/09/2021	30/09/2021	30/09/2021	30/09/2021	30/09/2021
Sample mass tested	g	Approx. 60g	Approx. 20g	Approx. 30g	Approx. 10g	Approx. 40g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Beige fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils				
Our Reference		278877-10	278877-12	278877-13
Your Reference	UNITS	206	211	211
Depth		0.05-0.15	0.2-0.3	0.5-0.6
Date Sampled		16/09/21	16/09/21	16/09/21
Type of sample		Soil	Soil	Soil
Date analysed	-	30/09/2021	30/09/2021	30/09/2021
Sample mass tested	g	Approx. 45g	Approx. 35g	Approx. 35g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Asbestos comments	-	NO	NO	NO
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			28/09/2021	3	28/09/2021	28/09/2021		28/09/2021	[NT]
Date analysed	-			29/09/2021	3	29/09/2021	29/09/2021		29/09/2021	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	<25	3	<25	<25	0	99	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	3	<25	<25	0	99	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	3	<0.2	<0.2	0	94	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	3	<0.5	<0.5	0	75	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	3	<1	<1	0	106	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	3	<2	<2	0	110	[NT]
o-Xylene	mg/kg	1	Org-023	<1	3	<1	<1	0	106	[NT]
naphthalene	mg/kg	1	Org-023	<1	3	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	93	3	75	82	9	88	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	28/09/2021	28/09/2021		[NT]	[NT]
Date analysed	-			[NT]	13	29/09/2021	29/09/2021		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	13	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	13	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	13	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	13	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	13	91	81	12	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			28/09/2021	3	28/09/2021	28/09/2021		28/09/2021	[NT]
Date analysed	-			29/09/2021	3	29/09/2021	29/09/2021		29/09/2021	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	3	<50	<50	0	97	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	3	<100	<100	0	91	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	3	<100	<100	0	92	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	3	<50	<50	0	97	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	3	<100	<100	0	91	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	3	<100	<100	0	92	[NT]
Surrogate o-Terphenyl	%		Org-020	100	3	104	103	1	110	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	28/09/2021	28/09/2021		[NT]	[NT]
Date analysed	-			[NT]	13	29/09/2021	29/09/2021		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	13	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	13	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	13	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	13	96	95	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			28/09/2021	3	28/09/2021	28/09/2021		28/09/2021	[NT]
Date analysed	-			30/09/2021	3	28/09/2021	28/09/2021		30/09/2021	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	107	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	109	[NT]
Fluorene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	109	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	3	0.2	0.2	0	122	[NT]
Anthracene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	3	0.3	0.4	29	104	[NT]
Pyrene	mg/kg	0.1	Org-022/025	<0.1	3	0.3	0.3	0	105	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	0.1	0	81	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	3	<0.2	0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	3	0.1	0.2	67	120	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	105	3	90	81	11	108	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	28/09/2021	28/09/2021		[NT]	[NT]
Date analysed	-			[NT]	13	30/09/2021	30/09/2021		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	13	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	13	85	85	0	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			28/09/2021	3	28/09/2021	28/09/2021		28/09/2021	[NT]
Date analysed	-			30/09/2021	3	28/09/2021	28/09/2021		30/09/2021	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	92	[NT]
HCB	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	99	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	65	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	107	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	98	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	101	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	102	[NT]
Endrin	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	78	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	74	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	82	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	100	3	91	88	3	106	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	28/09/2021	28/09/2021		[NT]	[NT]
Date analysed	-			[NT]	13	30/09/2021	30/09/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	13	77	77	0	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			28/09/2021	3	28/09/2021	28/09/2021		28/09/2021	[NT]
Date analysed	-			30/09/2021	3	28/09/2021	28/09/2021		30/09/2021	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	70	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	101	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	63	[NT]
Malathion	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	103	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	106	[NT]
Parathion	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	66	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	84	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	100	3	91	88	3	106	[NT]

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	28/09/2021	28/09/2021		[NT]	[NT]
Date analysed	-			[NT]	13	30/09/2021	30/09/2021		[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	13	77	77	0	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date extracted	-			28/09/2021	3	28/09/2021	28/09/2021		28/09/2021	[NT]
Date analysed	-			30/09/2021	3	28/09/2021	28/09/2021		30/09/2021	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	3	<0.1	<0.1	0	100	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	3	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	100	3	91	88	3	106	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	28/09/2021	28/09/2021		[NT]	[NT]
Date analysed	-			[NT]	13	30/09/2021	30/09/2021		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	13	77	77	0	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date prepared	-			28/09/2021	3	28/09/2021	28/09/2021		28/09/2021	[NT]
Date analysed	-			30/09/2021	3	30/09/2021	30/09/2021		30/09/2021	[NT]
Arsenic	mg/kg	4	Metals-020	<4	3	7	5	33	83	[NT]
Cadmium	mg/kg	0.4	Metals-020	<0.4	3	<0.4	<0.4	0	86	[NT]
Chromium	mg/kg	1	Metals-020	<1	3	12	11	9	87	[NT]
Copper	mg/kg	1	Metals-020	<1	3	21	18	15	84	[NT]
Lead	mg/kg	1	Metals-020	<1	3	55	71	25	92	[NT]
Mercury	mg/kg	0.1	Metals-021	<0.1	3	<0.1	<0.1	0	86	[NT]
Nickel	mg/kg	1	Metals-020	<1	3	6	6	0	89	[NT]
Zinc	mg/kg	1	Metals-020	<1	3	69	69	0	93	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	13	28/09/2021	28/09/2021		[NT]	[NT]
Date analysed	-			[NT]	13	30/09/2021	30/09/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	13	<4	5	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	13	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	13	15	20	29	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	13	21	22	5	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	13	26	17	42	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	13	8	11	32	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	13	36	42	15	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date prepared	-			29/09/2021	3	29/09/2021	29/09/2021		29/09/2021	[NT]
Date analysed	-			29/09/2021	3	29/09/2021	29/09/2021		29/09/2021	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	3	<5	<5	0	102	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Asbestos: Excessive sample volumes were provided for asbestos analysis.
A portion of the supplied samples were sub-sampled according to Envirolab procedures.
We cannot guarantee that these sub-samples are indicative of the entire sample.
Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.
Note: Samples requested for asbestos testing were sub-sampled from bags provided by the client.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 278877-13 for Pb. Therefore a triplicate result has been issued as laboratory sample number 278877-16.

Douglas Partners
Geotechnics | Environment | Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	207155.00	**Suburb:**	Kellyville	**To:**	Envirolab Services
Project Manager:	G Boyd	**Order Number:**		**Sampler:** G Boyd	12 Ashley Street, Chatswood, NSW 2067
Email:	gavin.boyd@douglaspartners.com.au			**Attn:**	Aileen Hie
Turnaround time:	☑ Standard ☐ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day			**Contact:**	02 9910 6200 Ahie@envirolab.com.au
Prior Storage:	☑ Fridge ☐ Freezer ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water	Container Type: G - glass P - plastic	Analytes: Combo 8a	Combo 3							pH, CEC			Notes/ Preservation/ Additional Requirements
1	BD1-160921			16/09/21	S	G/P		•										
2	BD1-220921			22/09/21	S	G/P		•										
3	201	0	0.1	22/09/21	S	G/P	•											
4	~~205~~	~~0~~	~~0.1~~	~~22/09/21~~	S	G/P	•											
5	203	0	0.1	22/09/21	S	G/P	•											
6	208	0	0.1	16/09/21	S	G/P	•											
7	208	0.3	0.4	16/09/21	S	G/P		•										
8	210	0.2	0.3	16/09/21	S	G/P	•											
9	210	0.4	0.6	16/09/21	S	G/P		•										
10	206	0.05	0.15	16/09/21	S	G/P	•											
11	206	0.2	0.5	16/09/21	S	G/P		•										
12	211	0.2	0.3	16/09/21	S	G/P	•											
13	211	0.5	0.6	16/09/21	S	G/P	•											
14	BH206	1.0	1.05	16/09	bag													
15	BH206	0.4	0.7	16/09	bag													

14 & 15 extra

ENVIROLAB GROUP
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: ~~27887~~ 27887 7
Date Received: 23/09/2021
Time Received: 14:40 COC 24/09 @ 7:30
Received By: ~~TO~~
Temp: Cool/Ambient 7°C
Cooling: ~~Ice/Icepack~~
Security: ~~Intact/Broken~~/None

Metals to analyse:	HM9 (As, Cd, Cr, Cu, Pb, Hg, Mn, Ni, Zn)		
Number of samples in container:		**Transported to laboratory by:**	Hunter Express
Send results to:	Douglas Partners Pty Ltd		
Address:	96 Hermitage Rd, West Ryde, 2114	**Phone:**	02 9809 0666
Relinquished by:		**Date:**	**Signed:**

LAB RECEIPT

Lab Ref. No:	
Received by:	Tanya Dahly
Date & Time:	23/09/2021 COC 24/09/2021
Signed:	

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

CERTIFICATE OF ANALYSIS 288445

Client Details

Client	Douglas Partners Pty Ltd
Attention	Gavin Boyd, Kristine Nicodemus
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	**2070155.00, Kellyville**
Number of Samples	23 Soil
Date samples received	09/02/2022
Date completed instructions received	09/02/2022

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	14/02/2022
Date of Issue	14/02/2022

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Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By
Analysed by Asbestos Approved Analyst: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By
Diego Bigolin, Inorganics Supervisor
Dragana Tomas, Senior Chemist
Giovanni Agosti, Group Technical Manager
Hannah Nguyen, Metals Supervisor
Lucy Zhu, Asbestos Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		288445-1	288445-2	288445-3	288445-4	288445-5
Your Reference	UNITS	212	212	213	213	214
Depth		0.0-0.1	0.2-0.3	01-0.2	0.6-0.7	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	96	76	92	99	85

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		288445-6	288445-7	288445-8	288445-9	288445-10
Your Reference	UNITS	215	215	215	216	216
Depth		0.0-0.1	0.2-0.3	0.7-0.8	0.0-0.1	0.5-0.6
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	97	92	83	93	88

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		288445-11	288445-12	288445-13	288445-15	288445-16
Your Reference	UNITS	216	217	217	218	218
Depth		1.5-1.6	0.0-0.1	0.7-0.8	0.1-0.2	1.4-1.5
Date Sampled		4/02/2022	4/02/2022	4/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	94	81	94	96	91

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		288445-17	288445-18	288445-19	288445-20	288445-21
Your Reference	UNITS	219	219	220	221	222
Depth		0.1-0.2	1.1-1.2	0.1-0.2	0.0-0.1	0.1-0.2
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	12/02/2022	12/02/2022
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	93	92	94	99	97

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		288445-22
Your Reference	UNITS	223
Depth		0.0-0.1
Date Sampled		5/02/2022
Type of sample		Soil
Date extracted	-	10/02/2022
Date analysed	-	12/02/2022
TRH C_6 - C_9	mg/kg	<25
TRH C_6 - C_{10}	mg/kg	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<3
Surrogate aaa-Trifluorotoluene	%	97

svTRH (C10-C40) in Soil						
Our Reference		288445-1	288445-2	288445-3	288445-4	288445-5
Your Reference	UNITS	212	212	213	213	214
Depth		0.0-0.1	0.2-0.3	01-0.2	0.6-0.7	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	100	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	150	<100	<100	<100	150
Total +ve TRH (>C10-C40)	mg/kg	150	<50	<50	<50	150
Surrogate o-Terphenyl	%	84	82	84	81	83

svTRH (C10-C40) in Soil						
Our Reference		288445-6	288445-7	288445-8	288445-9	288445-10
Your Reference	UNITS	215	215	215	216	216
Depth		0.0-0.1	0.2-0.3	0.7-0.8	0.0-0.1	0.5-0.6
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	100	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	100	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	160	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	160	<50	<50	<50	<50
Surrogate o-Terphenyl	%	90	81	81	81	79

svTRH (C10-C40) in Soil						
Our Reference		288445-11	288445-12	288445-13	288445-15	288445-16
Your Reference	UNITS	216	217	217	218	218
Depth		1.5-1.6	0.0-0.1	0.7-0.8	0.1-0.2	1.4-1.5
Date Sampled		4/02/2022	4/02/2022	4/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	110	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	180	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	290	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	220	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	220	110
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	440	110
Surrogate o-Terphenyl	%	80	80	80	91	86

svTRH (C10-C40) in Soil						
Our Reference		288445-17	288445-18	288445-19	288445-20	288445-21
Your Reference	UNITS	219	219	220	221	222
Depth		0.1-0.2	1.1-1.2	0.1-0.2	0.0-0.1	0.1-0.2
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	140	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	170	<100	120
Total +ve TRH (C10-C36)	mg/kg	<50	<50	310	<50	120
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	240	<100	120
TRH >C_{34} -C_{40}	mg/kg	120	<100	210	<100	170
Total +ve TRH (>C10-C40)	mg/kg	120	<50	450	<50	290
Surrogate o-Terphenyl	%	85	85	84	79	81

svTRH (C10-C40) in Soil		
Our Reference		288445-22
Your Reference	UNITS	223
Depth		0.0-0.1
Date Sampled		5/02/2022
Type of sample		Soil
Date extracted	-	10/02/2022
Date analysed	-	11/02/2022
TRH C_{10} - C_{14}	mg/kg	<50
TRH C_{15} - C_{28}	mg/kg	<100
TRH C_{29} - C_{36}	mg/kg	<100
Total +ve TRH (C10-C36)	mg/kg	<50
TRH >C_{10} -C_{16}	mg/kg	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50
TRH >C_{16} -C_{34}	mg/kg	<100
TRH >C_{34} -C_{40}	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	<50
Surrogate o-Terphenyl	%	82

PAHs in Soil						
Our Reference		288445-1	288445-2	288445-3	288445-4	288445-5
Your Reference	UNITS	212	212	213	213	214
Depth		0.0-0.1	0.2-0.3	01-0.2	0.6-0.7	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.1	<0.05	0.5	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	84	87	86	80	89

PAHs in Soil						
Our Reference		288445-6	288445-7	288445-8	288445-9	288445-10
Your Reference	UNITS	215	215	215	216	216
Depth		0.0-0.1	0.2-0.3	0.7-0.8	0.0-0.1	0.5-0.6
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	83	83	89	86	90

PAHs in Soil						
Our Reference		288445-11	288445-12	288445-13	288445-15	288445-16
Your Reference	UNITS	216	217	217	218	218
Depth		1.5-1.6	0.0-0.1	0.7-0.8	0.1-0.2	1.4-1.5
Date Sampled		4/02/2022	4/02/2022	4/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	0.4	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	1.4	0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	1.8	0.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	1.2	0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.6	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	1	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.76	0.08
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.5	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.7	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	9.0	0.5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	1.2	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	1.2	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	1.2	<0.5
Surrogate p-Terphenyl-d14	%	91	92	93	87	90

PAHs in Soil						
Our Reference		288445-17	288445-18	288445-19	288445-20	288445-21
Your Reference	UNITS	219	219	220	221	222
Depth		0.1-0.2	1.1-1.2	0.1-0.2	0.0-0.1	0.1-0.2
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.4	<0.1	0.1
Acenaphthene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	2.7	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	1	<0.1	0.1
Fluoranthene	mg/kg	0.4	<0.1	3.4	<0.1	<0.1
Pyrene	mg/kg	0.5	<0.1	3.2	<0.1	0.1
Benzo(a)anthracene	mg/kg	0.2	<0.1	2.2	<0.1	0.2
Chrysene	mg/kg	0.2	<0.1	1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.3	<0.2	2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.2	<0.05	1.1	<0.05	0.08
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.6	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	0.9	<0.1	0.1
Total +ve PAH's	mg/kg	2.1	<0.05	19	<0.05	0.76
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	1.8	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	1.8	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	1.8	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	87	87	92	90	87

PAHs in Soil		
Our Reference		288445-22
Your Reference	UNITS	223
Depth		0.0-0.1
Date Sampled		5/02/2022
Type of sample		Soil
Date extracted	-	10/02/2022
Date analysed	-	10/02/2022
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2
Benzo(a)pyrene	mg/kg	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	92

Organochlorine Pesticides in soil						
Our Reference		288445-1	288445-2	288445-3	288445-5	288445-6
Your Reference	UNITS	212	212	213	214	215
Depth		0.0-0.1	0.2-0.3	01-0.2	0.0-0.1	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	90	91	94	88

Organochlorine Pesticides in soil						
Our Reference		288445-7	288445-9	288445-10	288445-12	288445-15
Your Reference	UNITS	215	216	216	217	218
Depth		0.2-0.3	0.0-0.1	0.5-0.6	0.0-0.1	0.1-0.2
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	92	94	90	86

Organochlorine Pesticides in soil						
Our Reference		288445-17	288445-19	288445-20	288445-21	288445-22
Your Reference	UNITS	219	220	221	222	223
Depth		0.1-0.2	0.1-0.2	0.0-0.1	0.1-0.2	0.0-0.1
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	87	89	91	88

Organophosphorus Pesticides in Soil						
Our Reference		288445-1	288445-2	288445-3	288445-5	288445-6
Your Reference	UNITS	212	212	213	214	215
Depth		0.0-0.1	0.2-0.3	01-0.2	0.0-0.1	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	90	91	94	88

Organophosphorus Pesticides in Soil						
Our Reference		288445-7	288445-9	288445-10	288445-12	288445-15
Your Reference	UNITS	215	216	216	217	218
Depth		0.2-0.3	0.0-0.1	0.5-0.6	0.0-0.1	0.1-0.2
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	92	94	90	86

Organophosphorus Pesticides in Soil						
Our Reference		288445-17	288445-19	288445-20	288445-21	288445-22
Your Reference	UNITS	219	220	221	222	223
Depth		0.1-0.2	0.1-0.2	0.0-0.1	0.1-0.2	0.0-0.1
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	87	89	91	88

PCBs in Soil						
Our Reference		288445-1	288445-2	288445-3	288445-5	288445-6
Your Reference	UNITS	212	212	213	214	215
Depth		0.0-0.1	0.2-0.3	01-0.2	0.0-0.1	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	87	90	91	94	88

PCBs in Soil						
Our Reference		288445-7	288445-9	288445-10	288445-12	288445-15
Your Reference	UNITS	215	216	216	217	218
Depth		0.2-0.3	0.0-0.1	0.5-0.6	0.0-0.1	0.1-0.2
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	99	92	94	90	86

PCBs in Soil						
Our Reference		288445-17	288445-19	288445-20	288445-21	288445-22
Your Reference	UNITS	219	220	221	222	223
Depth		0.1-0.2	0.1-0.2	0.0-0.1	0.1-0.2	0.0-0.1
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	87	89	91	88

Acid Extractable metals in soil						
Our Reference		288445-1	288445-2	288445-3	288445-4	288445-5
Your Reference	UNITS	212	212	213	213	214
Depth		0.0-0.1	0.2-0.3	01-0.2	0.6-0.7	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Arsenic	mg/kg	<4	7	<4	7	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	18	56	11	12
Copper	mg/kg	46	25	27	35	51
Lead	mg/kg	5	62	9	16	7
Mercury	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	52	10	54	16	56
Zinc	mg/kg	31	68	46	82	39
Manganese	mg/kg	400	330	360	35	420

Acid Extractable metals in soil						
Our Reference		288445-6	288445-7	288445-8	288445-9	288445-10
Your Reference	UNITS	215	215	215	216	216
Depth		0.0-0.1	0.2-0.3	0.7-0.8	0.0-0.1	0.5-0.6
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Arsenic	mg/kg	<4	7	8	5	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	18	21	12	15
Copper	mg/kg	38	19	23	19	21
Lead	mg/kg	4	21	23	15	18
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	55	17	10	11	10
Zinc	mg/kg	26	34	36	35	35
Manganese	mg/kg	340	420	28	200	160

Acid Extractable metals in soil						
Our Reference		288445-11	288445-12	288445-13	288445-15	288445-16
Your Reference	UNITS	216	217	217	218	218
Depth		1.5-1.6	0.0-0.1	0.7-0.8	0.1-0.2	1.4-1.5
Date Sampled		4/02/2022	4/02/2022	4/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Arsenic	mg/kg	5	7	5	<4	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	16	7	14	11
Copper	mg/kg	12	16	22	56	31
Lead	mg/kg	18	20	18	19	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	6	7	8	16
Zinc	mg/kg	15	42	35	45	69
Manganese	mg/kg	130	270	34	310	82

Acid Extractable metals in soil						
Our Reference		288445-17	288445-18	288445-19	288445-20	288445-21
Your Reference	UNITS	219	219	220	221	222
Depth		0.1-0.2	1.1-1.2	0.1-0.2	0.0-0.1	0.1-0.2
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Arsenic	mg/kg	5	13	<4	9	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	25	18	12	21	14
Copper	mg/kg	30	28	27	20	46
Lead	mg/kg	13	22	19	27	12
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	28	3	8	11	38
Zinc	mg/kg	34	18	38	41	40
Manganese	mg/kg	310	4	360	520	500

Acid Extractable metals in soil			
Our Reference		288445-22	288445-24
Your Reference	UNITS	223	216 - [TRIPLICATE]
Depth		0.0-0.1	1.5-1.6
Date Sampled		5/02/2022	4/02/2022
Type of sample		Soil	Soil
Date prepared	-	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022
Arsenic	mg/kg	8	5
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	17	8
Copper	mg/kg	23	13
Lead	mg/kg	19	19
Mercury	mg/kg	<0.1	<0.1
Nickel	mg/kg	6	4
Zinc	mg/kg	25	14
Manganese	mg/kg	65	80

Misc Soil - Inorg						
Our Reference		288445-1	288445-2	288445-3	288445-5	288445-6
Your Reference	UNITS	212	212	213	214	215
Depth		0.0-0.1	0.2-0.3	01-0.2	0.0-0.1	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		288445-7	288445-9	288445-10	288445-12	288445-15
Your Reference	UNITS	215	216	216	217	218
Depth		0.2-0.3	0.0-0.1	0.5-0.6	0.0-0.1	0.1-0.2
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		288445-17	288445-19	288445-20	288445-21	288445-22
Your Reference	UNITS	219	220	221	222	223
Depth		0.1-0.2	0.1-0.2	0.0-0.1	0.1-0.2	0.0-0.1
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Moisture						
Our Reference		288445-1	288445-2	288445-3	288445-4	288445-5
Your Reference	UNITS	212	212	213	213	214
Depth		0.0-0.1	0.2-0.3	01-0.2	0.6-0.7	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Moisture	%	3.6	16	5.3	5.6	3.5

Moisture						
Our Reference		288445-6	288445-7	288445-8	288445-9	288445-10
Your Reference	UNITS	215	215	215	216	216
Depth		0.0-0.1	0.2-0.3	0.7-0.8	0.0-0.1	0.5-0.6
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Moisture	%	2.4	11	25	13	12

Moisture						
Our Reference		288445-11	288445-12	288445-13	288445-15	288445-16
Your Reference	UNITS	216	217	217	218	218
Depth		1.5-1.6	0.0-0.1	0.7-0.8	0.1-0.2	1.4-1.5
Date Sampled		4/02/2022	4/02/2022	4/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Moisture	%	12	14	8.2	9.1	8.8

Moisture						
Our Reference		288445-17	288445-18	288445-19	288445-20	288445-21
Your Reference	UNITS	219	219	220	221	222
Depth		0.1-0.2	1.1-1.2	0.1-0.2	0.0-0.1	0.1-0.2
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	10/02/2022	10/02/2022	10/02/2022	10/02/2022	10/02/2022
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Moisture	%	8.9	15	8.9	15	8.6

Moisture		
Our Reference		288445-22
Your Reference	UNITS	223
Depth		0.0-0.1
Date Sampled		5/02/2022
Type of sample		Soil
Date prepared	-	10/02/2022
Date analysed	-	11/02/2022
Moisture	%	14

Asbestos ID - soils						
Our Reference		288445-1	288445-2	288445-3	288445-5	288445-6
Your Reference	UNITS	212	212	213	214	215
Depth		0.0-0.1	0.2-0.3	01-0.2	0.0-0.1	0.0-0.1
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	4/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Sample mass tested	g	Approx. 60g	Approx. 45g	Approx. 80g	Approx. 80g	Approx. 95g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		288445-7	288445-9	288445-10	288445-12	288445-15
Your Reference	UNITS	215	216	216	217	218
Depth		0.2-0.3	0.0-0.1	0.5-0.6	0.0-0.1	0.1-0.2
Date Sampled		4/02/2022	4/02/2022	4/02/2022	4/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Sample mass tested	g	Approx. 35g	Approx. 65g	Approx. 80g	Approx. 50g	Approx. 50g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		288445-17	288445-19	288445-20	288445-21	288445-22
Your Reference	UNITS	219	220	221	222	223
Depth		0.1-0.2	0.1-0.2	0.0-0.1	0.1-0.2	0.0-0.1
Date Sampled		5/02/2022	5/02/2022	5/02/2022	5/02/2022	5/02/2022
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	11/02/2022	11/02/2022	11/02/2022	11/02/2022	11/02/2022
Sample mass tested	g	Approx. 50g	Approx. 60g	Approx. 40g	Approx. 45g	Approx. 20g
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022	Determination of VOCs sampled onto coconut shell charcoal sorbent tubes, that can be desorbed using carbon disulphide, and analysed by GC-MS.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS.
Org-022/025	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-MS/GC-MSMS. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.

Method ID	Methodology Summary
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS and/or GC-MS/MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
TRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	105	106
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	105	106
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	103	104
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	104	106
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	102	103
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	108	108
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	107	108
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	99	1	96	98	2	98	98

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	12/02/2022
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	11	<25	<25	0	119	115
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	11	<25	<25	0	119	115
Benzene	mg/kg	0.2	Org-023	[NT]	11	<0.2	<0.2	0	110	105
Toluene	mg/kg	0.5	Org-023	[NT]	11	<0.5	<0.5	0	110	104
Ethylbenzene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	120	117
m+p-xylene	mg/kg	2	Org-023	[NT]	11	<2	<2	0	127	124
o-Xylene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	120	116
Naphthalene	mg/kg	1	Org-023	[NT]	11	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	11	94	83	12	103	96

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Date analysed	-			[NT]	21	12/02/2022	12/02/2022		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	21	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	21	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	21	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	21	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	[NT]	[NT]
Naphthalene	mg/kg	1	Org-023	[NT]	21	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	21	97	100	3	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			11/02/2022	1	11/02/2022	11/02/2022		11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	1	<50	<50	0	96	90
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	1	<100	<100	0	92	79
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	1	100	160	46	109	119
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	1	<50	<50	0	96	90
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	1	<100	150	40	92	79
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	1	150	240	46	109	119
Surrogate o-Terphenyl	%		Org-020	80	1	84	89	6	99	113

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	11	11/02/2022	11/02/2022		11/02/2022	11/02/2022
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	11	<50	<50	0	94	91
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	91	80
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	106	127
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	11	<50	<50	0	94	91
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	91	80
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	11	<100	<100	0	106	127
Surrogate o-Terphenyl	%		Org-020	[NT]	11	80	81	1	99	102

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Date analysed	-			[NT]	21	11/02/2022	11/02/2022		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	21	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	21	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	21	120	160	29	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	21	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	21	120	150	22	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	21	170	250	38	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	21	81	84	4	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	88	92
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	99	99
Fluorene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	103
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	100	94
Anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	104	94
Pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	107	95
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	73	67
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	1	<0.05	<0.05	0	106	96
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	1	0.1	0.2	67	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	94	1	84	95	12	92	88

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	95	97
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	99	117
Fluorene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	95	116
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	106	112
Anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	94	104
Pyrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	97	105
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	65	73
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	11	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	11	<0.05	<0.05	0	104	114
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	11	91	85	7	85	90

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	21	0.1	0.2	67	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	21	0.1	0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	0.2	67	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	21	0.1	0.3	100	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	21	0.2	0.3	40	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	21	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	21	0.08	0.08	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	21	0.1	0.2	67	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	21	87	98	12	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	100
HCB	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	96
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	91
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	101
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	94
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	103	94
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	96	90
Endrin	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	92	84
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	102	88
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	110	100
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	100	1	87	93	7	84	90

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	88	110
HCB	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	85	103
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	87	101
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	103	111
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	96	110
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	94	105
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	90	93
Endrin	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	90	94
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	92	102
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	110	126
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	21	91	100	9	85	97

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Dichlorvos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	108	123
Dimethoate	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	101	91
Fenitrothion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	79	75
Malathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	95	105
Chlorpyriphos	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	106	100
Parathion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	89	84
Bromophos-ethyl	mg/kg	0.1	Org-022	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	86	82
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	100	1	87	93	7	84	90

QUALITY CONTROL: Organophosphorus Pesticides in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Dichlorvos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	128	123
Dimethoate	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	99	108
Fenitrothion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	83	103
Malathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	108	136
Chlorpyriphos	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	110	118
Parathion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	101	105
Bromophos-ethyl	mg/kg	0.1	Org-022	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	88	102
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-022/025	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	21	91	100	9	85	97

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date extracted	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	108	100
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	100	1	87	93	7	84	90

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date extracted	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	101	100
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	21	91	100	9	85	97

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	288445-2
Date prepared	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	99	82
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	97	72
Chromium	mg/kg	1	Metals-020	<1	1	16	15	6	99	82
Copper	mg/kg	1	Metals-020	<1	1	46	45	2	98	104
Lead	mg/kg	1	Metals-020	<1	1	5	5	0	101	79
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	120	104
Nickel	mg/kg	1	Metals-020	<1	1	52	46	12	99	78
Zinc	mg/kg	1	Metals-020	<1	1	31	30	3	98	84
Manganese	mg/kg	1	Metals-020	<1	1	400	420	5	103	89

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	288445-22
Date prepared	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			[NT]	11	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Arsenic	mg/kg	4	Metals-020	[NT]	11	5	6	18	100	86
Cadmium	mg/kg	0.4	Metals-020	[NT]	11	<0.4	<0.4	0	98	77
Chromium	mg/kg	1	Metals-020	[NT]	11	10	12	18	101	83
Copper	mg/kg	1	Metals-020	[NT]	11	12	13	8	100	101
Lead	mg/kg	1	Metals-020	[NT]	11	18	17	6	102	79
Mercury	mg/kg	0.1	Metals-021	[NT]	11	<0.1	<0.1	0	130	115
Nickel	mg/kg	1	Metals-020	[NT]	11	5	5	0	100	83
Zinc	mg/kg	1	Metals-020	[NT]	11	15	14	7	99	88
Manganese	mg/kg	1	Metals-020	[NT]	11	130	75	54	106	73

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	21	6	5	18	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	21	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	21	14	15	7	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	21	46	50	8	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	21	12	11	9	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	21	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	21	38	38	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	21	40	38	5	[NT]	[NT]
Manganese	mg/kg	1	Metals-020	[NT]	21	500	470	6	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	288445-2
Date prepared	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Date analysed	-			10/02/2022	1	10/02/2022	10/02/2022		10/02/2022	10/02/2022
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	108	108

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Date analysed	-			[NT]	21	10/02/2022	10/02/2022		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	21	<5	<5	0	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

The recommended maximums for analytes in urine are taken from “2018 TLVs and BEIs”, as published by ACGIH (where available). Limit provided for Nickel is a precautionary guideline as per Position Paper prepared by AIOH Exposure Standards Committee, 2016.

Guideline limits for Rinse Water Quality reported as per analytical requirements and specifications of AS 4187, Amdt 2 2019, Table 7.2

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals (not SPOCAS); 60-140% for organics/SPOCAS (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Samples for Microbiological analysis (not Amoeba forms) received outside of the 2-8°C temperature range do not meet the ideal cooling conditions as stated in AS2031-2012.

Report Comments

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria has been exceeded for 288445-11 for Cd. Therefore a triplicate result has been issued as laboratory sample number 288445-24.

Asbestos: Excessive sample volumes were provided for asbestos analysis.
A portion of the supplied samples were sub-sampled according to Envirolab procedures.
We cannot guarantee that these sub-samples are indicative of the entire sample.
Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.
Note: Samples 288445-1-13,16-22 were sub-sampled from bags provided by the client.

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.
We cannot guarantee that this sub-sample is indicative of the entire sample.
Envirolab recommends supplying 40-50g of sample in its own container.
Note: Sample 288445-15 was sub-sampled from a jar provided by the client.

Douglas Partners
Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	207155.00	**Suburb:**	Kellyville	**To:**	Envirolab Services
Project Manager:	Gavin Boyd	**Order Number:**		**Sampler:**	12 Ashley Street, Chatswood, NSW 2067
Email:	gavin.boyd@douglaspartners.com.au; kristine.nicodemus@douglaspartners.com.au			**Attn:**	Aileen Hie
Turnaround time:	☐ Standard ☑ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day			**Contact:**	02 9910 6200 Ahie@envirolab.com.au
Prior Storage:	☑ Fridge ☐ Freezer ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water	Container Type: G - glass P - plastic	Analytes: Combo 8a	Combo 3	Soil Aggressivity	OCP/OPP/PCB	Phenols	Asbestos (AS)	Asbestos (NEPM)	PFAS	pH, CEC			Notes/ Preservation/ Additional Requirements
1	212.	0.0	0.1	4/2.	S	G/P	•											
2	212.	0.2	0.3	4/2	S	G/P	•											
3	213	0.1	0.2	4/2	S	G/P	•											
4	213	0.6	0.7	4/2.	S	G/P		•										
5	214	0.0	0.1		S	G/P	•											
6	215	0.0	0.1		S	G/P	•											
7	215	0.2	0.3		S	G/P	•											
8	215	0.7	0.8		S	G/P		•										
9	216.	0.0	0.1		S	G/P	•											
10	216	0.5	0.6		S	G/P	•											
11	216	1.5	1.6		S	G/P		•										
12	217	0.0	0.1		S	G/P	•											
13	217.	0.7	0.8		S	G/P		•										
14	BD 2-2-2022				S	G/P			•									

Environment Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Lab No: 288945
Date Received: 9-2-22
Time Received: 1730
Received by: TJH
Temp: Cool/Ambient
Cooling: Ice/Icepack 22°
Security: Intact/Broken/None

Metals to analyse:	HM9 (As, Cd, Cr, Cu, Pb, Hg, Mn, Ni, Zn)		
Number of samples in container:		**Transported to laboratory by:**	Hunter Express
Send results to:	Douglas Partners Pty Ltd		
Address:	96 Hermitage Rd, West Ryde, 2114	**Phone:**	02 9809 0666
Relinquished by:		**Date:**	**Signed:**

LAB RECEIPT

Lab Ref. No:	288945
Received by:	TJHN
Date & Time:	9.2.22 1730
Signed:	

Douglas Partners
Geotechnics / Environment / Groundwater

CHAIN OF CUSTODY DESPATCH SHEET

Project No:	207155.00	**Suburb:**	Kellyville	**To:**	Envirolab Services
Project Manager:	Gavin Boyd	**Order Number:**		**Sampler:**	12 Ashley Street, Chatswood, NSW 2067
Email:	gavin.boyd@douglaspartners.com.au; kristine.nicodemus@douglaspartners.com.au			**Attn:**	Aileen Hie
Turnaround time:	☐ Standard ☑ 72 hour ☐ 48 hour ☐ 24 hour ☐ Same day			**Contact:**	02 9910 6200 Ahie@envirolab.com.au
Prior Storage:	☑ Fridge ☐ Freezer ☐ Shelf	**Do samples contain 'potential' HBM?**	☐ No ☐ Yes (If YES, then handle, transport and store in accordance with FPM HAZID)		

Lab ID	Sample ID: Location / Other ID	Depth From	Depth To	Date Sampled	Sample Type: S - soil W - water	Container Type: G - glass P - plastic	Analytes: Combo 8a	Combo 3	Soil Aggressivity	OCP/OPP/PCB	Phenols	Asbestos (AS)	Asbestos (NEPM)	PFAS	pH, CEC			Notes/ Preservation/ Additional Requirements
15	218	0.1	0.2	5/2	S	G/P	•											
NR	218	1.0	1.1	5/2	S	G/P	•											
16	218	1.4	1.5	5/2	S	G/P		•										
17	219	0.9	0.2	5/2	S	G/P	•											
18	219	1.1	1.2	5/2	S	G/P		•										
19	220	0.9	0.2	5/2	S	G/P	•											
20	221	0.0	0.1	5/2	S	G/P	•											
NR	221	0.8	0.9		S	G/P		•										
21	222	0.1	0.2		S	G/P	•											
22	223	0.0	0.1		S	G/P	•											
					S	G/P												
					S	G/P												
					S	G/P												
23	BD420	220205			S	G/P		•										

Metals to analyse:	HM9 (As, Cd, Cr, Cu, Pb, Hg, Mn, Ni, Zn)		
Number of samples in container:		**Transported to laboratory by:**	Hunter Express
Send results to:	Douglas Partners Pty Ltd		
Address:	96 Hermitage Rd, West Ryde, 2114	**Phone:**	02 9809 0666
Relinquished by:		**Date:**	**Signed:**

LAB RECEIPT

Lab Ref. No:	288495
Received by:	TSHAW
Date & Time:	9/2/22 1730
Signed:	TS