REPORT TO

WOOLWORTHS GROUP LIMITED

ON

ADDITIONAL SITE INVESTIGATION

FOR

PROPOSED DISTRIBUTION CENTRE DEVELOPMENT

AT

250 VICTORIA STREET, WETHERILL PARK, NSW

Date: 23 March 2021
Ref: E31888BRrpt2

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DOCUMENT REVISION RECORD

Report Reference	Report Status	Report Date
E31888BRrpt2	Draft Report	26 February 2021
E31888BRrpt2	Final	23 March 2021

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Executive Summary

Woolworths Group Limited ('the client') commissioned JK Environments (JKE) to undertake an Additional Site Investigation for the proposed development at 250 Victoria Street, Wetherill Park, NSW. The site location is shown on Figure 1 and the investigation was confined to the site boundaries as shown on Figure 2 attached in the appendices.

JKE understand that the proposed development is being considered under State Significant Development Application (SSDA)/Standard Secretary Environmental Assessment Requirements (SEARs). This report has been prepared to address the requirement for additional soil and groundwater contamination assessment for the proposed development. An acid sulfate soil (ASS) assessment and salinity investigation were undertaken in conjunction with the additional site investigation. The findings of the ASS assessment and salinity investigation are presented in separate reports.

A geotechnical investigation was undertaken previous to this investigation by JK Geotechnics (JKG). The results of the geotechnical investigation are presented in a separate report (Ref: 31888AH2rpt, dated 25 January 2021). This report should be read in conjunction with the JKG report. A preliminary Stage 2 Environmental Site Assessment (ESA) has previously been prepared for the site by Environmental Investigation Services (EIS, now JKE). A summary of this information has been included in Section 2.

A review of the early works DA plans issued to JKE indicate that the proposed development will include the construction of a high-bay distribution centre over the majority of the site. The proposed development includes major earthworks (cut/fill) over the majority of the site to achieve the development levels. The plans indicate four building pads will be constructed, with bulk excavation levels ranging from RL 33.20m Australian Heights Datum (AHD) to 41.30mAHD. The maximum cut is anticipated to be approximately 7m below ground level (BGL). Selected plans issued to JKE are attached in the appendices.

The primary aim of the investigation was to characterise the site contamination conditions based on existing data and data collected from further intrusive investigation. The objectives were to:

- Identify the potential for dangerous goods to be stored on-site via a review of SafeWork NSW records;
- Assess the current site condition and uses via a site walkover inspection;
- Review potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC) identified on-site and in the surrounds;
- Assess the soil and groundwater contamination conditions via implementation of a sampling and analysis program;
- Update and refine the conceptual site model (CSM);
- Assess the potential risks posed by contamination to the receptors identified in the CSM (Tier 1 assessment);
- Provide a preliminary waste classification for off-site disposal of soil and bedrock;
- Assess whether the site is suitable or can be made suitable for the proposed development (from a contamination viewpoint); and
- Assess whether remediation is required.

The scope of work included the following:

- Review of site information, background and site history information from various sources outlined in the report;
- Update and refine of the CSM;
- Design and implementation of a sampling, analysis and quality plan (SAQP);
- Interpretation of the analytical results against the adopted Site Assessment Criteria (SAC);
- Data Quality Assessment; and
- Preparation of a report including a Tier 1 risk assessment.

The potential contamination sources/AEC and CoPC identified in the CSM included:

- Fill material – The site appears to have been historically filled to achieve the existing levels. The fill may have been imported from various sources and could be contaminated. Several stockpiles of fill material were also located at the site. The EIS 2018 report identified filling across the site, ranging from 0.2mBGL to 3.4mBGL. The depth of filling generally increased within the east of the site.

- Fuel/oil storage – At least one UST was identified at the site (see Figure 2). Two aboveground storage tanks (ASTs) were identified at the site that were used to store diesel (see Figure 2). An IBC containing waste oil residue was located centrally within the north of the site.
- Mechanics workshop – The site was formerly used as a mechanics. Fuels, oils and solvents may have been used during this site use.
- Historical agricultural use – The site appears to have been used for grazing and market garden purposes. This could have resulted in contamination across the site via use of machinery, application of pesticides and building/ demolition of various structures. Irrigation pipes made from asbestos cement may also be associated with this AEC.
- Use of pesticides – Pesticides may have been used beneath the buildings and/or around the site.
- Hazardous Building Material – Hazardous building materials may be present as a result of former building and demolition activities. The historical aerial photographs indicate the former buildings were generally located within the south of the site however, ancillary structures may also have been present in other areas. JKE note that a hazardous building material survey (HAZMAT) has previously been undertaken on the existing buildings and ACM was confirmed to be present.
- Industrial/Commercial land use – The site was used for various commercial purposes, including vehicle storage, printing and manufacturing of paper products. The use of chemicals, fuels and paints during this period could have resulted in contamination. An electrical substation kiosk was located at the site.
- Off-site area 1 – Several current and former automotive service and spray-painting businesses are located up-gradient of the site and are considered to be potential sources of contamination.

Soil samples for the ASI were collected from 46 locations as shown on the attached Figure 3. In conjunction with the 29 locations sampled in the EIS ESA, a total of 75 locations were sampled. The sampling plan was not designed to meet the minimum sampling density outlined in the EPA Sampling Design Guidelines 1995. Considering the land use and proposed development, JKE are of the opinion that 75% coverage is adequate to address the objectives of the investigation.

The soil sampling locations were placed on a judgemental sampling plan and were broadly positioned for site coverage, taking into consideration areas that were not easily accessible. It is acknowledged that the sampling plan did not target all identified potential sources of contamination (including the IBCs, the truck wash bay, and down-gradient of the UST). The IBCs were observed during the site inspection and were not known at the outset of the investigation. Due to the existing structures, locations down-gradient of the truck wash bay and the UST were not accessible. This has been identified as a data gap and is discussed further in Section 10.3.

Groundwater monitoring wells were installed in nine boreholes drilled for the soil sampling. The monitoring well locations are shown on Figure 3. The wells were positioned to provide a baseline of the groundwater conditions.

A selection of soil and groundwater samples were analysed for a range of CoPC identified in the CSM. The laboratory results were assessed against the SAC presented in Section 7.

Chrysotile asbestos was detected within the surface fragment FCF1 located in the south-western section of the site, as shown on Figure 4 attached in the appendices. The fibre cement was assessed to be bonded asbestos containing material (ACM). This FCF was removed from site (for analysis). No other FCF was visibly observed at the site surface however, localised impacts may be present. On this basis, considering the asbestos was non-friable/bonded, there is unlikely to be a complete SPR linkage to asbestos fibres based on the current site configuration and use. Therefore, the current risk of exposure to asbestos in ground is low. Nevertheless, interim measures are to be implemented so that the potential risks from asbestos remain low. This has been addressed in our recommendations.

All hydrocarbon concentrations (i.e. PAHs, TRH and BTEX) in soil were below the SAC. The UST and the surrounding area are considered to be a potential source of hydrocarbon contamination, however the borehole observations and soil analysis results indicated that the potential for extensive impacts from hydrocarbons in this area is relatively low. Localised impacts may be encountered in the tank pit back fill and immediately beneath or adjacent to the infrastructure.

As the USTs and associated infrastructure are located within an area proposed to cut (i.e. excavated) for the proposed building pad, excavation works for the pad will provide a suitable mechanism to remove any undetected, localised contamination. On this basis, risks associated with localised hydrocarbons in the vicinity of the USTs are considered to be low in the context of the proposed land use.

Arsenic, cadmium, chromium, copper, mercury, nickel and zinc concentrations exceeding the ecological SAC were recorded in the groundwater. The concentrations of heavy metals recorded within the soils at the monitoring well locations were generally low, indicating that the site is not likely to be the source of heavy metals within the groundwater. This was further confirmed based on the results of limited TCLP analysis conducted. Therefore, JKE consider the concentrations of heavy metals within the groundwater are likely a regional issue. The heavy metal concentrations do not pose a risk to the on-site receptors in the context of the proposed development.

Concentrations of mid-fraction TRH F2 was detected in MW106 and MW128 above the human health (HSL-SSA) SAC. The concentrations in MW106 and MW128 are considered likely to be associated with the UST and an indicated of a potential hydrocarbon plume. However, this will require further assessment as only one round of groundwater monitoring was undertaken for the ASI. Given the shallow groundwater depth in comparison to the bulk excavation levels for the proposed buildings, there is potential that TRH F2 may volatilise, migrate into and accumulate within the proposed buildings. On this basis, JKE consider a complete SPR linkage may exist.

Concentrations of benzene were detected in MW123 at concentrations above the human health (recreational) SAC. Traces of light fraction (TRH F1) and toluene were also detected in MW123 at concentrations below the SAC. JKE note that benzene, toluene and TRH F1 were not detected within the soils at this location. The risk posed by the benzene concentrations relate to incidental contact/recreational use. The proposed development does not include the use of groundwater, and groundwater will be at least 4m below the bulk excavation level in this area (this area is proposed for filling). On this basis, a complete SPR linkage does not exist for on-site receptors.

Traces of mid to heavy fractions TRH F3 and TRH F4 were encountered in samples collected from MW106. Though below the SAC, these concentrations indicate possible spills/leaks associated with vehicle maintenance and heavy vehicles/plant may have occurred in this area. The concentrations of TRH F3 and TRH F4 do not pose a risk to the on-site receptors in the context of the proposed development.

Based on the findings of the investigation, JKE are of the opinion that the site can be made suitable for the proposed development described in Section 1.1, subject to the implementation of the following recommendations:

- A suitably qualified/licensed contractor is to carry out an ‘emu pick’ to remove all visible FCF from the areas of the site with exposed soils. A surface clearance certificate is then to be issued by a Licensed Asbestos Assessor. This is to occur as soon as practicable;
- Prepare a RAP to address the contamination issues identified at the site. This will include an unexpected-finds protocol (UFP). The RAP should address the data gaps outlined in Section 10.3. Due to access constraints, this will largely need to occur during remediation works; and
- Undertake a validation assessment documenting the remediation works.

The report conclusions should be read in context of the scope of works undertaken and the limitations presented in the report.

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Abbreviations

Asbestos Fines/Fibrous Asbestos	**AF/FA**
Ambient Background Concentrations	**ABC**
Added Contaminant Limits	**ACL**
Asbestos Containing Material	**ACM**
Australian Drinking Water Guidelines	**ADWG**
Area of Environmental Concern	**AEC**
Australian Height Datum	**AHD**
Acid Sulfate Soil	**ASS**
Above-Ground Storage Tank	**AST**
Below Ground Level	**BGL**
Benzo(a)pyrene Toxicity Equivalent Factor	**BaP TEQ**
Bureau of Meteorology	**BOM**
Benzene, Toluene, Ethylbenzene, Xylene	**BTEX**
Cation Exchange Capacity	**CEC**
Contaminated Land Management	**CLM**
Contaminant(s) of Potential Concern	**CoPC**
Chain of Custody	**COC**
Conceptual Site Model	**CSM**
Development Application	**DA**
Dial Before You Dig	**DBYD**
Data Quality Indicator	**DQI**
Data Quality Objective	**DQO**
Detailed Site Investigation	**DSI**
Ecological Investigation Level	**EIL**
Ecological Screening Level	**ESL**
Environmental Management Plan	**EMP**
Excavated Natural Material	**ENM**
Environment Protection Authority	**EPA**
Environmental Site Assessment	**ESA**
Ecological Screening Level	**ESL**
Fibre Cement Fragment(s)	**FCF**
General Approval of Immobilisation	**GAI**
Health Investigation Level	**HILs**
Hardness Modified Trigger Values	**HMTV**
Health Screening Level	**HSL**
Health Screening Level-Site Specific Assessment	**HSL-SSA**
International Organisation of Standardisation	**ISO**
JK Environments	**JKE**
Lab Control Spike	**LCS**
Light Non-Aqueous Phase Liquid	**LNAPL**
Map Grid of Australia	**MGA**
National Association of Testing Authorities	**NATA**
National Environmental Protection Measure	**NEPM**
Organochlorine Pesticides	**OCP**
Organophosphate Pesticides	**OPP**
Polycyclic Aromatic Hydrocarbons	**PAH**
Potential ASS	**PASS**
Polychlorinated Biphenyls	**PCBs**
Per-and Polyfluoroalkyl Substances	**PFAS**
Photo-ionisation Detector	**PID**
Protection of the Environment Operations	**POEO**
Practical Quantitation Limit	**PQL**
Quality Assurance	**QA**

Quality Control	**QC**
Remediation Action Plan	**RAP**
Relative Percentage Difference	**RPD**
Site Assessment Criteria	**SAC**
Sampling, Analysis and Quality Plan	**SAQP**
Site Audit Statement	**SAS**
Site Audit Report	**SAR**
Site Specific Assessment	**SSA**
Source, Pathway, Receptor	**SPR**
Specific Contamination Concentration	**SCC**
Standard Penetration Test	**SPT**
Standing Water Level	**SWL**
Trip Blank	**TB**
Toxicity Characteristic Leaching Procedure	**TCLP**
Total Recoverable Hydrocarbons	**TRH**
Trip Spike	**TS**
Upper Confidence Limit	**UCL**
United States Environmental Protection Agency	**USEPA**
Underground Storage Tank	**UST**
Virgin Excavated Natural Material	**VENM**
Volatile Organic Compounds	**VOC**
World Health Organisation	**WHO**
Work Health and Safety	**WHS**

Units

Litres	**L**
Metres BGL	**mBGL**
Metres	**m**
Millivolts	**mV**
Millilitres	**ml or mL**
Milliequivalents	**meq**
micro Siemens per Centimetre	**µS/cm**
Micrograms per Litre	**µg/L**
Milligrams per Kilogram	**mg/kg**
Milligrams per Litre	**mg/L**
Parts Per Million	**ppm**
Percentage	**%**

1 INTRODUCTION

Woolworths Group Limited ('the client') commissioned JK Environments (JKE) to undertake an Additional Site Investigation for the proposed development at 250 Victoria Street, Wetherill Park, NSW. The site location is shown on Figure 1 and the investigation was confined to the site boundaries as shown on Figure 2 attached in the appendices.

JKE understand that the proposed development is being considered under State Significant Development Application (SSDA)/Standard Secretary Environmental Assessment Requirements (SEARs). This report has been prepared to address the requirement for additional soil and groundwater contamination assessment for the proposed development. An acid sulfate soil (ASS) assessment and salinity investigation were undertaken in conjunction with the additional site investigation. The findings of the ASS assessment and salinity investigation are presented in separate reports.

A geotechnical investigation was undertaken previous to this investigation by JK Geotechnics (JKG). The results of the geotechnical investigation are presented in a separate report (Ref: 31888AH2rpt, dated 25 January 2021)[1]. This report should be read in conjunction with the JKG report.

A preliminary Stage 2 Environmental Site Assessment (ESA) has previously been prepared for the site by Environmental Investigation Services (EIS, now JKE). A summary of this information has been included in Section 2.

1.1 Proposed Development Details

A review of the early works DA plans issued to JKE indicate that the proposed development will include the construction of a high-bay distribution centre over the majority of the site. The proposed development includes major earthworks (cut/fill) over the majority of the site to achieve the development levels. The plans indicate four building pads will be constructed, with bulk excavation levels ranging from RL 33.20m Australian Heights Datum (AHD) to 41.30mAHD. The maximum cut is anticipated to be approximately 7m below ground level (BGL). Selected plans issued to JKE are attached in the appendices.

1.2 Aims and Objectives

The primary aim of the investigation was to characterise the site contamination conditions based on existing data and data collected from further intrusive investigation. The objectives were to:

- Identify the potential for dangerous goods to be stored on-site via a review of SafeWork NSW records;
- Assess the current site condition and uses via a site walkover inspection;
- Review potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC) identified on-site and in the surrounds;
- Assess the soil and groundwater contamination conditions via implementation of a sampling and analysis program;
- Update and refine the conceptual site model (CSM);

[1] JKG, (2021). *Report to Fabcot Pty Ltd on Geotechnical Investigation for Proposed Woolworths Facility at 250-266 Victoria Street, Wetherill Park, NSW.* (Ref: 31888AH2rpt, dated 25 January 2021) (referred to as JKG report)

- Assess the potential risks posed by contamination to the receptors identified in the CSM (Tier 1 assessment);
- Provide a preliminary waste classification for off-site disposal of soil and bedrock;
- Assess whether the site is suitable or can be made suitable for the proposed development (from a contamination viewpoint); and
- Assess whether remediation is required.

1.3 Scope of Work

The investigation was undertaken generally in accordance with a JKE proposal (Ref: EP53311B) of 7 January 2021 and written acceptance from the client of 8 January 2021. The scope of work included the following:

- Review of site information, background and site history information from various sources outlined in the report;
- Update and refine of the CSM;
- Design and implementation of a sampling, analysis and quality plan (SAQP);
- Interpretation of the analytical results against the adopted Site Assessment Criteria (SAC);
- Data Quality Assessment; and
- Preparation of a report including a Tier 1 risk assessment.

The scope of work was undertaken with reference to the National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013)[2], other guidelines made under or with regards to the Contaminated Land Management Act (1997)[3] and State Environmental Planning Policy No.55 – Remediation of Land (1998)[4]. A list of reference documents/guidelines is included in the appendices.

[2] National Environment Protection Council (NEPC), (2013). *National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013).* (referred to as NEPM 2013)

[3] Contaminated Land Management Act 1997 (NSW) (referred to as CLM Act 1997)

[4] *State Environmental Planning Policy No. 55 – Remediation of Land 1998* (NSW) (referred to as SEPP55)

2 SITE INFORMATION

2.1 Background

2.1.1 Preliminary Stage 2 Environmental Site Assessment (ESA)

A preliminary Stage 2 ESA was previously undertaken by EIS in 2018[5]. The ESA included a review of site information, site history information, a site inspection and soil sampling from 29 locations throughout the site and two samples from a soil stockpile.

The site history information identified that the site was used for agricultural purposes until Circa c1977, after which the site was developed for industrial land uses. Between 1977 and 2010, the site was used for vehicle storage (holding yard) and for vehicle repairs. From 2010, the site history information indicated the site was used for the distribution of paper products, such as tissues.

The site inspection identified the following sources of site contamination/areas of environmental concern (AEC):

- Historical filling of the site;
- Historical agricultural use;
- Industrial/commercial activities on-site; and
- Hazardous building materials in current and former structures.

The ESA identified copper concentrations in one location and nickel concentrations in two locations above the ecological site assessment criteria (SAC). EIS considered the elevated concentrations did not pose a risk to environmental receptors, as the exceedances were located in areas sealed with pavements, the site history did not indicate any ecological or environmental sensitive receptors at the site, and the site was proposed for on-going commercial/industrial land uses with limited landscaping. All results were below the respective human health SAC.

The ESA concluded that the site was suitable for on-going commercial/industrial land use. To assess the site suitability for future development, EIS recommended the following:

- Undertake a data gap assessment, including additional soil and groundwater sampling and analysis; and
- Prepare a remediation action plan (RAP) if the data gap assessment identified any contamination issues.

[5] JKE (previously EIS), (2019). *Report to Fabcot Pty Ltd on Preliminary Stage 2 Environmental Site Assessment for Due Diligence, Proposed Highbay Distribution Warehouse at 250 Victoria Street, Wetherill Park, NSW.* (Ref: E31888KD) (referred to as JKE 2018)

2.2 Site Identification

Table 2-1: Site Identification

Current Site Owner:	Woolworths Group Limited
Site Address:	250 Victoria Street, Wetherill Park, NSW
Lot & Deposited Plan:	Lots 1 to 4 DP781975
Current Land Use:	Trucking Yard, Masonry Distribution and Carpark
Proposed Land Use:	Distribution Warehouse
Local Government Authority:	Fairfield City Council
Current Zoning:	IN1 - General Industrial
Site Area (m^2) (approx.):	85,000
RL (AHD in m) (approx.):	31-43
Geographical Location (decimal degrees) (approx.):	Latitude: -33.846043 Longitude: 150.916851
Site Location and Site Features Plan:	Figures 1 and 2
Sample Location Plan:	Figure 3

2.3 Site Location and Regional Setting

The site is located in a predominantly commercial and industrial area of Wetherill Park and is bound by Redfern Street to the North and Victoria Street to the South. The site is located approximately 590m to the south-west of Prospect Creek. A concrete lined stormwater drain is located approximately 30m to the east of the site.

2.4 Topography

The regional topography is characterised by an east/north-east facing hillside that falls towards Prospect Creek. The site is located towards the middle of the hillside and has a gentle slope towards the east at approximately 5° and to the south at approximately 1°. Parts of the site appear to have been levelled to account for the slope and accommodate the existing development.

2.5 Site Inspection

A walkover inspection of the site was undertaken by JKE on 5 February 2021. The inspection was limited to accessible areas of the site and immediate surrounds. An internal inspection of buildings was not undertaken. Selected site photographs obtained during the inspection are attached in the appendices.

A summary of the inspection findings is outlined in the following subsections:

2.5.1 Current Site Use and/or Indicators of Former Site Use

At the time of the inspection, the majority of the eastern portion of the site was occupied by Austral Masonry and used as a distribution centre. A sign on the northern wall of the warehouse building indicated the warehouse was formerly used for heavy vehicle repairs.

A carpark was located within the north-eastern portion of the site and was used by ABC Tissue Products for staff parking.

The majority of the western portion of the site was unsealed and used for truck/trailer storage. The south-western portion of the site was occupied by a trucking company office (Double X Trucking) and a firewood supplier (Flamin' Firewood).

2.5.2 Buildings, Structures and Roads

Four buildings were located within the south of the site. Two single-storey buildings of brick and corrugated steel construction were located within the south-western portion of the site. The eaves appeared to comprise fibre cement sheeting and based on the apparent age, were considered likely to contain asbestos (i.e. ACM). The buildings appeared to be in fair condition and were linked by a metal awning.

A two-storey building of concrete-render and glass construction was located centrally within the southern portion of the site. The building appeared in fair to good condition and was vacant.

A large warehouse of exposed aggregate (pebblecrete) construction was located in the south-east of the site. the warehouse appeared to be in fair condition. A two-storey office building adjoined the warehouse to the south. The office building was of glass, concrete and steel cladding construction and appeared in fair condition.

A concrete-lined vehicle wash-bay was located to the north of the single-storey buildings in the south-west of the site. the wash-bay was covered by a metal awning. The wash-bay appeared in serviceable condition, though it was not known whether the wash-bay was used.

Asphaltic concrete (AC) and concrete pavements were located in the eastern and southern sections of the site. The AC pavement appeared in fair to poor condition, with evidence of cracking and heaving. The concrete pavements appeared in fair condition with minor cracking.

2.5.3 Boundary Conditions, Soil Stability and Erosion

The site was fenced on all sides with chain-link fencing and upper barbed-wire strands. The site was accessible via two driveways in the south (from Victoria Street) and one driveway in the north-east (from Redfern Street). Steel gates were located at each driveway to secure the site.

No visible evidence of erosion was observed at the site perimeters. A depression trending in a north/south orientation was observed within the centre of the site.

2.5.4 Presence of Drums/Chemical Storage and Waste

Several intermediate bulk containers (IBCs) were located in the north-western portion of the site. The labels on the IBCs indicated they were previously used for the storage of cleaning solvents and acids, though the current contents were not confirmed.

An IBC was located centrally within the northern portion of the site. The IBC appeared to contain waste oil products. The protective cage of the IBC was damaged and residue was visible near the outlet.

Several drums (244L) were stored within the south-west of the site, adjacent to the west of the single-storey buildings. The drums appeared to contain oils and lubricants associated with vehicle/machinery maintenance. Several discarded vehicle components (brake shoes, drums and rotors) were located to the north of the drums.

2.5.5 Evidence of Cut and Fill

Fill was evident from exposed soil with inclusions of igneous, ironstone and sandstone gravel, brick, concrete and tile fragments.

2.5.6 Visible or Olfactory Indicators of Contamination (odours, spills etc)

Two suspected underground storage tanks (USTs) were located in the south-western portion of the site. A 35,500L diesel tank was located within a shipping container to the south of the suspected USTs, and was self-contained. A second containerised diesel tank (approx. 10,000L capacity) was located within the east of the site, north of the pebblecrete warehouse. The approximate locations of these features are shown on Figure 2.

Two stockpiles of debris (steel, plastic, timber pallets) were located to the north-east of the warehouse, and one stockpile of soil was located to the south-east of the warehouse. This stockpile appeared to be a similar size, composition and location as the soil stockpile sampled during the EIS 2018 assessment. The data presented in the EIS 2018 assessment indicated the soil stockpile was suitable (from a contamination view-point) for the proposed development.

2.5.7 Drainage and Services

Stormwater drainage was observed within paved areas and presume to discharge to regional stormwater infrastructure along Redfern and Victoria Streets. A concrete lined dish-drain was located within the north, adjacent to western site boundary. The drain appeared to discharge to regional stormwater infrastructure to the north.

An electrical substation kiosk, gas manifold and water mains manifold were located within the south of the site. A hydrant standpipe was located within the south-west of the site, adjacent to the western boundary.

Local water, lighting and power connections were observed throughout the site, with services conduits above and below ground. The lighting within the north-eastern carpark appeared solar powered, though may have included electrical back-up connections.

2.5.8 Sensitive Environments

Sensitive environments such as wetlands, ponds, creeks or extensive areas of natural vegetation were not identified on site or in the immediate surrounds.

2.5.9 Landscaped Areas and Visible Signs of Plant Stress

Exotic grasses and trees were located in the eastern and southern portions of the site, and within formed gardens in the north-east, and between the central building and the warehouse in the south of the site.

The vegetation within the north-east and southern portions appeared in good condition based on a cursory inspection. The vegetation located between the buildings appeared overgrown, though generally heavy. The vegetation adjacent to the eastern boundary appeared in poor condition, with patches of bare earth. The condition of the vegetation appeared related to a lack of upkeep/maintenance rather than an indication of significant contamination.

2.6 Surrounding Land Use

During the site inspection, JKE observed the following land uses in the immediate surrounds:

- North – Redfern Street, with hardware design and manufacturing warehouse (Alchin Long Group) and tissue manufacturing (ABC Tissue Products);
- South – Victoria Street, with Wetherill Park Tafe and residential beyond;
- East – Heavy vehicle inspection station (RMS); and
- West – light industrial complexes. Tenancies include: automotive repairers and tuners; auto electricians; joinery and ceiling panel manufacturer; pool maintenance contractors; information technology (IT) offices; and a horticultural chemical wholesaler (Colin Campbell (Chemicals) Pty Ltd).

JKE are of the opinion that the adjacent auto service businesses to the west of the site are potential off-site contamination sources as the auto service businesses are located within 15m of the site boundary and is up-gradient.

2.7 Underground Services

The 'Dial Before You Dig' (DBYD) plans were reviewed for the investigation in order to establish whether any major underground services exist at the site or in the immediate vicinity that could act as a preferential pathway for contamination migration. Major services were not identified that would be expected to act as preferential pathways for contamination migration. A high-pressure gas main, electrical mains cable and local connections enter the site from the south. The local connections extend to the existing buildings.

3 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Geology

Regional geological information presented in the EIS 2018 report indicated that the site is underlain by Bringelly Shale of the Wianamatta Group, which typically consists of shale, carbonaceous claystone, claystone, laminite, fine to medium grained lithic sandstone, rare coal and tuff.

Soil landscape information presented in the EIS 2018 report indicated the site is located within the Blacktown soils landscape, which is typically of residual origins.

3.2 Acid Sulfate Soil (ASS) Risk and Planning

ASS information presented in the EIS 2018 report indicated the site is not located in an ASS risk area. The site is classed as having extremely low probability of ASS occurrence.

An ASS assessment was undertaken in conjunction with this investigation. The findings are presented in a separate report.

3.3 Dry Land Salinity

Salinity information presented in the EIS 2018 report indicated the site is in an area impacted by dryland salinity. The site is located in an area classed as having moderate salinity potential.

A salinity investigation was undertaken in conjunction with this investigation. The findings are presented in a separate report.

3.4 Hydrogeology

Hydrogeological information presented in the EIS 2018 report indicated that the regional aquifer on-site and in the areas immediately surrounding the site includes porous, extensive aquifers of low to moderate productivity. There was a total of 27 registered bores within the report buffer of 2,000m. In summary:

- The nearest registered bore was located approximately 580m to the north of the site. This was utilised for monitoring purposes;
- The majority of the bores were registered for monitoring purposes;
- There were no nearby bores (i.e. within 1km) registered for domestic or irrigation uses; and
- The drillers log information from the closest registered bores typically identified fill and/or clay soil to depths of 1-3m, underlain by shale bedrock. Standing water levels (SWLs) in the bores ranged from 1mBGL to 19mBGL.

The information reviewed for this investigation indicates that the subsurface conditions at the site are likely to consist of relatively low permeability (residual) soils overlying shallow bedrock. The potential for viable groundwater abstraction and use of groundwater under these conditions is considered to be low. There is a reticulated water supply in the area and consumption of groundwater is not expected to occur. Use of groundwater is not proposed as part of the development.

Considering the local topography and surrounding land features, JKE anticipate groundwater to flow to the east/south-east towards the tributary of Prospect Creek.

3.5 Receiving Water Bodies

The site location and regional topography indicates that excess surface water flows have the potential to enter the stormwater channel located to the east of the site. The channel drains to Prospect Creek, located to the north-east of the site. This water body is considered to be a potential receptor.

4 SITE HISTORY INFORMATION

4.1 Review of Historical Aerial Photographs

Historical aerial photographs were reviewed for the investigation. The information was sourced for the Lotsearch report attached in the appendices. JKE has reviewed the photographs, and summarised relevant information in the following table:

Table 4-1: Summary of Historical Aerial Photographs

Year	Details
1930	**On-site:** The majority of the site was vacant and used for cultivation purposes. A few small residential dwellings were located on the south-western portion. Ploughing furrows and a possible orchard were visible in some areas. Large trees and bushland were located on the north-western corner which extended further to the west onto the adjoining property. **Off-site:** The surrounds appeared similar to the site and were most likely used for grazing and/or market garden purposes.
1955	The site and immediate surrounds appeared similar to the 1930 photograph. Some large sheds had been constructed to the north of the site.
1961	The site appeared to be divided into individual lots. The site and immediate surrounds appeared similar to the 1955 photograph.
1965	The site and surrounds appeared similar to the 1961 photograph.
1970	The site and surrounds appeared similar to the 1965 photograph.
1978	**On-site:** The site had been developed for industrial/commercial purposes. The western and northern portions of the site appeared to be used as a vehicle holding yard. Access roads were visible throughout the holding yard. A large building (likely an office) was visible in the south-western corner, with a concrete driveway/hardstand. The eastern portion of the site was undeveloped. **Off-site:** Disturbed ground was visible to the east and south-east of the site, following the alignment of the current (2021) stormwater drain. Vegetation had been cleared further east.
1982	**On-site:** A large building was visible in the south-eastern corner and appeared to be the current (2021) warehouse. A driveway and hardstand to the east and north of the warehouse appeared under construction. Soil stockpiles were visible further north and indicated filling was occurring. **Off-site:** The stormwater drain to the east of the site had been concrete-lined. The land to the north and south of the site had been cleared. A few large buildings (presumed to be Wetherill Park TAFE) had been constructed to the south-west of the site, with a residential subdivision under construction to the east of the TAFE. The land to the north of the site was being redeveloped for commercial/industrial uses.
1986	**On-site:** The majority of the site was used as a vehicle holding yard. The hardstand area in the north-east had been extended to the south. **Off-site:** several houses had been constructed within the subdivision to the south of the site. A large building (RMS Heavy vehicle checking station) and driveways had been constructed to the east of the site.

Year	Details
1991	The site appeared generally similar to the 1986 photograph. Industrial/commercial complexes and warehouses had been constructed to the north and west of the site.
1994	**On-site:** Two buildings had been constructed within the south of the site. One building appeared to be a large shed/warehouse type structure to the north of the western building. The other building was constructed between the western building and the warehouse and appeared to be an office building. **Off-site:** The immediate surrounds appeared generally similar to the 1991 photograph.
2000	The site and immediate surrounds appeared generally similar to the 1994 photograph. Some upgrades/alterations to the TAFE property and Victoria Street were visible.
2009	The site and immediate surrounds appeared generally similar to the 2000 photograph.
2015	**On-site:** the central-eastern portion of the site appeared covered with grass and soil mounds. Filling was possibly underway. The north-eastern corner of the site was used as a carpark, with shipping container storage to the south. The western and southern portions of the site appeared mostly vacated, though structurally unchanged. **Offsite:** The immediate surrounds appeared generally similar to the 2009 photograph.
2020	A hardstand had been constructed over the grass and soil mounds visible in the 2015 photograph. The eastern half of the site was predominantly used for storage of bulk goods (likely masonry products). The western half of the site was predominantly used for heavy vehicle storage. The immediate surrounds appeared generally similar to the 2015 photograph.

4.2 SafeWork NSW Records

SafeWork NSW records in relation to the registered storage of dangerous goods were reviewed for the investigation. Copies of relevant documents are attached in the appendices. A summary of the relevant information is provided in the following table:

Table 4-2: Summary of SafeWork NSW Records

Date	Record Number	Licence Details
28.11.1994	35/023688	A licence for the keeping of Dangerous Goods was issued to Inchcape Motors Australia Limited. The licence indicated the following dangerous goods were stored: • 1x 10,000L UST located in the south-western portion, to the north of the single-storey building; • 1x 500L AST (for diesel storage) and 1x 500L AST (kerosene storage) adjacent to the south-eastern corner of the single-storey building in the south-west of the site; and • Storage for 7x 18kg LPG cylinders adjacent to the northern wall of the pebblecrete warehouse.
10.04.1990	35/010452.8	A licence for the keeping of Dangerous Goods was issued to Subaru Australia. The licence indicated a 1x 10,000L UST (for unleaded petroleum storage) was present. No plans or drawings were provided by SafeWork NSW in relation to the location of the UST.

Date	Record Number	Licence Details
05.01.1984	35/023688	A licence for the keeping of Dangerous Goods was issued to Bennett Honda Pty limited. The licence indicated the following dangerous goods were stored: • 1x 2,000L AST (LPG storage) located approximately 16m north of the north-western corner of the pebblecrete warehouse; and • 2x 250L cabinets within the warehouse for the storage of petroleum.
27/02/1984	35/010452.8	A licence for the keeping of Dangerous Goods was issued to Mark IV Industries limited. The licence indicated the following dangerous goods were stored on-site: • 1x 28,000L UST (leaded petroleum); and • 1x 1,350L UST (diesel). The records indicated the diesel tank was not in use.
20/02/1984	-	A letter was issued to Mark IV Industries Pty Limited regarding the abandoning of tanks at the site. The response (dated 24 February 1984) indicated the 28,000L UST (petroleum storage) was used by the company. JKE presume the diesel tank was to be abandoned. No further information was provided.
09.06.1978	10452-8	A licence for the keeping of Dangerous Goods was issued to LWC Industries limited. The licence indicated the following dangerous goods were stored on-site: • 1x 27,000L UST (mineral spirits); and • 1x 1,350L AST (mineral oil). No plans or drawings were provided by SafeWork NSW in relation to the locations of the infrastructure.

Based on the provided information, JKE are of the opinion that the licences 10452-8 and 35/010452.8 relate to the same tanks, being a 27,000L to 28,000L UST for petroleum storage, and a 1,350L AST for diesel storage. JKE note that the licence issued to Subaru Australia in 1990 was the same licence number, though the size of the UST decreased to 10,000L. information relating to the decommissioning/replacement of the UST was not available.

Based on the provided information, JKE are of the opinion that the UST/s were likely located within the south-western portion of the site, in the vicinity of the known UST. The USTs are considered to present potential point-sources of site contamination. The approximate locations of these features are shown of Figure 2 attached in the appendices.

4.3 NSW EPA and Department of Defence Records

A review of the NSW EPA and Department of Defence databases was undertaken for this investigation. Information from the following databases were sourced from the Lotsearch report:

- Records maintained in relation to contaminated land under Section 58 of the CLM Act 1997;

- Records of sites notified in accordance with the Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997 (2015)[6];
- Licensed activities under the Protection of the Environment Operations Act (1997)[7];
- Sites being investigated under the NSW EPA per-and polyfluoroalkyl substances (PFAS) investigation program;
- Sites being investigated by the Department of Defence for PFAS contamination; and
- Sites being managed by the Department of Defence for PFAS contamination.

The search included the site and surrounding areas in the report buffer. A summary of the information is provided below:

Table 4-3: NSW EPA and Department of Defence Records

Records	On-site	Off-site
Records under Section 58 of the CLM Act 1997	None	None
Records under the Duty to Report Contamination under Section 60 of the CLM Act 1997	None	There were two properties listed in the report buffer. These properties were resource recovery centres and were located approximately 440m north of the site (Fairfield Sustainable Resource Centre) and 700m north-west of the site (Sims Wetherill Park). Due to the distances from the site, the properties are not considered to represent off-site sources of contamination.
Licences under the POEO Act 1997	None	Current and historical licenses were identified for several properties within the report buffer, including the application of herbicides along waterways. However, these activities are considered unlikely to pose a contamination risk to the site or represent and off-site source of contamination due to their distance and/or down-gradient location from the site.
Records relating to the NSW EPA PFAS Investigation Program	None	None
Records relating to the Department of Defence PFAS management and investigation programs	None	None

[6] NSW EPA, (2015). *Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997.* (referred to as Duty to Report Contamination)

[7] Protection of the Environment Operations Act 1997 (NSW) (referred to as POEO Act 1997)

4.4 Historical Business Directory and Additional Lotsearch Information

Historical business records and other relevant information were reviewed for the investigation. The information was sourced from the Lotsearch report and summarised in the following table:

Table 4-4: Historical Business Directory and other Records

Records	On-site	Off-site
Historical dry cleaners, motor garages and service stations	A motor car dealer was listed on-site in the 1990s. The historical aerial photographs indicate the site was used as a vehicle holding yard. This use of the site may have resulted in potential contamination.	There was one listed in the report buffer between 1950-1990. This property was a service station located approximately 500m to the west and down-gradient of the site. Due to the distance and down-gradient location, the property is not considered to represent an off-site source of contamination. There were seven motor garages/service stations listed in the report buffer. Two of the properties were located within approximately 50m to 100m to the west and up-gradient of the site. Due to the up-gradient location and proximity to the site, the properties are considered to represent potential off-site sources of contamination.
Other historical businesses that could represent potential sources of contamination	A commercial lithographic printer (offset) was listed on-site on the 1990s. This use of the site may have resulted in potential contamination.	A commercial lithographic printer and a panel beater/spray painter business were listed in the report buffer in the 1990s and were located approximately 50m to 100m west of the site. Due to the up-gradient location and proximity to the site, these businesses are considered to represent potential off-site sources of contamination. A second spray painting business was identified on Redfern Street, though the exact street address and direction from the site was not available.
National waste management site database	None	There were three properties listed in the report buffer. The properties were located approximately 400m to 1,000m north/north-west of the site and were used for reprocessing or transfer of waste. All three properties were listed as operational. Due to the distance from the site, these properties are not considered to represent of-site sources of contamination.
National liquid fuel facilities	None	There was one listed in the report buffer. The property was a service station located approximately 850m south-east of the site. Due to the distance and down-gradient location from the site, this property is not considered to represent an off-site source of contamination.

Records	On-site	Off-site
Mapped heritage items	None	Various local heritage items were mapped in the report buffer. These are not considered to have any relevance in the context of the investigation objectives.
Mapped ecological constraints	Urban exotic/native vegetation was mapped on-site. This vegetation is not considered to have any relevance in the context of the investigation objectives.	Various ecological items were mapped in the report buffer. These are not considered to have any relevance in the context of the investigation objectives.
Mapped naturally occurring asbestos	None	None

4.5 Summary of Site History Information

A time line summary of the historical land uses and activities is presented in the following table. The information presented in the table is based on a weight of evidence assessment of the site history documentation and observations made by JKE.

Table 4-5: Summary of Historical Land Uses / Activities

Year(s)	Potential Land Use / Activities
Pre-1977	The site was a rural property and used for agricultural purposes. Subdivision of the site occurred during this period into four individual allotments.
1977-2010	The site was developed for industrial land uses and occupied by a warehouse, hardstands and vehicle storage yards. Activities at the site included the distribution of motor vehicles and commercial lithographic printing.
2010 – Present	The commercial/industrial land use continued. The site was used for the manufacturing and distribution of paper products (i.e. tissues), storage and distribution of shipping containers, and later, masonry products. Since sometime after 2016, the western portion of the site was used for heavy vehicle parking.

4.6 Integrity of Site History Information

The majority of the site history information was obtained from government organisations as outlined in the relevant sections of this report. The veracity of the information from these sources is considered to be relatively high. A certain degree of information loss can be expected given the lack of specific land use details over time. JKE have relied upon the information presented in the EIS 2018 report and the Lotsearch report and have not verified any information as part of this investigation. However, it is noted that the Lotsearch report is generated based on databases maintained by various government agencies and is expected to be reliable.

5 CONCEPTUAL SITE MODEL

NEPM (2013) defines a CSM as a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM for the site is presented in the following sub-sections and is based on the site information (including the site inspection information) and the review of site history information. Reference should also be made to the figures attached in the appendices.

A review of the CSM in relation to source, pathway and receptor (SPR) linkages has been undertaken as part of the Tier 1 risk assessment process, as outlined in Section 10.

5.1 Potential Contamination Sources/AEC and CoPC

The potential contamination sources/AEC and CoPC are presented in the following table:

Table 5-1: Potential (and/or known) Contamination Sources/AEC and Contaminants of Potential Concern

Source / AEC	CoPC
Fill material – The site appears to have been historically filled to achieve the existing levels. The fill may have been imported from various sources and could be contaminated. Several stockpiles of fill material were also located at the site. The EIS 2018 report identified filling across the site, ranging from 0.2mBGL to 3.4mBGL. The depth of filling generally increased within the east of the site.	Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), petroleum hydrocarbons (referred to as total recoverable hydrocarbons – TRHs), benzene, toluene, ethylbenzene and xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), organophosphate pesticides (OPPs), polychlorinated biphenyls (PCBs) and asbestos.
Fuel/oil storage – At least one UST was identified at the site (see Figure 2). Two aboveground storage tanks (ASTs) were identified at the site that were used to store diesel (see Figure 2). An IBC containing waste oil residue was located centrally within the north of the site.	Lead, TRH, BTEX and PAHs
Mechanics workshop – The site was formerly used as a mechanics. Fuels, oils and solvents may have been used during this site use.	Heavy metals, TRH, naphthalene, BTEX and and Per-and Polyfluoroalkyl Substances (PFAS).
Historical agricultural use – The site appears to have been used for grazing and market garden purposes. This could have resulted in contamination across the site via use of machinery, application of pesticides and building/ demolition of various structures. Irrigation pipes made from asbestos cement may also be associated with this AEC.	Heavy metals, TRH, PAHs, OCPs, PCBs and asbestos JKE note that OCPs only became commercially available in the 1940s. Prior to this time pesticides were predominantly heavy metal compounds.
Use of pesticides – Pesticides may have been used beneath the buildings and/or around the site.	Heavy metals and OCPs
Hazardous Building Material – Hazardous building materials may be present as a result of former building and demolition activities. The historical aerial photographs indicate the former buildings were	Asbestos, lead and PCBs

Source / AEC	CoPC
generally located within the south of the site however, ancillary structures may also have been present in other areas. JKE note that a hazardous building material survey (HAZMAT) has previously been undertaken on the existing buildings and ACM was confirmed to be present.	
Industrial/Commercial land use – The site was used for various commercial purposes, including vehicle storage, printing and manufacturing of paper products. The use of chemicals, fuels and paints during this period could have resulted in contamination. An electrical substation kiosk was located at the site.	Heavy metals, PAHs, TRH, Volatile Organic Compounds (VOCs), solvents, naphthalene, BTEX, PCBs and PFAS.
Off-site area 1 – Several current and former automotive service and spray-painting businesses are located up-gradient of the site and are considered to be potential sources of contamination.	Heavy metals, PAHs, TRH, VOCs, solvents, naphthalene, BTEX and PFAS.

JKE note that herbicides have not been included as CoPC as herbicides are not commonly found at residual concentrations likely to pose a risk to human health or the environment (NSW DEC 2005, *Guidelines for Assessing Former Orchards and Market Gardens*).

5.2 Mechanism for Contamination, Affected Media, Receptors and Exposure Pathways

The mechanisms for contamination, affected media, receptors and exposure pathways relevant to the potential contamination sources/AEC are outlined in the following CSM table:

Table 5-2: CSM

Potential mechanism for contamination	Potential mechanisms for contamination include: • Fill material – importation of impacted material, 'top-down' impacts (e.g. placement of fill, leaching from surficial material etc), or sub-surface release (e.g. impacts from buried material); • Fuel storage – 'top-down', spills (e.g. during filling of the tanks and/or dispensing activities), or sub-surface release (e.g. from leaking tank or pipework); • Mechanics workshop - 'top-down', spills (e.g. leaks through cracks in the pavement), or sub-surface release (e.g. from leaking separator/grease pits or sewer pipework); • Historical agricultural use – 'top-down' and spills (e.g. application of pesticides, refuelling or repairing machinery, and other activities at the ground surface level); • Use of pesticides – 'top-down' and spills (e.g. during normal use, application and/or improper storage); • Hazardous building materials – 'top-down' (e.g. demolition resulting in surficial impacts in unpaved areas);

	• Industrial / Commercial land use - 'top-down', spills (e.g. leaks through cracks in the pavement), or sub-surface release (e.g. from leaking separator/grease pits or sewer pipework); and • Off-site land uses – 'top-down', spill or sub-surface release. Impacts to the site could occur via migration of contaminated groundwater.
Affected media	Soil and groundwater have been identified as potentially affected media.
Receptor identification	Human receptors include site users (adults), construction workers and intrusive maintenance workers. Off-site human receptors include adjacent land users and recreational water users within Prospect Creek. Ecological receptors include terrestrial organisms and plants within unpaved areas (including proposed landscaped areas), and freshwater ecology in Prospect Creek.
Potential exposure pathways	Potential exposure pathways relevant to the human receptors include ingestion, dermal absorption and inhalation of dust (all contaminants) and vapours (volatile TRH, VOCs, naphthalene and BTEX). The potential for exposure would typically be associated with the construction and excavation works, and future use of the site. Potential exposure pathways for ecological receptors include primary/direct contact and ingestion. Exposure during future site use could occur via direct contact with soil in unpaved areas such as gardens, inhalation of airborne asbestos fibres during soil disturbance, or inhalation of vapours within enclosed spaces such as buildings and basements. Exposure to groundwater is unlikely to occur in Prospect Creek through direct migration, however groundwater has the potential to enter the river via the stormwater system (which is expected to discharge into the river) in a drained basement scenario.
Potential exposure mechanisms	The following have been identified as potential exposure mechanisms for site contamination: • Vapour intrusion into the proposed basement and/or building (either from soil contamination or volatilisation of contaminants from groundwater); • Contact (dermal, ingestion or inhalation) with exposed soils in landscaped areas and/or unpaved areas; and • Migration of groundwater off-site and into nearby water bodies, including aquatic ecosystems and those being used for recreation.
Presence of preferential pathways for contaminant movement	Local underground services such as stormwater have the potential to act as preferential pathways for contaminant migration at the site.

6 SAMPLING, ANALYSIS AND QUALITY PLAN

6.1 Data Quality Objectives (DQO)

Data Quality Objectives (DQOs) were developed to define the type and quality of data required to achieve the project objectives outlined in Section 1.2. The DQOs were prepared with reference to the process outlined in Schedule B2 of NEPM (2013) and the Guidelines for the NSW Site Auditor Scheme, 3rd Edition (2017)[8]. The seven-step DQO approach for this project is outlined in the following sub-sections.

The DQO process is validated in part by the Data Quality Assurance/Quality Control (QA/QC) Evaluation. The Data (QA/QC) Evaluation is summarised in Section 8.1 and the detailed evaluation is provided in the appendices.

6.1.1 Step 1 - State the Problem

The CSM identified potential sources of contamination/AEC at the site that may pose a risk to human health and the environment. The EIS 2018 report identified deep fill with low or non-detectable concentrations of the CoPC.

Investigation data is required to better characterise the site, assess the risks posed by the contaminants in the context of the proposed development/intended land use, and assess whether remediation is required. This information will be considered by the project team in the design and delivery of the project as well as by the consent authority in exercising its planning functions in relation to the development proposal.

A waste classification is required prior to off-site disposal of excavated soil/bedrock.

6.1.2 Step 2 - Identify the Decisions of the Study

The objectives of the investigation are outlined in Section 1.2. The decisions to be made reflect these objectives and are as follows:

- Did the site inspection, or does the historical information identify potential contamination sources/AEC at the site?
- Are any results above the SAC?
- Do potential risks associated with contamination exist, and if so, what are they?
- Is remediation required?
- Is the site characterisation sufficient to provide adequate confidence in the above decisions?
- Is the site suitable for the proposed development, or can the site be made suitable subject to further characterisation and/or remediation?

6.1.3 Step 3 - Identify Information Inputs

The primary information inputs required to address the decisions outlined in Step 2 include the following:

- Existing relevant environmental data from previous reports;
- Site information, including site observations and site history documentation;

[8] NSW EPA (2017). *Guidelines for the NSW Site Auditor Scheme, 3rd ed.* (referred to as Site Auditor Guidelines 2017)

- Sampling of potentially affected media, including soil, groundwater and fibre cement fragments (FCF);
- Observations of sub-surface variables such as soil type, photo-ionisation detector (PID) concentrations, odours and staining, and groundwater physiochemical parameters;
- Laboratory analysis of soils, FCF and groundwater for the CoPC identified in the CSM; and
- Field and laboratory QA/QC data.

6.1.4 Step 4 - Define the Study Boundary

The sampling was confined to the site boundaries as shown in Figure 3 and was limited vertically to a depth of 8mBGL (spatial boundary). The soil sampling was completed between 1 and 5 February 2021, with groundwater sampling completed between 15 and 17 February 2021 (temporal boundary). The assessment of potential risk to adjacent land users has been made based on data collected within the site boundary.

Sampling was not undertaken within the existing building footprint due to access constraints. This has been identified as a data gap.

6.1.5 Step 5 - Develop an Analytical Approach (or Decision Rule)

6.1.5.1 Tier 1 Screening Criteria

The laboratory data will be assessed against relevant Tier 1 screening criteria (referred to as SAC), as outlined in Section 7. Exceedances of the SAC do not necessarily indicate a requirement for remediation or a risk to human health and/or the environment. Exceedances are considered in the context of the CSM and valid SPR-linkages.

Where appropriate, data are assessed against valid statistical parameters to characterise the data population. This may include calculation and application of mean values and/or 95% upper confidence limit (UCL) values for the data set, with regards to the NEPM (2013) framework and other relevant guidelines made under the CLM Act 1997. UCLs are considered acceptable where the UCL is below the SAC, the standard deviation of the data is less than 50% of the SAC and none of the individual concentrations are more than 250% of the SAC.

6.1.5.2 Field and Laboratory QA/QC

Field QA/QC included analysis of inter-laboratory duplicates, intra-laboratory duplicates, trip spike, trip blank and rinsate samples. Further details regarding the sampling and analysis undertaken, and the acceptable limits adopted, is provided in the Data Quality (QA/QC) Evaluation in the appendices.

The suitability of the laboratory data is assessed against the laboratory QA/QC criteria which is outlined in the attached laboratory reports. These criteria were developed and implemented in accordance with the laboratory's National Association of Testing Authorities, Australia (NATA) accreditation and align with the acceptable limits for QA/QC samples as outlined in NEPM (2013) and other relevant guidelines.

In the event that acceptable limits are not met by the laboratory analysis, other lines of evidence are reviewed (e.g. field observations of samples, preservation, handling etc) and, where required, consultation with the laboratory is undertaken in an effort to establish the cause of the non-conformance. Where

uncertainty exists, JKE typically adopt the most conservative concentration reported (or in some cases, consider the data from the affected sample as an estimate).

6.1.5.3 Appropriateness of Practical Quantitation Limits (PQLs)

The PQLs of the analytical methods are considered in relation to the SAC to confirm that the PQLs are less than the SAC. In cases where the PQLs are greater than the SAC, a discussion of this is provided.

6.1.6 Step 6 – Specify Limits on Decision Errors

To limit the potential for decision errors, a range of quality assurance processes are adopted. A quantitative assessment of the potential for false positives and false negatives in the analytical results is undertaken with reference to Schedule B(3) of NEPM (2013) using the data quality assurance information collected.

Decision errors can be controlled through the use of hypothesis testing. The test can be used to show either that the baseline condition is false or that there is insufficient evidence to indicate that the baseline condition is false. The null hypothesis is an assumption that is assumed to be true in the absence of contrary evidence. For this investigation, the null hypothesis has been adopted which is that, there is considered to be a complete SPR linkage for the CoPC identified in the CSM unless this linkage can be proven not to (or unlikely to) exist.

6.1.7 Step 7 - Optimise the Design for Obtaining Data

The most resource-effective design will be used in an optimum manner to achieve the investigation objectives. Adjustment of the investigation design can occur following consultation or feedback from project stakeholders. For this investigation, the design was optimised via consideration of the various lines of evidence used to select the sample locations, the media being sampled, and also by the way in which the data were collected.

The sampling plan and methodology are outlined in the following sub-sections.

6.2 Soil Sampling Plan and Methodology

The soil sampling plan and methodology adopted for this investigation is outlined in the table below:

Table 6-1: Soil Sampling Plan and Methodology

Aspect	Input
Sampling Density	Samples were collected from 46 locations as shown on the attached Figure 3. In conjunction with the 29 locations sampled in the EIS ESA, a total of 75 locations were sampled. This number of locations is approximately 75% of the minimum sampling density for hotspot identification, as outlined in the NSW EPA Contaminated Sites Sampling Design Guidelines (1995)[9]. The number of locations corresponded to a sampling density of approximately one sample per 1,130m^2. The sampling plan was not designed to meet the minimum sampling density outlined in

[9] NSW EPA, (1995), *Contaminated Sites Sampling Design Guidelines.* (referred to as EPA Sampling Design Guidelines 1995)

Aspect	Input
	the EPA Sampling Design Guidelines 1995. Considering the land use and proposed development, JKE are of the opinion that 75% coverage is adequate to address the objectives of the investigation.
Sampling Plan	The sampling locations were placed on a judgemental sampling plan and were broadly positioned for site coverage, taking into consideration areas that were not easily accessible. This sampling plan was considered suitable to make an assessment of potential risks associated with the AEC and CoPC identified in the CSM, and assess whether further investigation is warranted. It is acknowledged that the sampling plan did not target all identified potential sources of contamination (including the IBCs, the truck wash bay, and down-gradient of the UST). The IBCs were observed during the site inspection and were not known at the outset of the investigation. Due to the existing structures, locations down-gradient of the truck wash bay and the UST were not accessible. This has been identified as a data gap and is discussed further in Section 10.3.
Set-out and Sampling Equipment	Sampling locations were set out using a hand-held GPS unit (with an accuracy of ±5m). In-situ sampling locations were checked for underground services by an external contractor prior to sampling. Samples were collected using either a hand auger, drill rig equipped with spiral flight augers (150mm diameter) or a 6-tonne excavator. Soil samples from the drill rig were obtained from a Standard Penetration Test (SPT) split-spoon sampler, and/or directly from the auger. Samples from the excavator were obtained from the test pit walls or directly from the bucket by hand. Where sampling occurred from the bucket, JKE collected samples from the central portion of large soil clods, or from material that was unlikely to have come into contact with the bucket.
Sample Collection and Field QA/QC	Soil samples were obtained between 1 and 5 February 2021 in accordance with our standard field procedures. Soil samples were collected from the fill and natural profiles based on field observations. The sample depths are shown on the logs attached in the appendices. Samples were placed in glass jars with plastic caps and Teflon seals with minimal headspace. Samples for asbestos analysis were placed in zip-lock plastic bags. During sampling, soil at selected depths was split into primary and duplicate samples for field QA/QC analysis. The field splitting procedure included alternately filling the sampling containers to obtain a representative split sample.
Field Screening	A portable Photo-ionisation Detector (PID) fitted with a 10.6mV lamp was used to screen the samples for the presence of volatile organic compounds (VOCs). PID screening for VOCs was undertaken on soil samples using the soil sample headspace method. VOC data was obtained from partly filled zip-lock plastic bags following equilibration of the headspace gases. PID calibration records are maintained on file by JKE. The field screening for asbestos quantification included the following: • A representative bulk sample was collected from fill at 1m intervals, or from each distinct fill profile. The quantity of material for each sample varied based on whatever return could be achieved using the auger. The bulk sample intervals are shown on the attached borehole and test pit logs; • Each sample was weighed using an electronic scale;

Aspect	Input
	• Due to the cohesive nature of the soils, each sample was subsequently placed on a contrasting support (blue tarpaulin) and inspected for the presence of fibre cement. Any soil clumps/nodules were disaggregated; • The condition of fibre cement or any other suspected asbestos materials was noted on the field records; and • If observed, any fragments of fibre cement in the bulk sample were collected, placed in a zip-lock bag and assigned a unique identifier. Calculations for asbestos content were undertaken based on the requirements outlined in Schedule B1 of NEPM (2013), as summarised in Section 7.1. A calibration/check of the accuracy of the scale used for weighing the fibre cement fragments was undertaken using a set of calibration weights. Calibration/check records are maintained on file by JKE. The scale used to weigh the 10L samples was not calibrated, however this is not considered significant as this method of providing a weight for the bulk sample is considered to be considerably more accurate than applying a nominal soil density conversion.
Decontami-nation and Sample Preservation	Sampling personnel used disposable nitrile gloves during sampling activities. Re-usable sampling equipment was decontaminated using Decon and potable water. Soil samples were preserved by immediate storage in an insulated sample container with ice. On completion of the fieldwork, the samples were stored temporarily in fridges in the JKE warehouse before being delivered in the insulated sample container to a NATA registered laboratory for analysis under standard chain of custody (COC) procedures.

6.3 Groundwater Sampling Plan and Methodology

The groundwater sampling plan and methodology is outlined in the table below:

Table 6-2: Groundwater Sampling Plan and Methodology

Aspect	Input
Sampling Plan	Groundwater monitoring wells were installed in BH103 (MW103), BH106 (MW106), BH111 (MW111), BH116 (MW116), BH123 (MW123), BH128 (MW128), BH134 (MW134), BH139 (MW139) and BH143 (MW143). The monitoring well locations are shown on Figure 3. The wells were positioned to provide a baseline of the groundwater conditions. Considering the topography and the location of the nearest down-gradient water body, MW106, MW116, MW134 and MW143 were considered to be in the up-gradient area of the site and would be expected to provide an indication of groundwater flowing onto (beneath) the site from the west/north-west. MW103, MW111, MW123, MW128 and MW139 were considered to be in the intermediate to down-gradient area of the site and would be expected to provide an indication of groundwater flowing across (beneath) the site and beyond the down-gradient site boundary. Groundwater samples were also collected from two existing wells (PMW1 and PMW2) located on-site. No construction details were available for these wells. JKE note that PMW2 was associated with the UST infrastructure onsite (likely a cathodic protection measure).

Aspect	Input
	It is acknowledged that groundwater monitoring wells were not installed down-gradient of the truck-wash bay and the UST, which are potential point sources of contamination. This has been identified as a data gap and is discussed further in Section 10.3.
Monitoring Well Installation Procedure	The monitoring well construction details are documented on the appropriate borehole logs attached in the appendices. The monitoring wells were installed to depths of approximately 5.5mBGL to 8.0mBGL. The wells were generally constructed as follows: • 50mm diameter Class 18 PVC (machine slotted screen) was installed in the lower section of the well to intersect groundwater; • 50mm diameter Class 18 PVC casing was installed in the upper section of the well (screw fixed); • The rubber O-rings located within the screw-fixed joints were removed prior to installation (the rubber O-rings can create interference when analysing for PFAS); • A 2mm sand filter pack was used around the screen section for groundwater infiltration; • A hydrated bentonite seal/plug was used on top of the sand pack to seal the well; and • A gatic cover was installed at the surface with a concrete plug to limit the inflow of surface water. The monitoring well installation, including the screen lengths, were considered suitable for assessment of general groundwater quality with regards to Table 5 in Schedule B2 of NEPM 2013.
Monitoring Well Development	The monitoring wells were developed on 8 February 2021 using a submersible electrical pump and dedicated disposable plastic bailers. Due to the hydrogeological conditions, groundwater inflow into the wells was relatively low, therefore the wells were pumped until they were effectively dry. The field monitoring records and calibration data are attached in the appendices.
Groundwater Sampling	The monitoring wells were allowed to recharge for approximately five to seven days after development. Groundwater samples were obtained between 15 and 17 February 2021. Prior to sampling, the monitoring wells were checked for the presence of Light Non-Aqueous Phase Liquids (LNAPL) using an inter-phase probe electronic dip meter. The monitoring well head space was checked for VOCs using a calibrated PID unit. The samples were obtained using a peristaltic pump/disposable plastic bailer. During sampling, the following parameters were monitored using calibrated field instruments: • Standing water level (SWL) using an electronic dip meter; and • pH, temperature, electrical conductivity (EC), dissolved oxygen (DO) and redox potential (Eh) using a YSI Multi-probe water quality meter. Steady state conditions were considered to have been achieved when the difference in the pH measurements was less than 0.2 units, the difference in conductivity was less than 10%, and when the SWL was not in drawdown. Groundwater samples were obtained directly from the single use tubing and placed in the sample containers. Duplicate samples were obtained by alternate filling of sample containers. This technique was adopted to minimise disturbance of the samples and loss of volatile contaminants associated with mixing of liquids in secondary containers, etc. Groundwater removed from the wells during development and sampling was transported to JKE in jerry cans and stored in holding drums prior to collection by a licensed waste-water contractor for off-site disposal.

Aspect	Input
	The field monitoring record and calibration data are attached in the appendices.
Decontaminant and Sample Preservation	During development, the pump was flushed between monitoring wells with potable water (single-use tubing was used for each well). The pump tubing was discarded after each sampling event and replaced therefore no decontamination procedure was considered necessary. The samples were preserved with reference to the analytical requirements and placed in an insulated container with ice or ice bricks. On completion of the fieldwork, the samples were temporarily stored in a fridge at the JKE office, before being delivered in the insulated sample container to a NATA registered laboratory for analysis under standard COC procedures.

6.3.1 Laboratory Analysis

Samples were analysed by an appropriate, NATA Accredited laboratory using the analytical methods detailed in Schedule B(3) of NEPM 2013. Reference should be made to the laboratory reports attached in the appendices for further details.

Table 6-3: Laboratory Details

Samples	Laboratory	Report Reference
All primary samples and field QA/QC samples including (intra-laboratory duplicates, trip blanks, trip spikes and field rinsate samples)	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	261320, 261320–A and 262017
Inter-laboratory duplicates	Envirolab Services Pty Ltd VIC, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	24410 and 24527

7 SITE ASSESSMENT CRITERIA (SAC)

The SAC were derived from the NEPM 2013 and other guidelines as discussed in the following sub-sections. The guideline values for individual contaminants are presented in the attached report tables and further explanation of the various criteria adopted is provided in the appendices.

7.1 Soil

Soil data were compared to relevant Tier 1 screening criteria in accordance with NEPM (2013) as outlined below.

7.1.1 Human Health

- Health Investigation Levels (HILs) for a 'commercial/industrial' exposure scenario (HIL-D);
- Health Screening Levels (HSLs) for a 'commercial/industrial' exposure scenario (HSL-D). HSLs were calculated based on conservative assumptions including a 'sand' type and a depth interval of 0m to 1m;
- HSLs for direct contact presented in the CRC Care Technical Report No. 10 – Health screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document (2011)[10]; and
- Asbestos was assessed against the HSL-D criteria. A summary of the asbestos criteria is provided in the table below:

Table 7-1: Details for Asbestos SAC

Guideline	Applicability
Asbestos in Soil	The HSL-D criteria were adopted for the assessment of asbestos in soil. The SAC adopted for asbestos were derived from the NEPM 2013 and are based on WA DoH (2009) guidance. The SAC include the following: • No visible asbestos at the surface/in the top 10cm of soil; • <0.05% w/w bonded asbestos containing material (ACM) in soil; and • <0.001% w/w asbestos fines/fibrous asbestos (AF/FA) in soil. Concentrations for bonded ACM concentrations in soil are based on the following equation which is presented in Schedule B1 of NEPM (2013): **% w/w asbestos in soil =** **% asbestos content x bonded ACM (kg)** / Soil volume (L) x soil density (kg/L) However, we are of the opinion that the actual soil volume in a 10L bucket varies considerably due to the presence of voids, particularly when assessing cohesive soils. Therefore, each bucket sample was weighed using electronic scales and the above equation was adjusted as follows (we note that the units have also converted to grams): **% w/w asbestos in soil =** **% asbestos content x bonded ACM (g)** / Soil weight (g)

[10] Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC Care), (2011). Technical Report No. 10 - *Health screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document*

7.1.2 Environment (Ecological – terrestrial ecosystems)

- Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs) for a 'commercial/industrial' exposure scenario. The NEPM (2013) recommends applying the EILs and ESLs to the top 2m of soil, however JKE have applied the EILs and ESLs to all soil samples to account for the potential for site-won material to be used for site levelling purposes. The criterion for benzo(a)pyrene has been increased from the value presented in NEPM (2013) based on the Canadian Soil Quality Guidelines[11];
- ESLs were adopted based on the soil type; and
- As an initial screen, EILs for selected metals were calculated based on the most conservative added contaminant limit (ACL) values presented in Schedule B(1) of NEPM (2013) and published ambient background concentration (ABC) values presented in the document titled Trace Element Concentrations in Soils from Rural and Urban Areas of Australia (1995)[12]. Where the initial screen identified EIL exceedances, the impacted samples were analysed for pH and cation exchange capacity (CEC). This data was used to select the appropriate ACL values and a soil-specific EIL was calculated. For exceedances noted in the EIS 2018 report, the lowest soil-specific EIL (for the corresponding soil type) was adopted as a conservative measure. This method is considered to be adequate for the Tier 1 Screening.

7.1.3 Management Limits for Petroleum Hydrocarbons

Management limits for petroleum hydrocarbons (as presented in Schedule B1 of NEPM 2013) were considered.

7.1.4 Waste Classification

Data for the waste classification assessment were assessed in accordance with the Waste Classification Guidelines, Part 1: Classifying Waste (2014)[13] as outlined in the following table:

Table 7-2: Waste Categories

Category	Description
General Solid Waste (non-putrescible)	• If Specific Contaminant Concentration (SCC) ≤ Contaminant Threshold (CT1) then Toxicity Characteristics Leaching Procedure (TCLP) not needed to classify the soil as general solid waste; and • If TCLP ≤ TCLP1 and SCC ≤ SCC1 then treat as general solid waste.
Restricted Solid Waste (non-putrescible)	• If SCC ≤ CT2 then TCLP not needed to classify the soil as restricted solid waste; and • If TCLP ≤ TCLP2 and SCC ≤ SCC2 then treat as restricted solid waste.
Hazardous Waste	• If SCC > CT2 then TCLP not needed to classify the soil as hazardous waste; and • If TCLP > TCLP2 and/or SCC > SCC2 then treat as hazardous waste.

[11] Canadian Council of Ministers of the Environment, (1999). *Canadian soil quality guidelines for the protection of environmental and human health: Benzo(a)Pyrene (1997)* (referred to as the Canadian Soil Quality Guidelines)

[12] Olszowy, H., Torr, P., and Imray, P., (1995), *Trace Element Concentrations in Soils from Rural and Urban Areas of Australia. Contaminated Sites Monograph Series No. 4*. Department of Human Services and Health, Environment Protection Agency, and South Australian Health Commission

[13] NSW EPA, (2014). *Waste Classification Guidelines, Part 1: Classifying Waste.* (referred to as Waste Classification Guidelines 2014)

Category	Description
Virgin Excavated Natural Material (VENM)	Natural material (such as clay, gravel, sand, soil or rock fines) that meet the following: • That has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial mining or agricultural activities; • That does not contain sulfidic ores or other waste; and • Includes excavated natural material that meets such criteria for virgin excavated natural material as may be approved from time to time by a notice published in the NSW Government Gazette.

7.2 Groundwater

Groundwater data were compared to relevant Tier 1 screening criteria in accordance with NEPM (2013), following an assessment of environmental values in accordance with the Guidelines for the Assessment and Management of Groundwater Contamination (2007)[14]. Environmental values for this investigation include aquatic ecosystems, and human-health risks in non-use scenarios.

7.2.1 Human Health

- HSLs for a 'commercial/industrial' exposure scenario (HSL-D). HSLs were calculated based on the soil type and the observed depth to groundwater;
- For MW106 and PMW2, the NEPM (2013) HSLs were not applicable as the groundwater was recorded at depths shallower than 2m. On this basis, JKE have undertaken a site-specific assessment (SSA) for the Tier 1 screening of human health risks posed by volatile contaminants in groundwater. The assessment included selection of alternative Tier 1 criteria that were considered suitably protective of human health. These criteria are based on drinking water guidelines and have been referred to as HSL-SSA. The criteria were based on the following (as shown in the attached report tables):
    - Australian Drinking Water Guidelines 2011 (updated 2018)[15] for BTEX compounds and selected VOCs;
    - World Health Organisation (WHO) document titled Petroleum Products in Drinking-water, Background document for the development of WHO Guidelines for Drinking Water Quality (2008)[16] for petroleum hydrocarbons;
    - USEPA Region 9 screening levels for naphthalene (threshold value for tap water); and
    - The use of the laboratory PQLs for other contaminants where there were no Australian guidelines.
- The ADWG 2018 were multiplied by a factor of 10 to assess potential risks associated with incidental/recreational-type exposure to groundwater (e.g. within down-gradient water bodies, or during monitoring activities). These have been deemed as 'recreational' SAC; and
- The recreational water quality guideline value was adopted for PFAS assessment based on Table 1 in NEMP 2020.

[14] NSW Department of Environment and Conservation, (2007). *Guidelines for the Assessment and Management of Groundwater Contamination.*

[15] National Health and Medical Research Council (NHMRC), (2018). *National Water Quality Management Strategy, Australian Drinking Water Guidelines 2011* (referred to as ADWG 2018)

[16] World Health Organisation (WHO), (2008). *Petroleum Products in Drinking-water, Background document for the development of WHO Guidelines for Drinking Water Quality* (referred to as WHO 2008)

7.2.2 Environment (Ecological - aquatic ecosystems)

Groundwater Investigation Levels (GILs) for 95% protection of freshwater species were adopted based on the Default Guideline Values in the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2018)[17]. The 99% trigger values were adopted where required to account for bioaccumulation. Low and moderate reliability trigger values were also adopted for some contaminants where high-reliability trigger values don't exist.

The ecological (freshwater) water quality guidelines were adopted for PFAS assessment based on NEMP 2020, based on 95% protection (slightly to moderately disturbed systems).

[17] Australian and New Zealand Governments (ANZG), (2018). *Australian and New Zealand Guidelines for Fresh and Marine Water Quality.* Australian and New Zealand Governments and Australian state and territory governments, Canberra ACT, Australia (referred to as ANZG 2018)

8 RESULTS

8.1 Summary of Data (QA/QC) Evaluation

The data evaluation is presented in the appendices. In summary, JKE are of the opinion that the data are adequately precise, accurate, representative, comparable and complete to serve as a basis for interpretation to achieve the investigation objectives.

8.2 Subsurface Conditions

A summary of the subsurface conditions encountered during the investigation is presented in the following table. Reference should be made to the borehole and test pit logs attached in the appendices for further details.

Table 8-1: Summary of Subsurface Conditions

Profile	Description
Pavement	AC and concrete pavements were encountered at the surface in BH105, BH106, BH107, BH108, BH111, BH116, BH119, BH128, BH129, BH138, BH139 and BH140 and ranged in thickness from 30mm to 500mm.
Fill	Fill was encountered at the surface or beneath the pavement in all boreholes and extended to depths of approximately 0.2mBGL (BH108) to 3.6mBGL (BH146). BH141 was terminated in the fill at a maximum depth of approximately 0.6mBGL. The fill typically comprised silty clay, silty gravelly sand and silty sand with inclusions of igneous, ironstone, sandstone and siltstone gravel, ash, slag, root fibres and building rubble (asphalt, bricks, concrete, glass, ceramic, tile and plastic fragments). Organic odours were encountered in BH106 at a depth of approximately 0.5mBGL to 0.8mBGL.
Natural Soil	Residual silty clay was encountered beneath the fill in BH/TP101 to BH/TP118, BH/TP120 to BH/TP140 and BH/TP142 to BH/TP144 at depths of approximately 0.2mBGL (BH108) to 2.8mBGL (BH129).
Bedrock	Siltstone/sandstone bedrock was encountered beneath the fill in BH119, BH145 and BH146, and beneath the residual silty clay in BH103, BH106, BH107, BH109, BH111, BH116, BH118, BH123, TP124, TP126, BH128, BH134, BH138 to BH140 and BH143 at depths of approximately 0.4mBGL (BH119) to 3.6mBGL (BH146).
Groundwater	Groundwater seepage was encountered in the boreholes BH106, BH107, TP125, BH129 and BH146 at depths of approximately 1.0mBGL to 4.0mBGL. The remaining boreholes and test pits were dry during and a short time after completion of drilling and/or excavation.

8.3 Field Screening

A summary of the field screening results are presented in the following table:

Table 8-2: Summary of Field Screening

Aspect	Details
PID Screening of Soil Samples for VOCs	PID soil sample headspace readings are presented in attached report tables and the COC documents attached in the appendices. The results ranged from 0ppm to 2ppm isobutylene equivalents which indicates a general lack of PID detectable VOCs.
Bulk Screening for Asbestos	The bulk field screening results are summarised in the attached report tables. All results were below the SAC. ACM was not identified in the screened samples. A FCF was observed upon the site surface. The fragment was confirmed to contain asbestos. This is discussed further in Section 10.1.
Groundwater Depth & Flow	SWLs measured in the monitoring wells installed at the site ranged from 1.5mBGL to 5.13mBGL. Groundwater RLs calculated on these measurements ranged from approximately 39mAHD to 27.4mAHD. The groundwater RLs indicate that excavation for the proposed basement may intercept groundwater. PMW2 recorded a SWL of 0.32mBGL. PMW2 was considered a component of the UST infrastructure (likely a cathodic protection measure) and may not be indicative of the groundwater conditions.
Groundwater Field Parameters	Field measurements recorded during sampling were as follows: - pH ranged from 5.90 to 7.17; - EC ranged from 6628µS/cm to 23668µS/cm; - Eh ranged from -23.1mV to -52.4mV; and - DO ranged from 0.3ppm to 5.7ppm.
LNAPL petroleum hydrocarbons	Phase separated product (i.e. LNAPL) were not detected using the interphase probe during groundwater sampling. No sheens were visibly observed using dedicated bailers.

8.4 Soil Laboratory Results

The soil laboratory results were assessed against the SAC presented in Section 7.1. Individual SAC are shown in the report tables attached in the appendices. For completeness, the EIS 2018 report data have been included within the appendices. The stockpile samples have not been considered in this report. Duplicate and triplicate results issued by the laboratory (where relevant) from the analytical laboratory's internal QA processes have been included within the report tables. These samples have been identified as 'Laboratory Duplicate' and 'Laboratory Triplicate' in the report tables and the data are shown in the QA sections of the laboratory certificates of analysis.

A summary of the results from the EIS 2018 assessment and this investigation is presented below:

8.4.1 Human Health and Environmental (Ecological) Assessment

Table 8-3: Summary of Soil Laboratory Results – Human Health and Environmental (Ecological)

Analyte	N	Max. (mg/kg)	N> Human Health SAC	N> Ecological SAC	Comments
Arsenic	88 (Fill) 6 (Natural)	24	0	NSL	-
Cadmium	88 (Fill) 6 (Natural)	0.4	0	NSL	-
Chromium (total)	88 (Fill) 6 (Natural)	95	0	0	-
Copper	88 (Fill) 6 (Natural)	170	0	0	-
Lead	88 (Fill) 6 (Natural)	64	0	0	-
Mercury	88 (Fill) 6 (Natural)	<PQL	0	NSL	-
Nickel	88 (Fill) 6 (Natural)	130	0	0	-
Zinc	88 (Fill) 6 (Natural)	260	0	0	-
Total PAHs	88 (Fill) 6 (Natural)	6	0	NSL	-
Benzo(a)pyrene	88 (Fill) 6 (Natural)	0.4	NSL	0	-
Carcinogenic PAHs (as BaP TEQ)	88 (Fill) 6 (Natural)	0.6	0	NSL	-
Naphthalene	88 (Fill) 6 (Natural)	<PQL	0	NSL	-
DDT+DDE+DDD	48 (Fill) 2 (Natural)	<PQL	0	NSL	-
DDT	48 (Fill) 2 (Natural)	<PQL	NSL	0	-
Aldrin and dieldrin	48 (Fill) 2 (Natural)	<PQL	0	NSL	-
Chlordane	48 (Fill) 2 (Natural)	<PQL	0	NSL	-

Analyte	N	Max. (mg/kg)	N> Human Health SAC	N> Ecological SAC	Comments
Heptachlor	48 (Fill) 2 (Natural)	<PQL	0	NSL	-
PCBs	48 (Fill) 2 (Natural)	0.2	0	NSL	-
Chlorpyrifos	27 (Fill) 2 (Natural)	<PQL	0	0	-
TRH F1	88 (Fill) 6 (Natural)	<PQL	0	0	-
TRH F2	88 (Fill) 6 (Natural)	130	0	0	-
TRH F3	88 (Fill) 6 (Natural)	1,600	0	0	-
TRH F4	88 (Fill) 6 (Natural)	540	0	0	-
Benzene	88 (Fill) 6 (Natural)	<PQL	0	0	-
Toluene	88 (Fill) 6 (Natural)	<PQL	0	0	-
Ethylbenzene	88 (Fill) 6 (Natural)	<PQL	0	0	-
Xylenes	88 (Fill) 6 (Natural)	<PQL	0	0	-
Total Phenols	21 (Fill)	<PQL	0	NSL	-
Asbestos (in soil)	67 (Fill) 2 (Natural)	-	0	NA	-
Asbestos in fibre cement	1	-	1	NSL	A FCF was identified at the site surface in the south-western portion of the site (FCF1). Laboratory analysis confirmed the fragment contained chrysotile asbestos.

Notes:

N: Total number (primary samples)

NSL: No set limit

NL: Not limiting

8.4.2 Management Limits

All TRH results were below the management limits.

8.4.3 Waste Classification Assessment

The laboratory results were assessed against the criteria presented in Section 7.1.4. The results are presented in the report tables attached in the appendices. For completeness, the EIS 2018 report data have been included. A summary of the results is presented in the following table:

Table 8-4: Summary of Soil Laboratory Results Compared to CT and SCC Criteria

Analyte	N	N > CT Criteria	N > SCC Criteria	Comments
Arsenic	88 (Fill) 6 (Natural)	0	0	-
Cadmium	88 (Fill) 6 (Natural)	0	0	-
Chromium	88 (Fill) 6 (Natural)	0	0	-
Copper	88 (Fill) 6 (Natural)	NSL	NSL	-
Lead	88 (Fill) 6 (Natural)	0	0	-
Mercury	88 (Fill) 6 (Natural)	0	0	-
Nickel	88 (Fill) 6 (Natural)	9	0	Nickel concentrations exceeded the CT1 criterion in nine fill samples collected from BH19 (0.3-0.4m), BH22 (0.1-0.2m), BH24 (0.2-0.3m), TP104 (0.2-0.4m), BH105 (0.03-0.3m), BH108 (0.03-0.2m), BH111 (0.2-0.5m), BH119 (0.16-0.3m) and BH134 (0-0.2m). The maximum nickel concentration was 130mg/kg.
Zinc	88 (Fill) 6 (Natural)	NSL	NSL	-
TRH (C_6-C_9)	88 (Fill) 6 (Natural)	0	0	-
TRH (C_{10}-C_{36})	88 (Fill) 6 (Natural)	0	0	-
BTEX	88 (Fill) 6 (Natural)	0	0	-
Total PAHs	88 (Fill) 6 (Natural)	0	0	-

Analyte	N	N > CT Criteria	N > SCC Criteria	Comments
Benzo(a)pyrene	88 (Fill) 6 (Natural)	0	0	-
OCPs & OPPs	48 (Fill) 2 (Natural)	0	0	-
PCBs	48 (Fill) 2 (Natural)	0	0	-
Total Phenols	21 (Fill)	0	0	-
Asbestos	67 (Fill) 2 (Natural) 1 (FCF)	-	-	The FCF collected from the site surface (FCF1) was confirmed to contain asbestos. Asbestos was not detected in the soil samples analysed.

N: Total number (primary samples)
NSL: No set limit

Table 8-5: Summary of Soil Laboratory Results Compared to TCLP Criteria

Analyte	N	N > TCLP Criteria	Comments
Nickel	6	0	The six fill samples with nickel concentrations above the CT1 criterion collected during this investigation were analysed for TCLP nickel. All TCLP nickel concentrations were below the TCLP1 criterion. The maximum TCLP nickel concentration was 0.3mg/L.

N: Total number (primary samples)

8.5 Groundwater Laboratory Results

The groundwater laboratory results were assessed against the SAC presented in Section 7.2. Individual SAC are shown in the report tables attached in the appendices. For completeness, duplicate results issued by the laboratory (where relevant) from the analytical laboratory's internal QA processes have been included within the report tables. These samples have been identified as 'Laboratory Duplicate' in the report tables and the data are shown in the QA sections of the laboratory certificates of analysis. A summary of the results is presented below:

Table 8-6: Summary of Groundwater Laboratory Results – Human Health and Environmental (Ecological)

Analyte	N ^	Max. (µg/L)	N> Human Health SAC	N> Ecological SAC	Comments
Arsenic	8	25	0	1	Arsenic concentrations exceeded the ecological SAC (24µg/L) in one sample collected from MW134. The maximum mercury concentration was 25µg/L.

Analyte	N ^	Max. (µg/L)	N> Human Health SAC	N> Ecological SAC	Comments
Cadmium	8	0.7	0	2	Cadmium concentrations exceeded the ecological SAC (0.2µg/L) in two samples collected from MW123 and MW143. The maximum mercury concentration was 0.7µg/L.
Chromium (total)	8	16	0	1	Chromium concentrations exceeded the ecological SAC (3.3µg/L) in one sample collected from MW128. The maximum mercury concentration was 16µg/L.
Copper	8	3	0	2	Copper concentrations exceeded the ecological SAC (1.4µg/L) in two samples collected from MW106 (and field duplicate) and MW128. The maximum mercury concentration was 3µg/L.
Lead	8	<PQL	0	0	-
Mercury (Total)	8	0.07	0	2	Mercury concentrations exceeded the ecological SAC (0.06µg/L) in one sample collected from MW103 (and the laboratory duplicate sample). The maximum mercury concentration was 0.07µg/L.
Nickel	8	76	0	5	Nickel concentrations exceeded the ecological SAC (11µg/L) in five water samples collected from MW123, MW128 MW134, MW139 and MW143. The maximum nickel concentration was 76µg/L in MW143.
Zinc	8	66	0	8	Zinc concentrations exceeded the ecological SAC (8µg/L) in eight water samples collected from MW103, MW106 (duplicate sample), MW111, MW123, MW128 MW134, MW139 and MW143. The maximum zinc concentration was 66µg/L in MW123.
Total PAHs	8	<PQL	0	0	-
Benzo(a)pyrene	8	<PQL	0	0	-
Carcinogenic PAHs (as BaP TEQ)	8	<PQL	0	0	-
TRH F1	8	56	0	-	Concentrations of TRH F1 were detected in the sample collected from MW123 (and laboratory duplicate sample). The maximum concentration was 56µg/L.

Analyte	N ^	Max. (µg/L)	N> Human Health SAC	N> Ecological SAC	Comments
TRH F2	8	100	2	-	TRH F2 concentrations exceeded the human health SAC (HSL-SSA) in two samples collected from MW106 (duplicate sample) and MW128. The maximum concentration was 100µg/L.
TRH F3	8	540	NSL	-	Concentrations of TRH F3 were detected in the sample collected from MW106 (and field and laboratory duplicate samples). The maximum concentration was 540µg/L.
TRH F4	8	120	NSL	-	Concentrations of TRH F4 were detected in the sample collected from MW106 (field and laboratory duplicate samples). The maximum concentration was 120µg/L.
Benzene	8	66	1	0	Benzene concentrations exceeded the human health SAC (recreational) in one sample collected from MW123 (and laboratory duplicate sample). The maximum concentration was 66µg/L.
Toluene	8	4	0	0	-
Ethylbenzene	8	<PQL	0	0	-
m+p-Xylene	8	<PQL	0	0	-
o-Xylene	8	<PQL	0	0	-
Total Xylenes	8	<PQL	0	0	-
PFOS	8	0.002	NSL	0	-
PFOS + PFHxS	8	0.002	0	NSL	-
PFOA	8	0.001	0	0	-
pH	8	pH 8.3 (Max) pH 6.2 (Min)	2	2	Two samples collected from MW123 and MW139 were below the lower criterion (i.e. outside acceptable range) of pH 6.5. All other readings were within the acceptable range of pH 6.5 to pH 8.5.
EC	8	25000 us/cm	0	NSL	-
Trihalomethanes[a]	8	<PQL	0	0	-
Other VOCs	8	17	0	0	Concentrations of chloromethane were detected in one water sample collected from MW123 (and laboratory duplicate

Analyte	N ^	Max. (µg/L)	N> Human Health SAC	N> Ecological SAC	Comments
					sample). The maximum concentration was 17µg/L.

Notes:

^: Primary samples

N: Total number

NSL: No set limit

NL: Not limiting

A: Sum of chloroform, bromodichloromethane, dibromochloromethane and bromoform.

9 WASTE CLASSIFICATION ASSESSMENT

9.1 Preliminary Classification of Fill

Based on the results of the assessment, and at the time of reporting, the fill material is assigned a preliminary classification of **General Solid Waste (non-putrescible)**, pending confirmation of the removal of all ACM impacts from the site surface. Further assessment is required to confirm this classification prior to off-site disposal of the waste. The anticipated waste quantities should also be confirmed at that time and documented in the report.

9.2 Classification of Natural Soil and Bedrock

Based on the scope of work undertaken for this investigation, and at the time of reporting, JKE are of the opinion that the natural soil and bedrock at the site will likely meet the definition of **VENM** for off-site disposal or re-use purposes. Further assessment is required to confirm this classification prior to off-site disposal of the waste. The anticipated waste quantities should also be confirmed at that time and documented in the report.

10 DISCUSSION

10.1 Tier 1 Risk Assessment and Review of CSM

For a contaminant to represent a risk to a receptor, the following three conditions must be present:

1. Source – The presence of a contaminant;
2. Pathway – A mechanism or action by which a receptor can become exposed to the contaminant; and
3. Receptor – The human or ecological entity which may be adversely impacted following exposure to contamination.

If one of the above components is missing, the potential for adverse risks is relatively low.

10.1.1 Soil

10.1.1.1 Asbestos

Chrysotile asbestos was detected within the surface fragment FCF1 located in the south-western section of the site, as shown on Figure 4 attached in the appendices. The fibre cement was assessed to be bonded asbestos containing material (ACM). This FCF was removed from site (for analysis). No other FCF was visibly observed at the site surface however, localised impacts may be present. On this basis, considering the asbestos was non-friable/bonded, there is unlikely to be a complete SPR linkage to asbestos fibres based on the current site configuration and use. Therefore, the current risk of exposure to asbestos in ground is low. Nevertheless, interim measures are to be implemented so that the potential risks from asbestos remain low. This has been addressed in our recommendations.

10.1.1.2 Hydrocarbons

All hydrocarbon concentrations (i.e. PAHs, TRH and BTEX) in soil were below the SAC. The UST and the surrounding area are considered to be a potential source of hydrocarbon contamination, however the borehole observations and soil analysis results indicated that the potential for extensive impacts from hydrocarbons in this area is relatively low. Localised impacts may be encountered in the tank pit back fill and immediately beneath or adjacent to the infrastructure.

As the USTs and associated infrastructure are located within an area proposed to cut (i.e. excavated) for the proposed building pad, excavation works for the pad will provide a suitable mechanism to remove any undetected, localised contamination. On this basis, risks associated with localised hydrocarbons in the vicinity of the USTs are considered to be low in the context of the proposed land use.

10.1.2 Groundwater

10.1.2.1 Heavy metals

Arsenic, cadmium, chromium, copper, mercury, nickel and zinc concentrations exceeding the ecological SAC were recorded in the groundwater. The concentrations of heavy metals recorded within the soils at the monitoring well locations were generally low, indicating that the site is not likely to be the source of heavy metals within the groundwater. This was further confirmed based on the results of limited TCLP analysis conducted. Therefore, JKE consider the concentrations of heavy metals within the groundwater are likely a

regional issue. The heavy metal concentrations do not pose a risk to the on-site receptors in the context of the proposed development.

10.1.2.2 Hydrocarbons

Concentrations of mid-fraction TRH F2 was detected in MW106 and MW128 above the human health (HSL-SSA) SAC. The concentrations in MW106 and MW128 are considered likely to be associated with the UST and an indicated of a potential hydrocarbon plume. However, this will require further assessment as only one round of groundwater monitoring was undertaken for the ASI..

Given the shallow groundwater depth in comparison to the bulk excavation levels for the proposed buildings, there is potential that TRH F2 may volatilise, migrate into and accumulate within the proposed buildings. On this basis, JKE consider a complete SPR linkage may exist.

Concentrations of benzene were detected in MW123 at concentrations above the human health (recreational) SAC. Traces of light fraction (TRH F1) and toluene were also detected in MW123 at concentrations below the SAC. JKE note that benzene, toluene and TRH F1 were not detected within the soils at this location. The risk posed by the benzene concentrations relate to incidental contact/recreational use. The proposed development does not include the use of groundwater, and groundwater will be at least 4m below the bulk excavation level in this area (this area is proposed for filling). On this basis, a complete SPR linkage does not exist for on-site receptors.

Traces of mid to heavy fractions TRH F3 and TRH F4 were encountered in samples collected from MW106. Though below the SAC, these concentrations indicate possible spills/leaks associated with vehicle maintenance and heavy vehicles/plant may have occurred in this area. The concentrations of TRH F3 and TRH F4 do not pose a risk to the on-site receptors in the context of the proposed development.

10.2 Decision Statements

The decision statements are addressed below:

> *Did the site inspection, or does the historical information identify potential contamination sources/AEC at the site?*

The historical information identified the site was used for commercial/industrial land uses, and included: vehicle storage and maintenance; commercial printing; paper products manufacturing; and bulk goods storage and distribution.

The site inspection identified USTs in the south-western portion of the site and an IBC containing oil within the north. FCF was also identified at the surface in the south-western portion of the site. The boreholes drilled for the investigation identified deep filling in some areas of the site, predominantly within the east.

> *Are any results above the SAC?*

FCF confirmed to contain asbestos was identified at the site surface.

Heavy metals (arsenic, cadmium, chromium, copper, mercury, nickel and zinc), benzene and TRH F2 were identified in groundwater at concentrations that exceeded the human health or ecological SAC.

Do potential risks associated with contamination exist, and if so, what are they?

The FCF was removed from the site and forwarded to the laboratory for analysis. No other FCF were visibly identified during the inspection. On this basis, the risks associated with the FCF is considered to be low.

Potential human health risks from exposure to TRH F2 in groundwater exist in the vicinity of MW106 and MW128. The bulk excavation levels of the proposed buildings in these areas are close/in contact with the groundwater levels, and TRH F2 may volatilise and migrate (as soil vapour) and accumulate within the buildings. This represents a potentially complete SPR linkage. It is noted that TRH F2 may be associated with the USTs, and the USTs will be removed as part of the development.

The potential for localised contamination (i.e. beneath and/or immediately adjacent to the tanks or associated infrastructure) in the vicinity of the USTs is acknowledged.

The heavy metals in groundwater are associated with regional factors and do not pose a risk.

Is remediation required?

Yes. Remediation is required for the removal of the UST and any unidentified localised impacts in this vicinity. Remediation is also required for the surficial asbestos impacts.

Further assessment of the potential risks posed by TRH F2 in groundwater is required.

Is the site characterisation sufficient to provide adequate confidence in the above decisions?

Yes.

Is the site suitable for the proposed development, or can the site be made suitable subject to further characterisation and/or remediation?

The site can be made suitable for the proposed development subject to the implementation of a Remediation Action Plan (RAP).

10.3 Data Gaps

An assessment of data gaps is provided in the following table:

Table 10-1: Data Gap Assessment

Data Gap	Assessment
SafeWork records not reviewed	The SafeWork NSW records search is pending. The results will be issued in a separate letter once received.
Soil sampling density below minimum guideline density	Sampling was limited to approximately 75% of the minimum sampling density recommended in the EPA Sampling Design Guidelines 1995. Widespread and/or significant contamination has not been identified on-site. On this basis, JKE consider the sampling conducted provides suitable confidence in the findings of the investigation. Following demolition, further investigation is recommended beneath the existing building footprints. The further investigation is largely required to inform the waste classification for off-site disposal of excavated material.
Potential point sources of contamination not targeted in sampling plan	Additional testing of groundwater should be undertaken to target the potential point sources of contamination include the truck wash bay, UST in order to establish the potential for a groundwater plume at the site. The ASI included one round of groundwater sampling and testing. Additional testing is recommended to inform the CSM and identify the risk of groundwater contamination at the site.

11 CONCLUSIONS AND RECOMMENDATIONS

The investigation included a review of historical information, soil sampling from 46 locations and groundwater sampling from 10 monitoring wells. The site has historically been used for agricultural and cultivation uses until 1977. Since then, the site has been used for commercial/industrial land uses, including vehicle storage yards, commercial printing, distribution centre and paper products manufacturing.

Potential contamination sources identified at the site and the immediate surrounds included:

- Historic site levelling activities;
- Fuel and oil storage, including USTs;
- Historic industrial/commercial land use, including vehicle storage and maintenance, printing and paper product manufacturing;
- Historic agricultural use of the site;
- Potential use of pesticides within the site;
- Hazardous building materials within current and former structures; and
- Several current and former automotive services and spray-painting businesses located up-gradient of the site.

Based on the findings of the investigation, JKE are of the opinion that the site can be made suitable for the proposed development described in Section 1.1, subject to the implementation of the following recommendations:

- A suitably qualified/licensed contractor is to carry out an 'emu pick' to remove all visible FCF from the areas of the site with exposed soils. A surface clearance certificate is then to be issued by a Licensed Asbestos Assessor. This is to occur as soon as practicable;
- Prepare a RAP to address the contamination issues identified at the site. This will include an unexpected-finds protocol (UFP). The RAP should address the data gaps outlined in Section 10.3. Due to access constraints, this will largely need to occur during remediation works; and
- Undertake a validation assessment documenting the remediation works.

At this stage, JKE consider that there is no requirement to notify the NSW EPA under the NSW EPA Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997 (2015)[18].

JKE consider that the report objectives outlined in Section 1.2 have been addressed.

[18] NSW EPA, (2015). *Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997* (referred to as Duty to Report Contamination)

12 LIMITATIONS

The report limitations are outlined below:

- JKE accepts no responsibility for any unidentified contamination issues at the site. Any unexpected problems/subsurface features that may be encountered during development works should be inspected by an environmental consultant as soon as possible;
- Previous use of this site may have involved excavation for the foundations of buildings, services, and similar facilities. In addition, unrecorded excavation and burial of material may have occurred on the site. Backfilling of excavations could have been undertaken with potentially contaminated material that may be discovered in discrete, isolated locations across the site during construction work;
- This report has been prepared based on site conditions which existed at the time of the investigation; scope of work and limitation outlined in the JKE proposal; and terms of contract between JKE and the client (as applicable);
- The conclusions presented in this report are based on investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances, visual observations of the site and immediate surrounds and documents reviewed as described in the report;
- Subsurface soil and rock conditions encountered between investigation locations may be found to be different from those expected. Groundwater conditions may also vary, especially after climatic changes;
- The investigation and preparation of this report have been undertaken in accordance with accepted practice for environmental consultants, with reference to applicable environmental regulatory authority and industry standards, guidelines and the assessment criteria outlined in the report;
- Where information has been provided by third parties, JKE has not undertaken any verification process, except where specifically stated in the report;
- JKE has not undertaken any assessment of off-site areas that may be potential contamination sources or may have been impacted by site contamination, except where specifically stated in the report;
- JKE accept no responsibility for potentially asbestos containing materials that may exist at the site. These materials may be associated with demolition of pre-1990 constructed buildings or fill material at the site;
- JKE have not and will not make any determination regarding finances associated with the site;
- Additional investigation work may be required in the event of changes to the proposed development or landuse. JKE should be contacted immediately in such circumstances;
- Material considered to be suitable from a geotechnical point of view may be unsatisfactory from a soil contamination viewpoint, and vice versa; and
- This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose.

Important Information About This Report

These notes have been prepared by JKE to assist with the assessment and interpretation of this report.

The Report is based on a Unique Set of Project Specific Factors
This report has been prepared in response to specific project requirements as stated in the JKE proposal document which may have been limited by instructions from the client. This report should be reviewed, and if necessary, revised if any of the following occur:

- The proposed land use is altered;
- The defined subject site is increased or sub-divided;
- The proposed development details including size, configuration, location, orientation of the structures or landscaped areas are modified;
- The proposed development levels are altered, eg addition of basement levels; or
- Ownership of the site changes.

JKE will not accept any responsibility whatsoever for situations where one or more of the above factors have changed since completion of the investigation. If the subject site is sold, ownership of the investigation report should be transferred by JKE to the new site owners who will be informed of the conditions and limitations under which the investigation was undertaken. No person should apply an investigation for any purpose other than that originally intended without first conferring with the consultant.

Changes in Subsurface Conditions
Subsurface conditions are influenced by natural geological and hydrogeological process and human activities. Groundwater conditions are likely to vary over time with changes in climatic conditions and human activities within the catchment (e.g. water extraction for irrigation or industrial uses, subsurface waste water disposal, construction related dewatering). Soil and groundwater contaminant concentrations may also vary over time through contaminant migration, natural attenuation of organic contaminants, ongoing contaminating activities and placement or removal of fill material. The conclusions of an investigation report may have been affected by the above factors if a significant period of time has elapsed prior to commencement of the proposed development.

This Report is based on Professional Interpretations of Factual Data
Site investigations identify actual subsurface conditions at the actual sampling locations at the time of the investigation. Data obtained from the sampling and subsequent laboratory analyses, available site history information and published regional information is interpreted by geologists, engineers or environmental scientists and opinions are drawn about the overall subsurface conditions, the nature and extent of contamination, the likely impact on the proposed development and appropriate remediation measures.

Actual conditions may differ from those inferred, because no professional, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than an investigation indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to prevent the unanticipated, but steps can be taken to help minimise the impact. For this reason, site owners should retain the services of their consultants throughout the development stage of the project, to identify variances, conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

Investigation Limitations
Although information provided by a site investigation can reduce exposure to the risk of the presence of contamination, no environmental site investigation can eliminate the risk. Even a rigorous professional investigation may not detect all contamination on a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled. Contaminant analysis cannot possibly cover every type of contaminant which may occur; only the most likely contaminants are screened.

Misinterpretation of Site Investigations by Design Professionals

Costly problems can occur when other design professionals develop plans based on misinterpretation of an investigation report. To minimise problems associated with misinterpretations, the environmental consultant should be retained to work with appropriate professionals to explain relevant findings and to review the adequacy of plans and specifications relevant to contamination issues.

Logs Should not be Separated from the Investigation Report

Borehole and test pit logs are prepared by environmental scientists, engineers or geologists based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these should not be re-drawn for inclusion in site remediation or other design drawings, as subtle but significant drafting errors or omissions may occur in the transfer process. Photographic reproduction can eliminate this problem, however contractors can still misinterpret the logs during bid preparation if separated from the text of the investigation. If this occurs, delays, disputes and unanticipated costs may result. In all cases it is necessary to refer to the rest of the report to obtain a proper understanding of the investigation. Please note that logs with the 'Environmental Log' header are not suitable for geotechnical purposes as they have not been peer reviewed by a Senior Geotechnical Engineer.

To reduce the likelihood of borehole and test pit log misinterpretation, the complete investigation should be available to persons or organisations involved in the project, such as contractors, for their use. Denial of such access and disclaiming responsibility for the accuracy of subsurface information does not insulate an owner from the attendant liability. It is critical that the site owner provides all available site information to persons and organisations such as contractors.

Read Responsibility Clauses Closely

Because an environmental site investigation is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in written transmittals. These are definitive clauses designed to indicate consultant responsibility. Their use helps all parties involved recognise individual responsibilities and formulate appropriate action. Some of these definitive clauses are likely to appear in the environmental site investigation, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to any questions.

Appendix A: Report Figures

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

This plan should be read in conjunction with the Environmental report.

Title: **SITE LOCATION PLAN**

Location: 250 VICTORIA STREET
WETHERILL PARK, NSW

Project No: E31888BR

Figure No: 1

JKEnvironments

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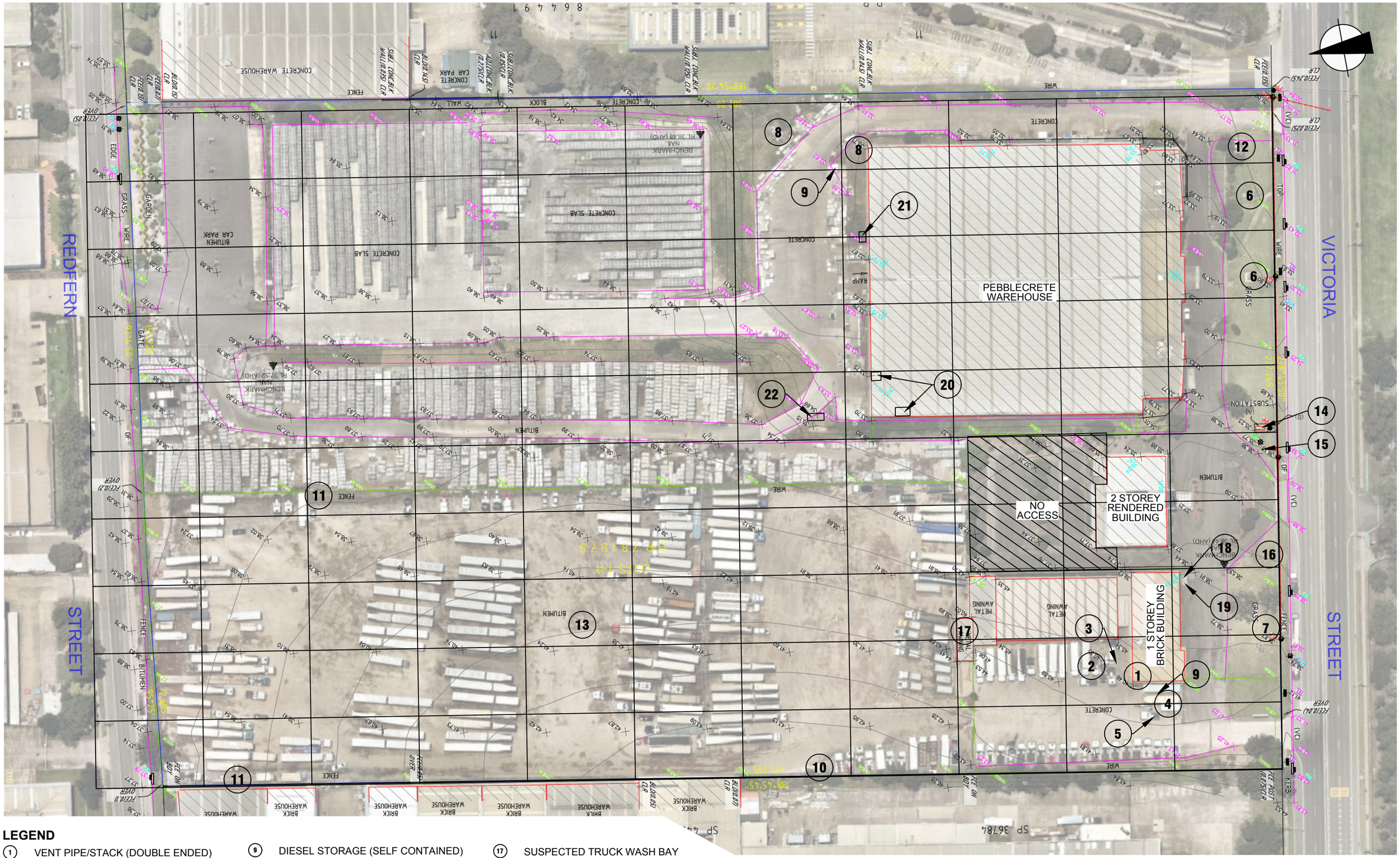

LEGEND

1. VENT PIPE/STACK (DOUBLE ENDED)
2. 10,000L UST (PETROL)
3. FEED LINES
4. SHIPPING CONTAINERS
5. FORMER BOWSER PLINTH
6. FORMER SIGNAGE/LIGHTING
7. SUSPECTED FCF
8. STOCKPILE OF DEBRIS
9. DIESEL STORAGE (SELF CONTAINED)
10. HYDRANT
11. IBC
12. SOIL STOCKPILE
13. CONCRETE SLAB SEGMENTS
14. SUBSTATION KIOSK
15. GAS MANIFOLD
16. WATER HYDRANT/MAINS
17. SUSPECTED TRUCK WASH BAY
18. 500L KEROSENE AST (FORMER)
19. 500L DIESEL AST (FORMER)
20. 250L EACH, PETROL CABINETS (FORMER)
21. LPG CYLINDER STORAGE (FORMER)
22. 2,200L LPG TANK AST (FORMER)

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 12 24 36 48 60

SCALE 1:1200 @A3 METRES

This plan should be read in conjunction with the Environmental report.

Title: **SITE FEATURES PLAN**

Location: 250 VICTORIA STREET WETHERILL PARK, NSW

Report No: E31888BR

Figure No: 2

JKEnvironments

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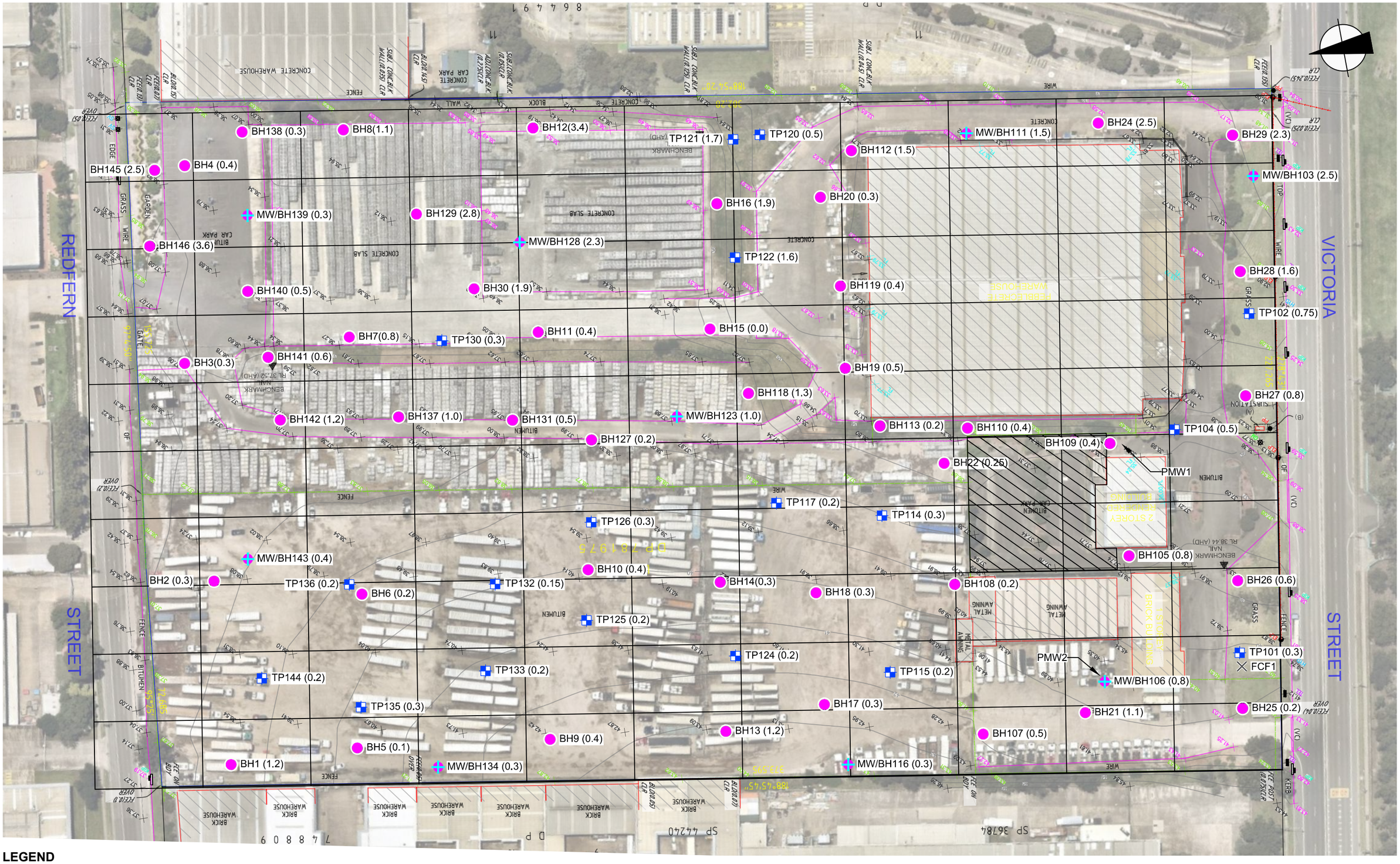

LEGEND

— — — —	APPROXIMATE SITE BOUNDARY
BH(Fill Depth)	BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m)
BH/MW(Fill Depth)	BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
TP(Fill Depth)	TEST PIT LOCATION, NUMBER AND DEPTH OF FILL (m)
PMW	PREVIOUS MONITORING WELL LOCATION
FCF(Surface)	FIBRE CEMENT FRAGMENT LOCATION, NUMBER AND DEPTH (Surface/m)

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 12 24 36 48 60

SCALE 1:1200 @A3 METRES

This plan should be read in conjunction with the Environmental report.

Title: **SAMPLE LOCATION PLAN**

Location: 250 VICTORIA STREET WETHERILL PARK, NSW

Report No: E31888BR

Figure No: 3

JKEnvironments

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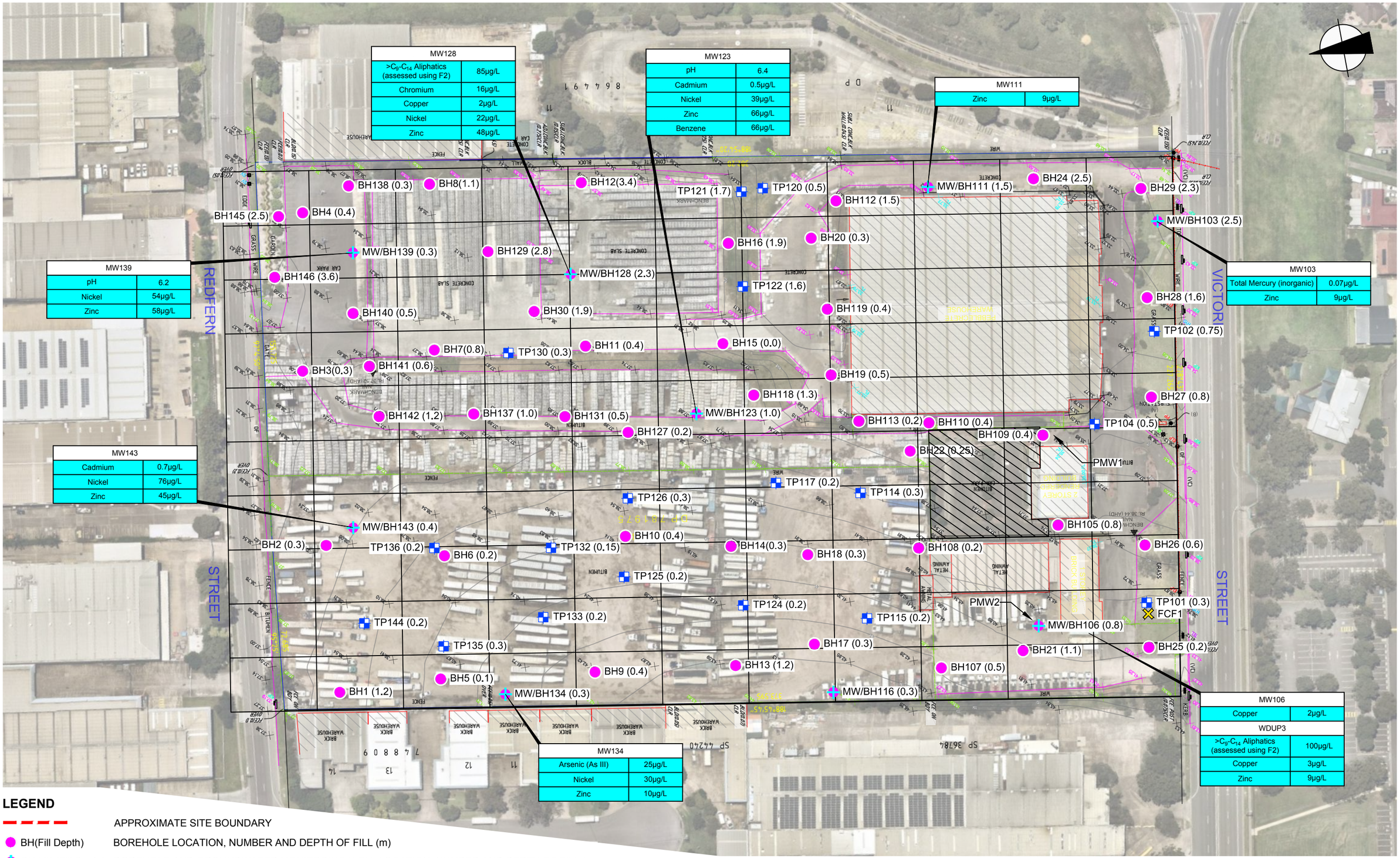

LEGEND

APPROXIMATE SITE BOUNDARY	
BH(Fill Depth)	BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m)
BH/MW(Fill Depth)	BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
TP(Fill Depth)	TEST PIT LOCATION, NUMBER AND DEPTH OF FILL (m)
PMW	PREVIOUS MONITORING WELL LOCATION
FCF(Surface)	SURFACE CEMENT FRAGMENT CONTAINING ASBESTOS

SAMPLE ID	-
CHEMICAL	CONCENTRATION (µg/L)

GROUNDWATER SAMPLE EXCEEDANCE

GROUNDWATER CONTAMINATION ABOVE SAC

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 15 30 45 60 75

SCALE 1:1500 @A3 METRES

This plan should be read in conjunction with the Environmental report.

Title: **CONTAMINATION LOCATION PLAN**

Location: 250 VICTORIA STREET WETHERILL PARK, NSW

Report No: E31888BR

Figure No: 4

JKEnvironments

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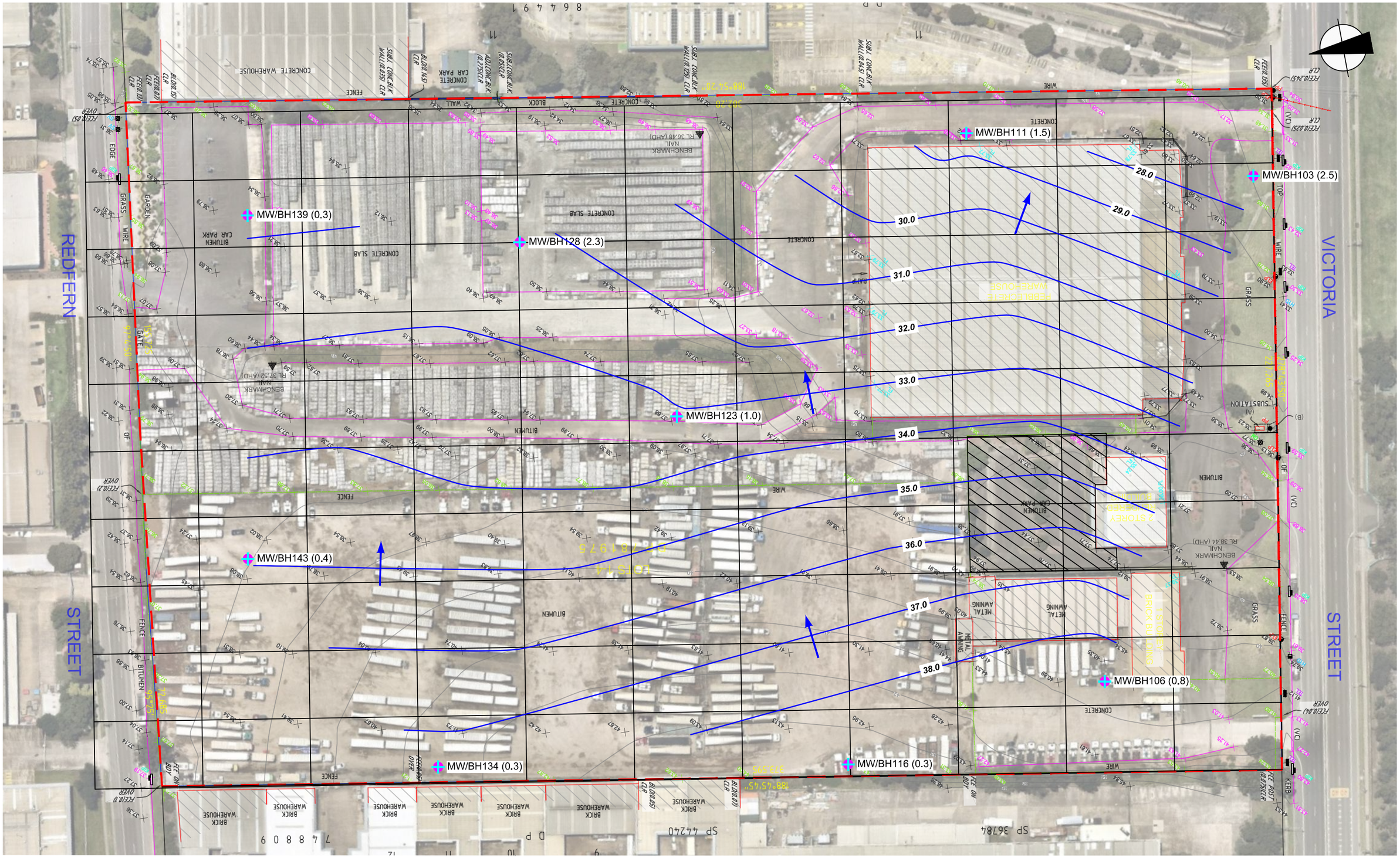

LEGEND

- APPROXIMATE SITE BOUNDARY
- BH/MW(Fill Depth) BOREHOLE AND GROUNDWATER MONITORING WELL LOCATION, NUMBER AND DEPTH OF FILL (m)
- 4.5 GROUNDWATER CONTOUR INTERVALS (mAHD)
- INFERRED GROUNDWATER FLOW DIRECTION

AERIAL IMAGE SOURCE: MAPS.AU.NEARMAP.COM

0 12 24 36 48 60

SCALE 1:1200 @A3 METRES

This plan should be read in conjunction with the Environmental report.

Title: **GROUNDWATER CONTOUR PLAN**

Location: 250 VICTORIA STREET WETHERILL PARK, NSW

Report No: E31888BR

Figure No: 5

JKEnvironments

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Appendix B: Site Information and Site History

Selected Site Photographs

Photograph 1: Truck storage area

Photograph 2: Truck storage area

Photograph 3: Truck wash-bay

Photograph 4: Oil drum storage

Photograph 5: IBCs

Photograph 6: IBC (oil waste)

Photograph 7: Carpark (north-eastern corner)

Photograph 8: Masonry product storage

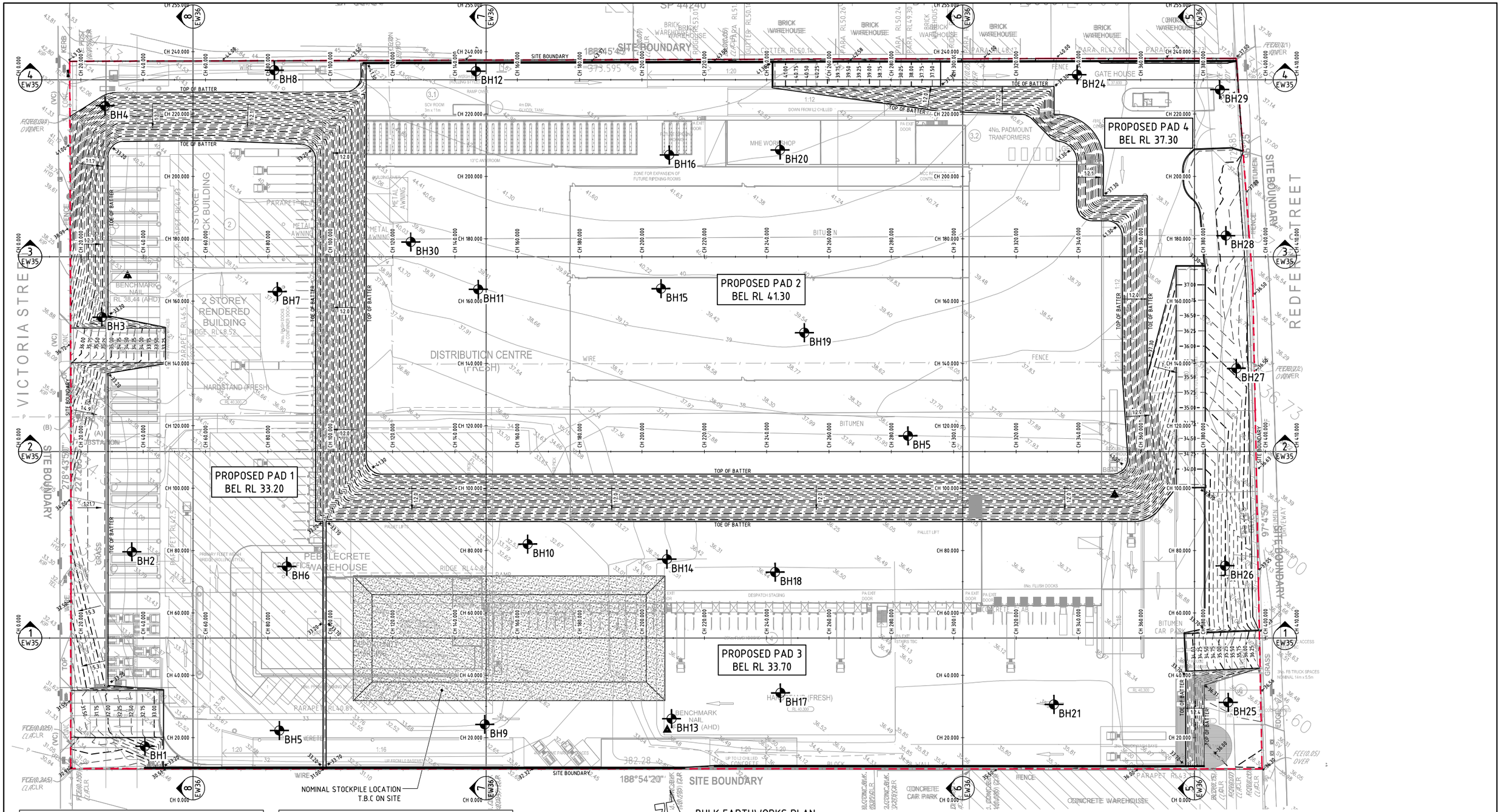
Photograph 9: UST fill point

Photograph 10: UST vent pipe

Photograph 11: Diesel Tank (35,500L)

Photograph 12: Diesel Tank (10,000L)

Selected Proposed Earthworks Plans



BULK EARTHWORKS PLAN
SCALE 1:500

SUMMARY NOTES

BULK EARTHWORKS VOLUMES:
SITE AREA = 8.6 Ha

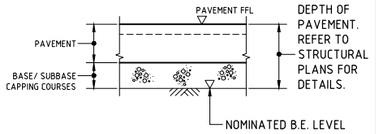
TOPSOIL STRIP (200mm OVER 8.6 Ha)	=	(-17,200m³)
CUT MATERIAL	= -	95,070m³
FILL MATERIAL	= +	83,340m³
BALANCE	= -	11,730m³ (STOCKPILED)

NOTE:
EARTHWORK VOLUMES ARE APPROXIMATE ONLY.
NO ALLOWANCE HAS BEEN MADE FOR DELETERIOUS MATERIAL, EROSION AND SEDIMENT CONTROL OR BULKING OR COMPACTION OF FILLED SOILS.
CONTRACTOR TO ALLOW FOR THESE ITEMS AS REQUIRED

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY LTS LOCKLEY TITLED 50469 002DT REV A DATED 21/05/20.



NOMINATED B.E.L. DETAIL
NTS

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY LTS LOCKLEY TITLED 50469 002DT REV A DATED 21/05/19.

- 50.00 – EXISTING CONTOUR (1.0m INTERVAL)
- 50.00 – B.E.L. CONTOUR (MAJOR 1.0m)
- 50.10 – B.E.L. CONTOUR (MINOR 0.25m)
- 50.00 – B.E.L. SPOT LEVEL
- BH1 – BOREHOLE LOCATION

BOREHOLE NOTE:

REFER TO GEOTECHNICAL REPORT PROVIDED BY JK GEOTECHNICS 31888AHrpt REV 0 DATED 18/10/2018 FOR TOP OF ROCK RL.

LEVELS NOTE:

LEVELS SHOWN TO BE ±500mm FROM THOSE SHOWN. FINAL LEVELS SUBJECT TO MINOR VARIATIONS TO SUIT DETAILED DESIGN.

NOTE:

1. TOPSOIL AND EXISTING PAVEMENT MAY BE REUSED ON SITE SUBJECT TO GEOTECHNICAL ADVICE DURING DETAILED DESIGN.
2. REFER TO DRAWING EW20 & EW21 FOR ESC MEASURE THROUGHOUT WORKS.

5m 0 10 20 30 40 50m
SCALE 1:500 AT B1 SIZE SHEET

FOR INFORMATION

ISSUED FOR INFORMATION	14.07.20	A	
AMENDMENTS	DATE	ISSUE	AMENDMENTS DATE ISSUE

ARCHITECT: watson young

CLIENT: Woolworths — the fresh food people

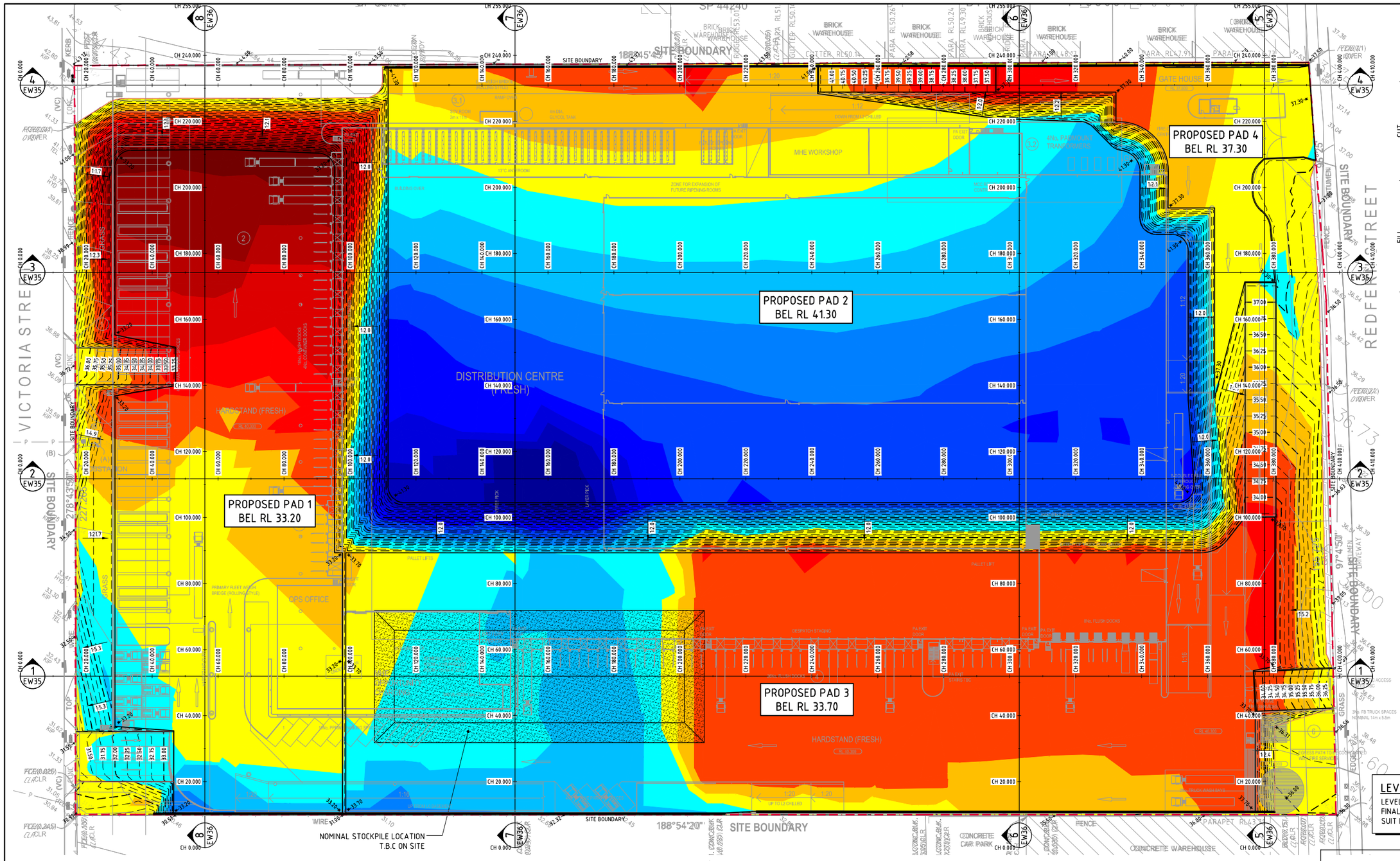
PROJECT: EARLY WORKS DA
250 - 266 VICTORIA STREET
WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
XC	MdW	JULY '20	XC	B1	AS SHOWN	C013738.01-EW30

Costin Roe Consulting Pty Ltd.
Consulting Engineers ACN 003 696 448
Level 1, 8 Windmill Street
Walsh Bay, Sydney NSW 2000
Tel: (02) 9251-7699 Fax: (02) 9241-3721
email: mail@costinroe.com.au

Costin Roe Consulting
PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: BULK EARTHWORKS PLAN
DRAWING No: C013738.01-EW30
ISSUE: A



CUT/FILL PLAN
SCALE 1:500

DEPTH RANGE

	No.	FROM DEPTH	TO DEPTH	COLOUR
CUT	1	-8.000	-7.000	
	2	-7.000	-6.000	
	3	-6.000	-5.000	
	4	-5.000	-4.000	
	5	-4.000	-3.000	
	6	-3.000	-2.000	
	7	-2.000	-1.000	
	8	-1.000	0.000	
FILL	9	0.000	1.000	
	10	1.000	2.000	
	11	2.000	3.000	
	12	3.000	4.000	
	13	4.000	5.000	
	14	5.000	6.000	
	15	6.000	7.000	
	16	7.000	8.000	
	17	8.000	9.000	

LEVELS NOTE:

LEVELS SHOWN TO BE ±500mm FROM THOSE SHOWN. FINAL LEVELS SUBJECT TO MINOR VARIATIONS TO SUIT DETAILED DESIGN.

LEGEND:

LEVELS DATUM IS AHD.

EXISTING SITE LEVELS AND DETAILS BASED ON SURVEY INFORMATION PROVIDED BY LTS LOCKLEY TITLED 50469 002DT REV A DATED 21/05/19.

- 50.00 - EXISTING CONTOUR (1.0m INTERVAL)
- 50.00 - B.E.L. CONTOUR (MAJOR 1.0m)
- 50.10 - B.E.L. CONTOUR (MINOR 0.25m)
- 50.00 - B.E.L. SPOT LEVEL

5m 0 10 20 30 40 50m
SCALE 1:500 AT B1 SIZE SHEET

FOR INFORMATION

AMENDMENTS	DATE	ISSUE
ISSUED FOR INFORMATION	14.07.20	A

ARCHITECT: watson young

CLIENT: Woolworths — the fresh food people

PROJECT: EARLY WORKS DA
250 - 266 VICTORIA STREET
WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
XC	MdW	JULY '20	XC	B1	AS SHOWN	C013738.01-EW31

Costin Roe Consulting Pty Ltd.
Consulting Engineers
Level 1, 8 Windmill Street
Walsh Bay, Sydney NSW 2000
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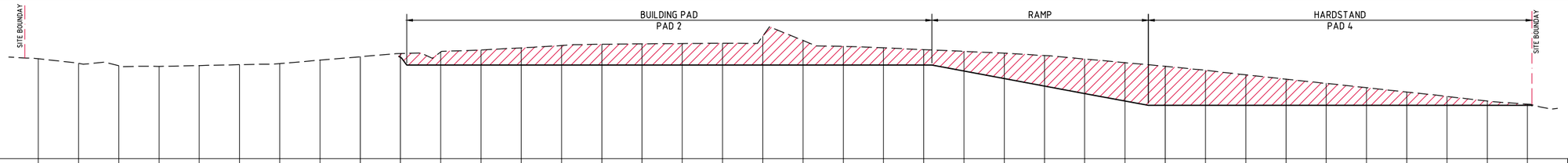
Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE: CUT/FILL PLAN

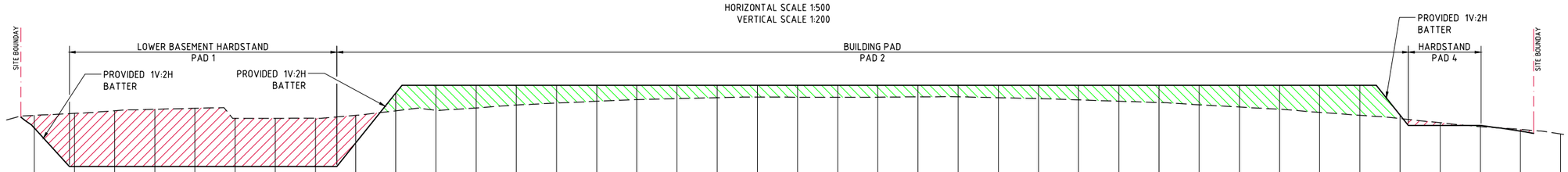
DRAWING No: C013738.01-EW31 ISSUE: A



DATUM 32.00

CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	340.000	350.000	360.000	370.000	380.000	390.000	400.000	410.000
EXISTING SURFACE LEVEL			41.932	41.462	41.243	41.187	41.249	41.332	41.449	41.788	42.128	42.443	42.608	42.804	43.008	43.244	43.361	43.403	43.435	43.458	44.164	43.745	43.153	43.013	42.835	42.656	42.485	42.242	41.899	41.537	41.171	40.777	40.330	39.903	39.475	39.048	38.621	38.192	37.727	37.415	
BULK EARTHWORKS LEVEL												42.055	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	40.705	39.961	39.218	38.474	37.731	37.300	37.300	37.300	37.300	37.300	37.300	37.300	37.300	37.300	37.300	37.300	
CUT/FILL DEPTH												-0.388	-1.308	-1.504	-1.708	-1.944	-2.061	-2.103	-2.135	-2.158	-2.864	-2.445	-1.853	-1.713	-1.535	-1.951	-2.523	-3.024	-3.425	-3.807	-3.871	-3.477	-3.038	-2.603	-2.175	-1.748	-1.321	-0.892	-0.427	-0.115		

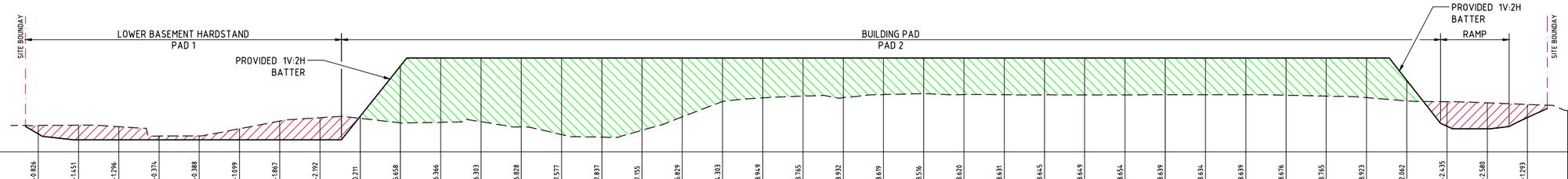
SECTION 4
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:200



DATUM 32.00

CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	340.000	350.000	360.000	370.000	380.000	390.000	400.000	410.000
EXISTING SURFACE LEVEL			38.298	38.497	38.758	38.903	39.006	37.996	38.004	38.007	38.293	38.754	38.869	39.039	39.328	39.528	39.701	39.869	39.966	40.059	40.117	40.113	40.189	40.115	40.142	40.145	40.061	39.972	39.839	39.707	39.576	39.355	39.131	38.907	38.595	38.309	37.987	37.570	37.176	36.907	36.453	
BULK EARTHWORKS LEVEL			37.038	33.200	33.200	33.200	33.200	33.200	33.200	33.200	35.537	40.537	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	38.343	37.300	37.300	36.729		
CUT/FILL DEPTH			-1.260	-5.297	-5.558	-5.703	-5.806	-4.796	-4.804	-4.807	-2.756	1.783	2.491	2.261	1.972	1.772	1.599	1.431	1.334	1.241	1.183	1.187	1.191	1.185	1.158	1.155	1.239	1.328	1.461	1.593	1.724	1.945	2.169	2.393	2.705	2.991	0.356	-0.270	0.124	-0.177		

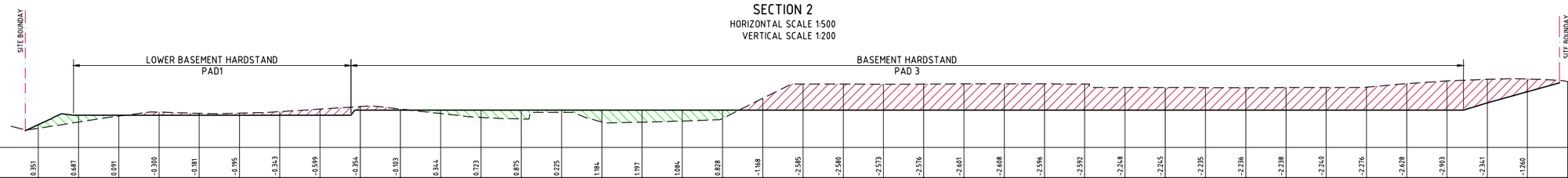
SECTION 3
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:200



DATUM 32.00

CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	340.000	350.000	360.000	370.000	380.000	390.000	400.000	410.000
EXISTING SURFACE LEVEL			34.615	34.651	34.496	33.574	33.588	34.299	35.067	35.392	35.326	34.879	34.934	34.997	34.472	33.723	33.463	34.145	35.171	36.997	37.351	37.535	37.368	37.681	37.784	37.680	37.669	37.655	37.651	37.646	37.661	37.666	37.661	37.624	37.535	37.377	37.059	36.985	36.865	36.705	36.105	
BULK EARTHWORKS LEVEL			33.789	33.200	33.200	33.200	33.200	33.200	33.200	33.200	35.537	40.537	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	39.121	34.549	34.286	35.412		
CUT/FILL DEPTH			-0.826	-1.451	-1.296	-0.374	-0.388	-1.099	-1.867	-2.192	0.211	5.658	6.366	6.393	6.828	7.577	7.837	7.755	5.829	4.303	3.949	3.765	3.932	3.679	3.576	3.620	3.631	3.645	3.649	3.654	3.639	3.634	3.639	3.676	3.765	3.923	2.662	-2.435	-2.580	-1.293		

SECTION 2
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:200



DATUM 30.00

CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	260.000	270.000	280.000	290.000	300.000	310.000	320.000	330.000	340.000	350.000	360.000	370.000	380.000	390.000	400.000	410.000
EXISTING SURFACE LEVEL			31.897	32.513	33.109	33.500	33.381	33.395	33.543	33.799	34.054	33.803	33.556	32.977	32.825	32.475	32.216	32.503	32.616	32.872	33.700	36.285	36.280	36.273	36.276	36.301	36.308	36.296	36.292	35.948	35.945	35.935	35.936	35.938	35.940	35.976	36.328	36.603	36.749	36.788	36.524	
BULK EARTHWORKS LEVEL			32.448	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	33.700	34.408	35.528		
CUT/FILL DEPTH			0.351	0.687	0.091	-0.300	-0.181	-0.195	-0.343	-0.599	-0.354	-0.103	0.344	0.723	0.875	0.225	1.184	1.197	1.084	0.828	-1.168	-2.585	-2.580	-2.573	-2.576	-2.601	-2.608	-2.596	-2.592	-2.248	-2.245	-2.235	-2.236	-2.238	-2.240	-2.276	-2.628	-2.903	-2.341	-1.260		

SECTION 1
HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:200

LEGEND:

- DENOTES BULK EARTHWORKS SURFACE
- DENOTES EXISTING SURFACE LEVEL
- DENOTES AREA IN CUT
- DENOTES AREA IN FILL

2m 0 5 10 15 20m
SCALE 1:200 AT B1 SIZE SHEET

5m 0 10 20 30 40 50m
SCALE 1:500 AT B1 SIZE SHEET

FOR INFORMATION

ISSUED FOR INFORMATION	14.07.20	A
AMENDMENTS	DATE	ISSUE

AMENDMENTS	DATE	ISSUE

ARCHITECT watson young

CLIENT Woolworths the fresh food people

PROJECT
EARLY WORKS DA
250 - 266 VICTORIA STREET
WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
XC	MdW	JULY '20	XC	B1	AS SHOWN	C013738.01-EW35

Costin Roe Consulting Pty Ltd.
Consulting Engineers ACN 003 696 448
Level 1, 6 Windmill Street
Walsh Bay, Sydney NSW 2000
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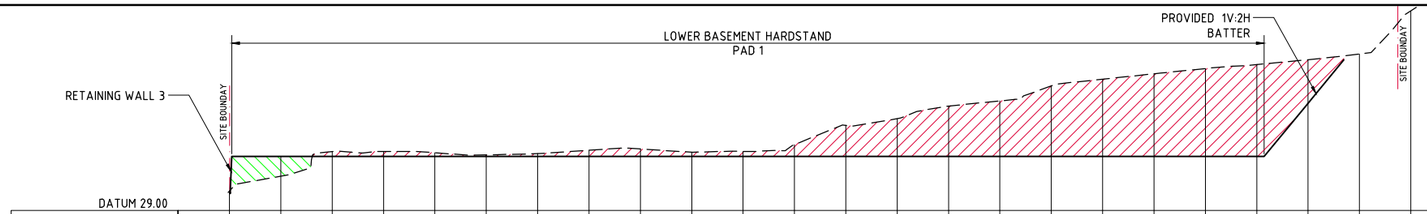
Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE
BULK EARTHWORKS SECTIONS
SHEET 1

DRAWING No C013738.01-EW35 ISSUE A

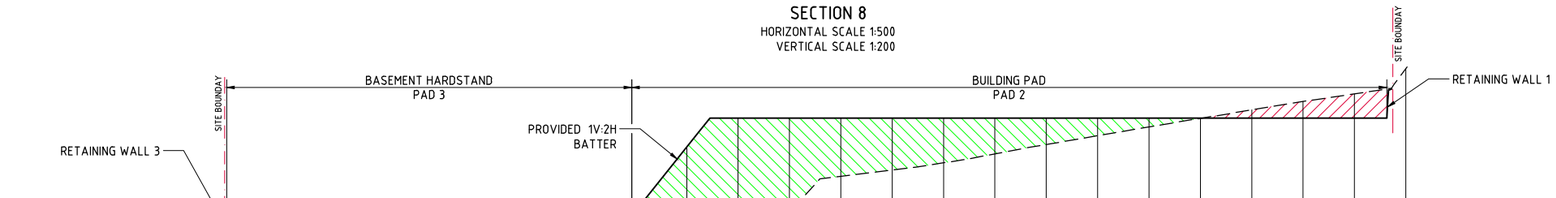


DATUM 29.00

CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	255.000
CUT/FILL DEPTH			1.538	-0.369	-0.389	-0.286	-0.118	-0.213	-0.478	-0.583	-0.326	-0.391	-0.919	-2.417	-2.941	-3.919	-4.321	-5.497	-6.007	-6.428	-6.833	-7.148	-3.398				
BULK EARTHWORKS LEVEL			33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	33.200	37.329				
EXISTING SURFACE LEVEL		39.593	31.662	33.569	33.589	33.486	33.318	33.413	33.678	33.783	33.526	33.591	34.119	35.617	36.141	37.119	37.521	38.697	39.207	39.628	40.033	40.348	40.727	41.172	44.533		
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	255.000

SECTION 8

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:200

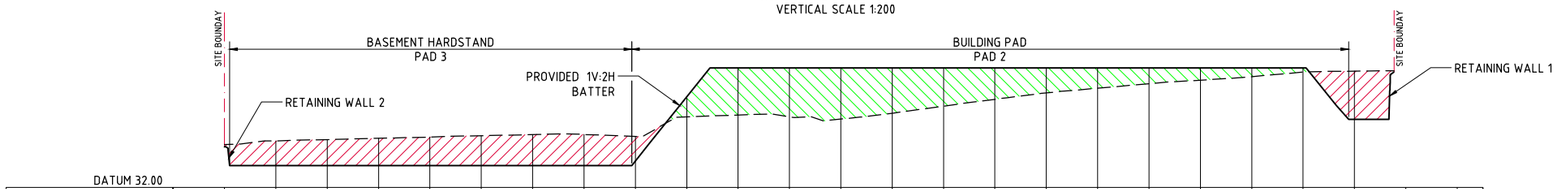


DATUM 29.00

CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	255.000
CUT/FILL DEPTH			1.290	0.192	0.207	0.222	0.230	1.195	1.179	0.326	5.340	7.568	7.378	4.531	4.045	3.485	2.786	2.065	1.370	0.687	0.021	-0.639	-1.295	-1.887			
BULK EARTHWORKS LEVEL			33.700	33.700	33.700	33.700	33.700	33.700	33.700	34.046	39.046	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300			
EXISTING SURFACE LEVEL		31.489	32.410	33.508	33.493	33.478	33.470	32.505	32.521	33.721	33.706	33.732	33.922	36.769	37.255	37.815	39.514	39.235	39.930	40.613	41.279	41.937	42.595	43.187	45.147		
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	255.000

SECTION 7

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:200

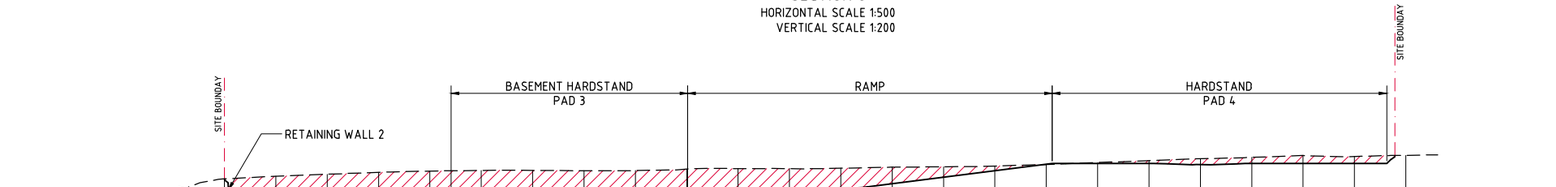


DATUM 32.00

CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	255.000
CUT/FILL DEPTH			-1.933	-2.029	-2.125	-2.219	-2.321	-2.416	-2.424	-1.926	1.549	3.662	3.803	3.980	3.521	2.967	2.437	1.942	1.570	1.219	0.944	0.674	0.317	-3.755			
BULK EARTHWORKS LEVEL			33.700	33.700	33.700	33.700	33.700	33.700	33.700	34.047	39.047	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	41.300	37.300			
EXISTING SURFACE LEVEL		35.633	35.729	35.825	35.919	36.021	36.116	36.124	35.973	37.498	37.638	37.497	37.320	37.779	38.333	38.863	39.358	39.730	40.081	40.356	40.626	40.983	41.055				
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	255.000

SECTION 6

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:200



DATUM 32.00

CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	255.000
CUT/FILL DEPTH			-1.420	-1.579	-2.020	-2.635	-3.056	-3.058	-3.040	-3.046	-3.157	-2.707	-2.186	-1.179	-1.288	-0.808	-0.370	0.022	-0.866	-0.223	-0.450	-0.469	-0.613	-0.542			
BULK EARTHWORKS LEVEL			34.875	34.875	34.586	34.065	33.700	33.700	33.700	33.700	33.700	34.197	34.705	35.212	35.719	36.227	36.734	37.241	37.300	37.300	37.211	37.300	37.300	37.300			
EXISTING SURFACE LEVEL		36.099	36.295	36.454	36.605	36.700	36.758	36.758	36.740	36.746	36.857	36.904	36.898	36.931	37.007	37.035	37.104	37.279	37.366	37.523	37.661	37.769	37.913	37.842	37.934		
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	100.000	110.000	120.000	130.000	140.000	150.000	160.000	170.000	180.000	190.000	200.000	210.000	220.000	230.000	240.000	250.000	255.000

SECTION 5

HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:200

LEGEND:

- DENOTES BULK EARTHWORKS SURFACE
- DENOTES EXISTING SURFACE LEVEL
- DENOTES AREA IN CUT
- DENOTES AREA IN FILL

2m 0 5 10 15 20m
SCALE 1:200 AT B1 SIZE SHEET

5m 0 10 20 30 40 50m
SCALE 1:500 AT B1 SIZE SHEET

FOR INFORMATION

ISSUED FOR INFORMATION	14.07.20	A
AMENDMENTS	DATE	ISSUE

AMENDMENTS	DATE	ISSUE

ARCHITECT: watson young

CLIENT: Woolworths — the fresh food people

PROJECT
EARLY WORKS DA
250 - 266 VICTORIA STREET
WETHERILL PARK, NSW

DESIGNED	DRAWN	DATE	CHECKED	SIZE	SCALE	CAD REF:
XC	MdW	JULY '20	XC	B1	AS SHOWN	C013738.01-EW36

Costin Roe Consulting Pty Ltd.
Consulting Engineers ACN 003 988 448
Level 1, 8 Windmill Street
Walsh Bay, Sydney NSW 2000
Tel: (02) 9251-7699 Fax: (02) 9241-3731
email: mail@costinroe.com.au ©

Costin Roe Consulting

PRECISION | COMMUNICATION | ACCOUNTABILITY

DRAWING TITLE
BULK EARTHWORKS SECTIONS
SHEET 2

DRAWING No C013738.01-EW36

ISSUE A

Lotsearch Environmental Risk and Planning Report

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 15 Feb 2021 15:27:31

Reference: LS017905 EP

Address: 250 Victoria Street, Wetherill Park, NSW 2164

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

Dataset Listing

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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	13/11/2020	13/11/2020	Quarterly	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	25/06/2019	25/06/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	14/01/2021	14/01/2021	Monthly	1000	0	0	2
Contaminated Land Records of Notice	Environment Protection Authority	05/02/2021	05/02/2021	Monthly	1000	0	0	0
Former Gasworks	Environment Protection Authority	09/02/2021	11/10/2017	Monthly	1000	0	0	0
National Waste Management Facilities Database	Geoscience Australia	11/02/2021	07/03/2017	Quarterly	1000	0	0	3
National Liquid Fuel Facilities	Geoscience Australia	15/02/2021	13/07/2012	Quarterly	1000	0	0	1
EPA PFAS Investigation Program	Environment Protection Authority	15/02/2021	23/11/2020	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	05/02/2021	05/02/2021	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	05/02/2021	05/02/2021	Monthly	2000	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	03/02/2021	03/02/2021	Monthly	2000	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	15/02/2021	15/02/2021	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	02/02/2021	13/12/2018	Annually	1000	0	0	1
Licensed Activities under the POEO Act 1997	Environment Protection Authority	08/02/2021	08/02/2021	Monthly	1000	0	1	13
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	08/02/2021	08/02/2021	Monthly	1000	0	0	3
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	08/02/2021	08/02/2021	Monthly	1000	0	2	11
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150	2	63	85
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150	-	63	110
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	4	28
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	4	23
Points of Interest	NSW Department of Finance, Services & Innovation	30/03/2020	30/03/2020	Quarterly	1000	0	1	45
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	30/03/2020	30/03/2020	Quarterly	1000	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	30/03/2020	30/03/2020	Quarterly	1000	0	0	0
Major Easements	NSW Department of Finance, Services & Innovation	30/03/2020	30/03/2020	Quarterly	1000	0	0	14
State Forest	Forestry Corporation of NSW	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	22/01/2021	11/12/2020	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	26/10/2020	21/02/2018	Annually	1000	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000	0	0	27
Geological Units 1:100,000	NSW Department of Planning, Industry and Environment	20/08/2014		None planned	1000	1	-	2
Geological Structures 1:100,000	NSW Department of Planning, Industry and Environment	20/08/2014		None planned	1000	0	-	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	As required	1000	1	1	2
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	14/10/2020	27/07/2020	Annually	1000	1	-	3
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	27/01/2021	03/07/2020	Monthly	500	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	2
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	0	0	1
Dryland Salinity Potential of Western Sydney	NSW Department of Planning, Industry and Environment	12/05/2017	01/01/2002	None planned	1000	1	1	1
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	30/03/2020	30/03/2020	Quarterly	1000	0	0	0
Current Mining Titles	NSW Department of Industry	05/02/2021	05/02/2021	Monthly	1000	0	0	0
Mining Title Applications	NSW Department of Industry	05/02/2021	05/02/2021	Monthly	1000	0	0	0
Historic Mining Titles	NSW Department of Industry	05/02/2021	05/02/2021	Monthly	1000	13	13	14
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	27/01/2021	07/12/2018	Monthly	1000	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	27/01/2021	22/01/2021	Monthly	1000	1	5	42
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	24/11/2020	20/11/2019	Quarterly	1000	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	24/11/2020	20/11/2019	Quarterly	1000	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	15/02/2021	30/11/2020	Quarterly	1000	0	0	0
Environmental Planning Instrument Heritage	NSW Department of Planning, Industry and Environment	27/01/2021	22/01/2021	Monthly	1000	0	0	5
Bush Fire Prone Land	NSW Rural Fire Service	05/02/2021	06/01/2021	Weekly	1000	0	1	2
Native Vegetation of the Sydney Metropolitan Area	NSW Office of Environment & Heritage	01/03/2017	16/12/2016	As required	1000	1	1	9
Ramsar Wetlands of Australia	Department of the Agriculture, Water and the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	3
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	3
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	08/02/2021	08/02/2021	Weekly	10000	-	-	-

Site Diagram

250 Victoria Street, Wetherill Park, NSW 2164

Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 86281m²

Total Perimeter: 1211m

Scale: 0 25 50 100 Meters

Data Sources: Aerial Imagery © Aerometrex Pty Ltd

Disclaimers:

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

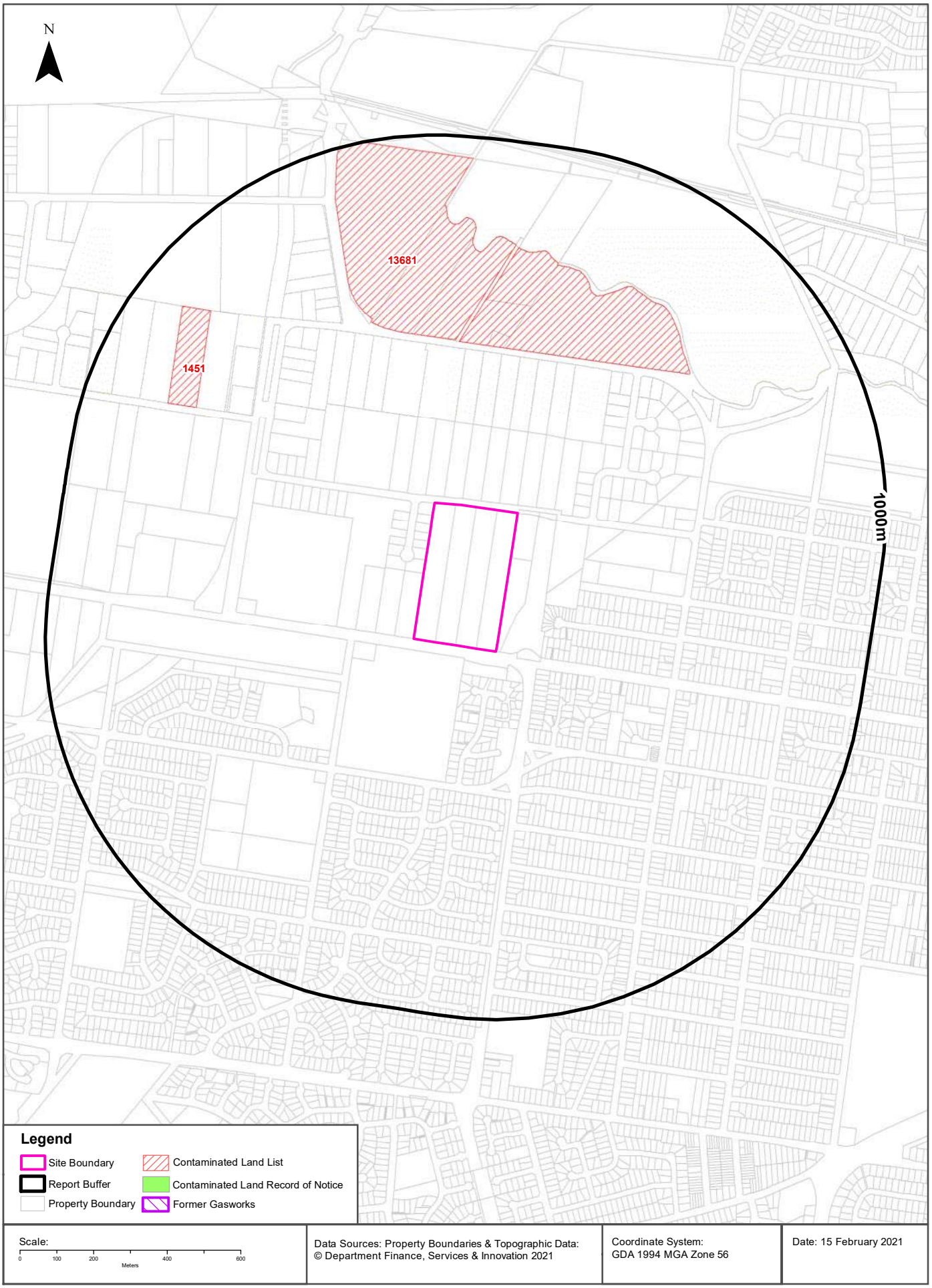
Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 February 2021

Contaminated Land

250 Victoria Street, Wetherill Park, NSW 2164



Contaminated Land

250 Victoria Street, Wetherill Park, NSW 2164

List of NSW contaminated sites notified to EPA

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

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist (m)	Direction
13681	Fairfield Sustainable Resource Centre	Corner Hassall Street and Widemere ROAD	WETHERILL PARK	Other Industry	Under assessment	Current EPA List	Premise Match	440m	North
1451	Sims Wetherill Park	35-37 Frank Street	Wetherill Park	Metal Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	699m	North West

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

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

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Contaminated Land

250 Victoria Street, Wetherill Park, NSW 2164

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

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

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

Former Gasworks

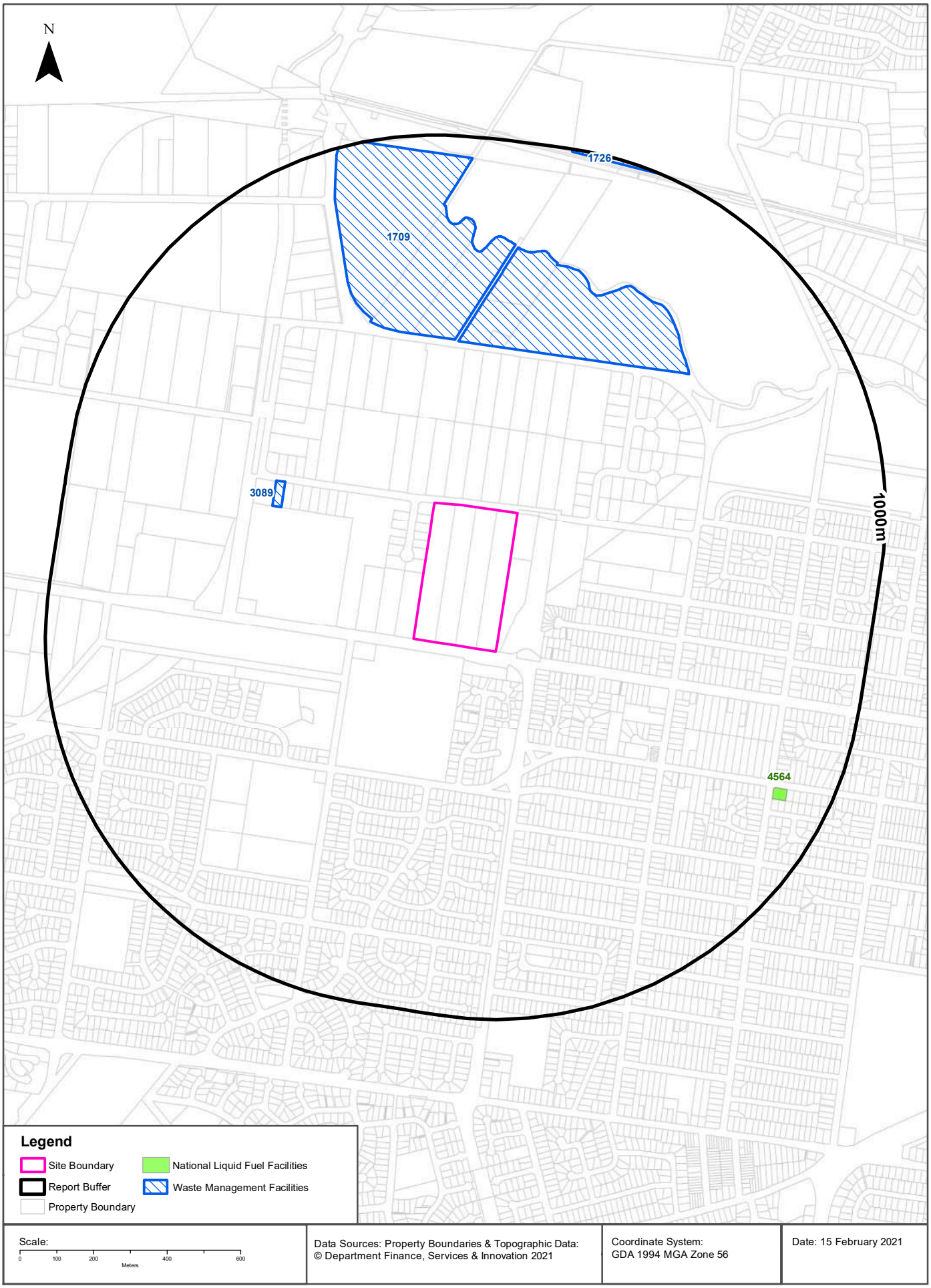
Former Gasworks within the dataset buffer:

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

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

Waste Management & Liquid Fuel Facilities

250 Victoria Street, Wetherill Park, NSW 2164



Waste Management & Liquid Fuel Facilities

250 Victoria Street, Wetherill Park, NSW 2164

National Waste Management Site Database

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

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist (m)	Direction
3089	Tank Management Services Pty Ltd	Tank Management Services	89 Redfern Street	Wetherill Park	Reprocessing		Operational		Hazwaste Packaging Facility.	Premise Match	409 m	North West
1709		Sustainable Resource Centre	Hassall Street	Wetherill Park	Transfer Station			Operational		Premise Match	440 m	North
1726		Hyland Road Depot	Hyland Road	Greystanes	Transfer Station			Operational		Premise Match	988 m	North

Waste Management Facilities Data Source: Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

National Liquid Fuel Facilities

National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist (m)	Direction
4564	BP	BP Smithfield	846 The Horsley Drive	Smithfield	Petrol Station	Operational		25/07/2011	Premise Match	840m	South East

National Liquid Fuel Facilities Data Source: Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

PFAS Investigation & Management Programs

250 Victoria Street, Wetherill Park, NSW 2164

EPA PFAS Investigation Program

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

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

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

Defence PFAS Investigation Program

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

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

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

Defence PFAS Management Program

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

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

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

Airservices Australia National PFAS Management Program

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

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

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

250 Victoria Street, Wetherill Park, NSW 2164

Defence 3 Year Regional Contamination Investigation Program

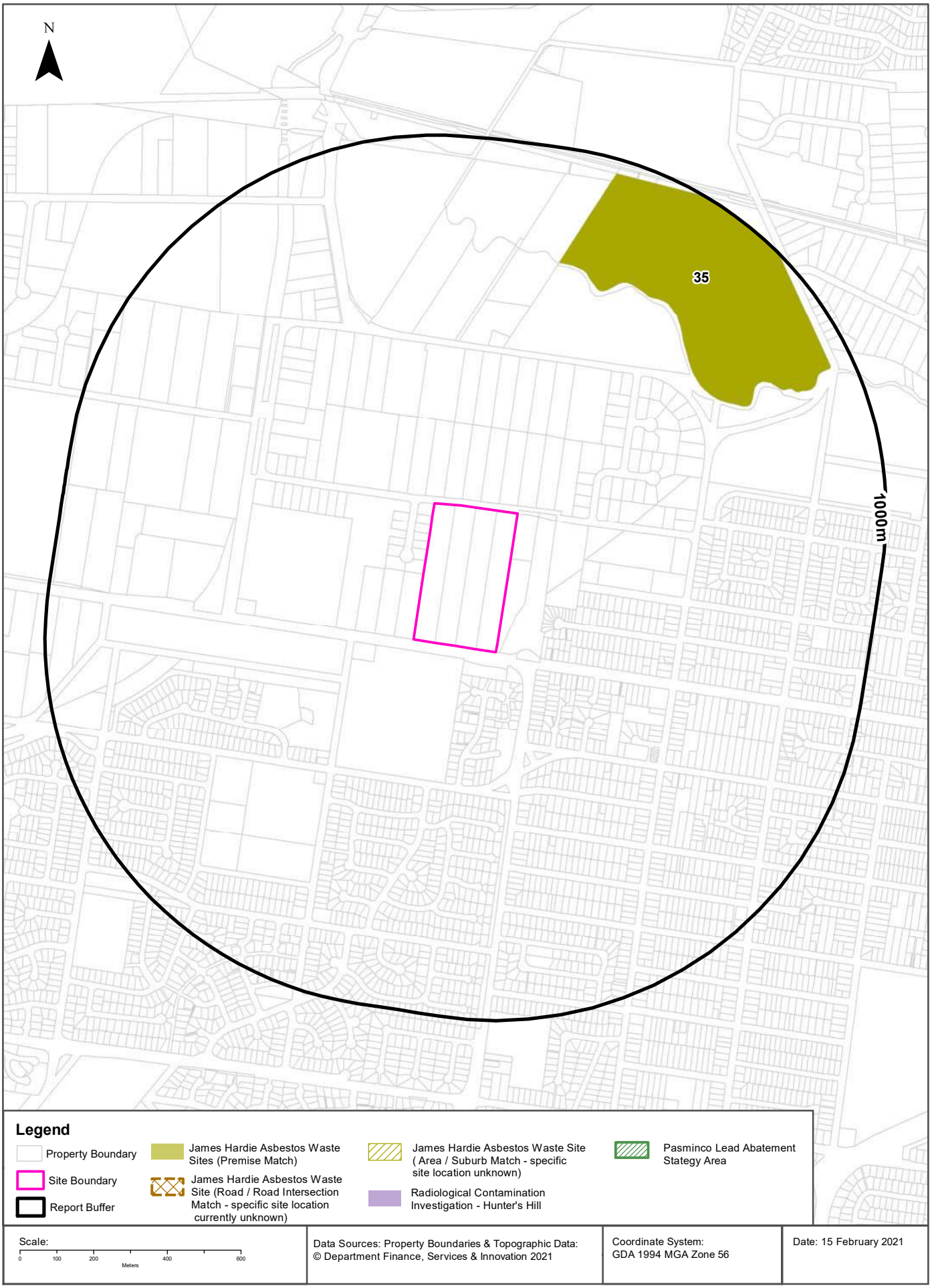
Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

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

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

EPA Other Sites with Contamination Issues

250 Victoria Street, Wetherill Park, NSW 2164



EPA Other Sites with Contamination Issues

250 Victoria Street, Wetherill Park, NSW 2164

EPA Other Sites with Contamination Issues

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

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

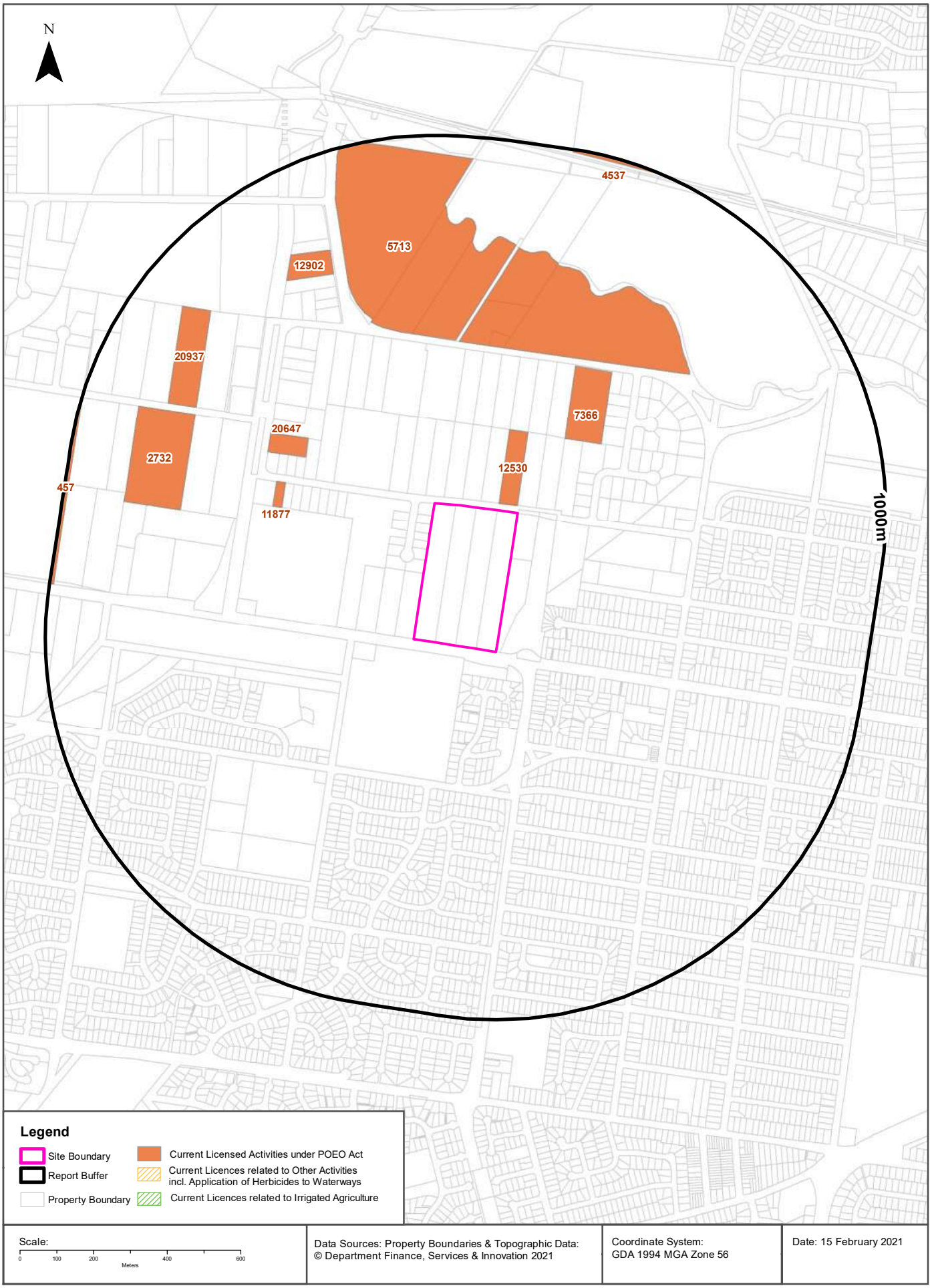
Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
35	Former Holroyd Tip	Hylands Road, Greystanes (end of Gipps Road)	James Hardie Asbestos Waste Sites	Current Land Use: Playing fields	Premise Match	605m	North East

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

Current EPA Licensed Activities

250 Victoria Street, Wetherill Park, NSW 2164



EPA Activities

250 Victoria Street, Wetherill Park, NSW 2164

Licensed Activities under the POEO Act 1997

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

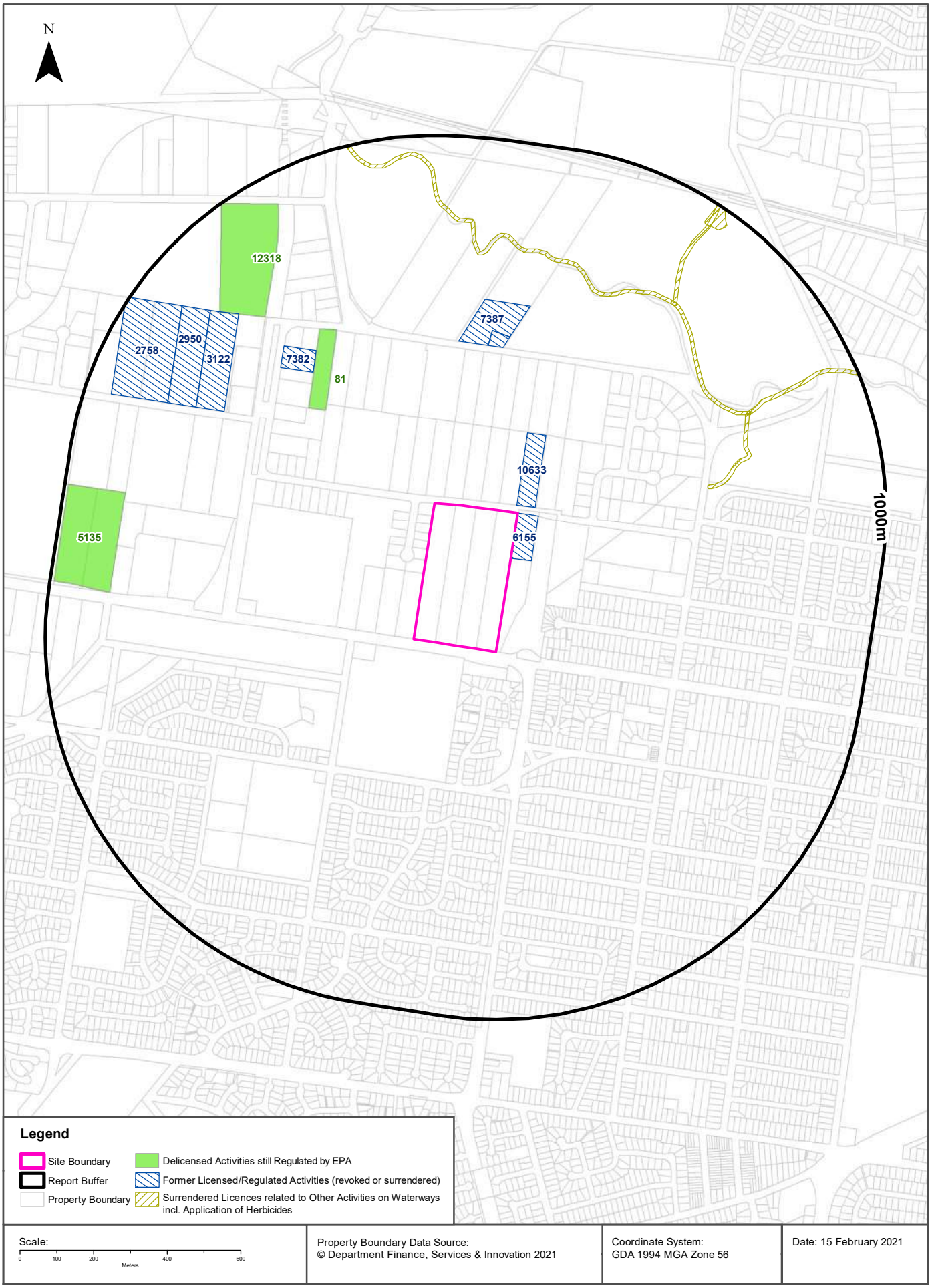
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
12530	ABC PAPER & PAPER MILLS PTY. LIMITED	ABC PAPER AND PAPER MILLS PTY LIMITED	63-65 REDFERN STREET	WETHERILL PARK	Paper or pulp production	Premise Match	20m	North East
7366	ITW AUSTRALIA PTY LTD	ITW POLYMERS & FLUIDS	100 HASSALL STREET	WETHERILL PARK	Petroleum products and fuel production	Premise Match	239m	North East
20647	GRIMA ENVIRONMENTAL SERVICES PTY LTD		88 REDFERN STREET, WETHERILL PARK, NSW 2164		Recovery of general waste; Waste storage - other types of waste	Premise Match	372m	North West
11877	TANK MANAGEMENT AUSTRALIA PTY LTD	TANK MANAGEMENT SERVICES	89 REDFERN STREET	WETHERILL PARK	Container reconditioning	Premise Match	409m	North West
11877	TANK MANAGEMENT AUSTRALIA PTY LTD	TANK MANAGEMENT SERVICES	89 REDFERN STREET	WETHERILL PARK	Non-thermal treatment of hazardous and other waste	Premise Match	409m	North West
5713	FAIRFIELD CITY COUNCIL	SUSTAINABLE RESOURCE CENTRE	HASSALL STREET	WETHERILL PARK	Recovery of general waste	Premise Match	440m	North
5713	FAIRFIELD CITY COUNCIL	SUSTAINABLE RESOURCE CENTRE	HASSALL STREET	WETHERILL PARK	Waste storage - other types of waste	Premise Match	440m	North
2732	AUSTRALIAN COMFORT GROUP PTY LTD	DUNLOP FLEXIBLE FOAMS	LOT 103 FRANK STREET	WETHERILL PARK	Plastic resins production	Premise Match	680m	West
12902	Steritech Pty. Ltd.	Steritech Pty Ltd	5 Widemere Road	WETHERILL PARK	Sterilisation activities	Premise Match	682m	North West
20937	CLEANAWAY RESOURCECO RRF PTY LTD		35-37 FRANK STREET, WETHERILL PARK, NSW 2164		Recovery of general waste	Premise Match	699m	North West
4537	CUMBERLAND COUNCIL	HYLAND ROAD DEPOT	2A HYLAND ROAD, GREYSTANES, NSW 2145	GREYSTANES	Waste disposal by application to land	Premise Match	988m	North
457	CSR BUILDING PRODUCTS LIMITED	CSR BUILDING PRODUCTS, WETHERILL PARK	376 VICTORIA STREET	WETHERILL PARK	Cement or lime handling	Premise Match	990m	West
457	CSR BUILDING PRODUCTS LIMITED	CSR BUILDING PRODUCTS, WETHERILL PARK	376 VICTORIA STREET	WETHERILL PARK	Crushing, grinding or separating	Premise Match	990m	West

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

250 Victoria Street, Wetherill Park, NSW 2164



EPA Activities

250 Victoria Street, Wetherill Park, NSW 2164

Delicensed Activities still regulated by the EPA

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

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
81	METROMIX PTY. LIMITED	METROMIX WETHERILL PARK	136 HASSALL STREET	WETHERILL PARK	Concrete works	Premise Match	390m	North West
12318	VISY PACKAGING PTY. LTD.	Visypak Beverage Packaging PET Specialities	2 Davis Road	WETHERILL PARK	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	685m	North West
5135	ONESTEEL TRADING PTY LIMITED	ONESTEEL STEEL AND TUBE	374 VICTORIA STREET	WETHERILL PARK	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	835m	West

Delicensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

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

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

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
6155	TIKKURILA PTY LTD	33-35 REDFERN STREET, WETHERILL PARK, NSW 2164	Surrendered	13/06/2000	Hazardous, Industrial or Group A Waste Generation or Storage; Dangerous goods production	Premise Match	0m	North East
10633	REDOX PTY LTD	30-32 Redfern Street, WETHERILL PARK, NSW 2164	Surrendered	28/03/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	21m	North East
7387	FAIRFIELD CITY COUNCIL	HASSALL STREET (Cross street Davis Road), WETHERILL PARK, NSW 2164	Surrendered	01/08/2000	Composting	Premise Match	440m	North
7382	ARCHITECTURAL & STRUCTURAL ADHESIVES PTY LTD	106-108 REDFERN STREET, WETHERILL PARK, NSW 2164	Surrendered	18/09/2000	Paints/polishes/adhesives production; Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	485m	North West
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	520m	-
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	520m	-
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	520m	-
5150	FAIRFIELD CITY COUNCIL	WATERWAYS OF FAIRFIELD CITY COUNCIL - FAIRFIELD NSW 2165	Surrendered	17/08/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	520m	-

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
3122	DRUM RECONDITIONERS (NSW) PTY LTD	41 FRANK STREET, WETHERILL PARK, NSW 2164	Surrendered	18/05/2001	Hazardous, Industrial or Group A Waste Generation or Storage; Container reconditioning; Non-thermal treatment of hazardous and other waste	Premise Match	623m	North West
2950	SIMS GROUP AUSTRALIA HOLDINGS LIMITED	SIMS GROUP LIMITED, 35-37 FRANK STREET, WETHERILL PARK	Surrendered	06/09/2000	Scrap metal processing	Premise Match	699m	North West
2758	RECKITT BENCKISER (AUSTRALIA) PTY LIMITED	27-33 FRANK STREET, WETHERILL PARK, NSW 2164	Surrendered	02/08/2000	Hazardous, Industrial or Group A Waste Generation or Storage; Soap and detergents production; General chemicals storage	Premise Match	774m	North West

Former Licensed Activities Data Source: Environment Protection Authority
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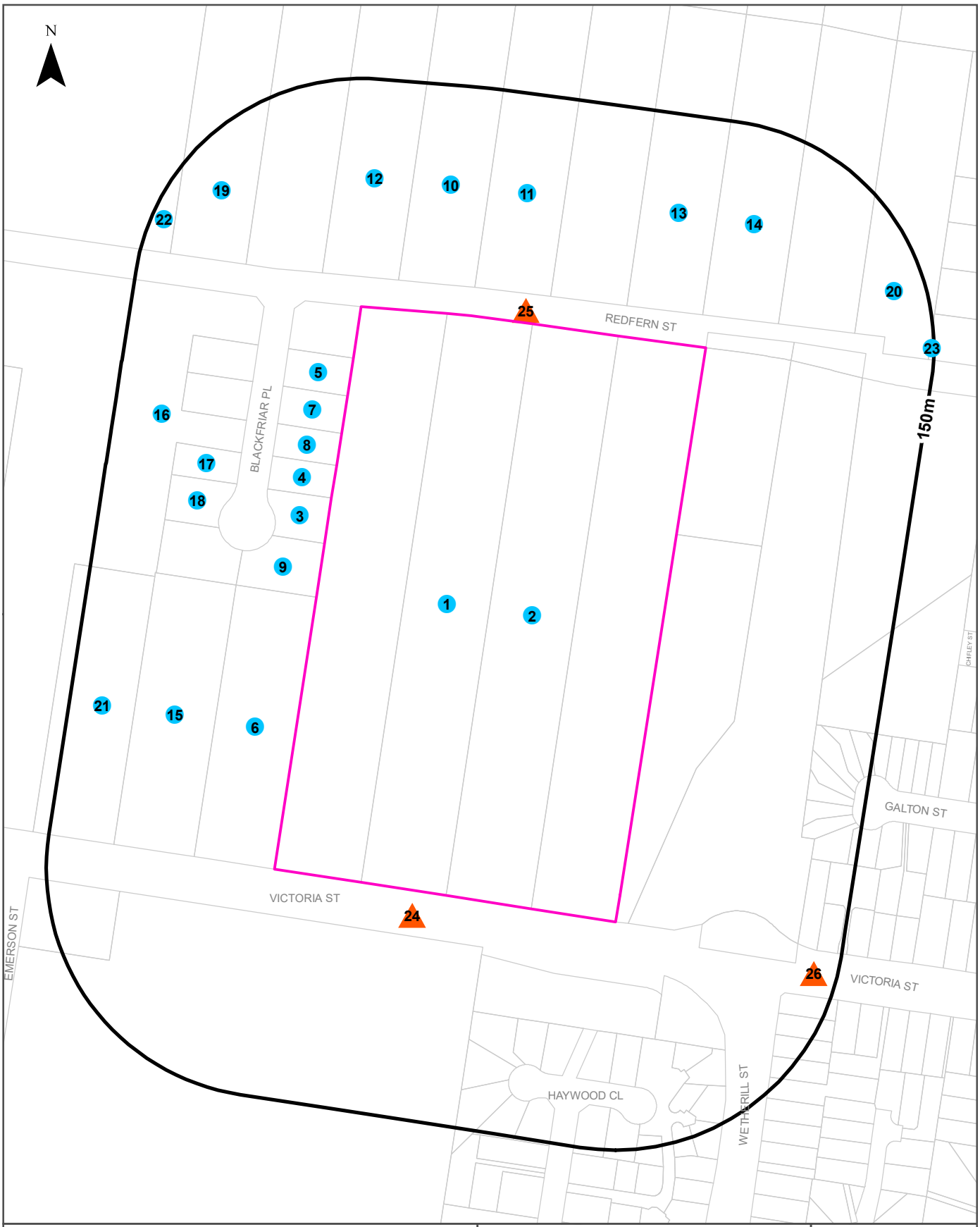
Historical Business Directories

250 Victoria Street, Wetherill Park, NSW 2164



Legend

- Site Boundary
- Buffer 150m
- Property Boundary
- Business directory records mapped to a specific premise
- Business directory records mapped to a road intersection
- Business directory records mapped to a road corridor
- Business directory records mapped to a general area

Scale: 0 40 80 120 160 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 February 2021

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

Historical Business Directories

250 Victoria Street, Wetherill Park, NSW 2164

Business Directory Records 1950-1991
Premise or Road Intersection Matches

Universal Business Directory records from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	Printers Lithographic (Offset)	Renouf, Darrin Printing., 254 Victoria Rd., Smithfield 2164	59314	1991	Premise Match	0m	On-site
2	Motor Car Dealers New &/or Used	Subaru Australia Pty Ltd, 250 Victoria St, Wetherill Park 2164	52643	1991	Premise Match	0m	On-site
3	Rubber Good Mfrs &/or Dists	B & C Rubber, 6 Blackfriar Pl Wetherill Park 2164	61284	1991	Premise Match	0m	North West
	Rubber Moulders	B & C Rubber, 6 Blackfriar Pl Wetherill Park 2164	61326	1991	Premise Match	0m	North West
	Rubber Good Mfrs &/or Dists	T. Q. R. Pty. Ltd., 6 Blackfriar Pl Wetherill Park 2164	61314	1991	Premise Match	0m	North West
	Rubber Moulders	T.Q. R. Pty. Ltd., 6 Blackfriar Pl Wetherill Park 2164	61328	1991	Premise Match	0m	North West
4	Agricultural Chemicals Mfrs &/or Imps &/or Dists	Campbell Colin (Chemicals) Pty. Ltd., 5 Blackfriar Pl., Wetherill Park 2164	33615	1991	Premise Match	0m	North West
	Chemical Mfrs &/or Imps &/or Dists	Campbell, Colin (Chemicals) Pty. Ltd., 5 Blackfriar Pl., Wetherill Park 2164	38850	1991	Premise Match	0m	North West
5	Electric Cable Flexible &/or Wire Mfrs &/or Dists	Euro- Tech Cables Pty. Ltd., 2 Blackfriar Pl, Wetherill Park 2164	41935	1991	Premise Match	0m	North West
6	Kitchen Units Mfrs &/or Dists &/or Installers	Glavan Designer Kitchens Pty Ltd, 268 -270 Victoria Street, Wetherill Park. 2164	50176	1991	Premise Match	0m	South West
	Kitchen Units Mfrs &/or Dists &/or Installers	Glavan Designer Kitchens Pty. Ltd., Unit 1/268 Victoria St., Wetherill Park. 2164	50177	1991	Premise Match	0m	South West
	Kitchen Units Mfrs &/or Dists &/or Installers	Glavan Kitchens Pty, Ltd., 1/268 Victoria St., Wetherill Park. 2164	50178	1991	Premise Match	0m	South West
7	Carpet &/or Floor Covering Planners &/or Layers	Heldon Carpets Pty. Ltd., 3 Blackfriar Pl., Wetherill Park 2164	38230	1991	Premise Match	0m	North West
	Carpet &/or Floor Covering Retailers &/or Specialists	HELDON CARPETS PTY. LTD., 3 Blackfriars Place., Wetherill Park 2164	38249	1991	Premise Match	0m	North West
8	Grocers Mfrg &/or W/sale	IFWA Limited (Independent Food Wholesale Agencies), 4 Blackfriar Pl., Wetherill Park. 2164	48052	1991	Premise Match	0m	North West
	Food Products Frozen Mfrs &/or Processors	IFWA Limited (Independent Food Wholesale Agencies)., 4 Blackfriar Pl., Wetherill Park 2164	46056	1991	Premise Match	0m	North West
9	Grocers Mfrg &/or W/sale	Monforte & Co. (NSW), 8 Blackfriar Pl., Wetherill Park. 2164	48054	1991	Premise Match	0m	West
	Food Importers	Monforte & Co., 8 Blackfriar Pl., Wetherill Park 2164	46003	1991	Premise Match	0m	West
10	Lock Mfrs &/or Dists	Doric, 46 Redfern Rd., Wetherill Park. 2164	50901	1991	Premise Match	19m	North
11	Shop &/or Office Fittings Mfrs &/or Dists	Kanweld Products Pty Ltd, 42 Redfern St Wetherill 2164	62410	1991	Premise Match	19m	North
12	Pharmaceutical Products Mfrs &/or W/Salers	Q.D.L. Limited, 50 Redfern St., Wetherill Park. 2164	57101	1991	Premise Match	19m	North
	Importers	W. D. Imports Pty Ltd, 50 Redfern St., Wetherill Park. 2164	49048	1991	Premise Match	19m	North
	Gift Shop Supplies Mfrs &/or W/salers	W. D. Imports Pty. Ltd., 50 Redfern St., Wetherill Park. 2164	47657	1991	Premise Match	19m	North

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
13	Paper Products Disposable Mfrs &/or Dists	ABC Tissue Products Pty. Ltd, 34 Redfern St., Wetherill Park. 2164	56783	1991	Premise Match	20m	North East
	Caterers Supplies	ABC Tissue Products Pty. Ltd., 34 Redfern St Wetherill Park 2164	38620	1991	Premise Match	20m	North East
14	Chemical Mfrs &/or Imps &/or Dists	Redox Chemicals Pty. Ltd., 30 Redfern St., Wetherill Park 2164	38939	1991	Premise Match	21m	North East
15	Motor Radiator Specialists &/or Repairers	Evakool Radiator, Unit 19/272 Victoria St., Wetherill Park 2164	54970	1991	Premise Match	53m	West
	Motor Radiator Specialists &/or Repairers	Frank's Radiator Service, Unit 24/272 Victoria St., Wetherill Park 2164	54971	1991	Premise Match	53m	West
	Motor Garages & Service Stations	Harry's Auto Services, Unit 26/272 Victoria St., Wetherill Park 2164	97207	1991	Premise Match	53m	West
	Motor Engineers	Hary's Auto Services, Unit 26/272 Victoria St, Wetherill Park 2164	53212	1991	Premise Match	53m	West
	Machine Tool Mfrs &/or Imps &/or Dists	Hettler Trading Co., 10/272 Victoria St., Wetherill Park 2164	50968	1991	Premise Match	53m	West
	Motor Engineers	J N C Car Care Centre, Unit 33/272 Victoria St, Wetherill Park 2164	53236	1991	Premise Match	53m	West
	Motor Garages & Service Stations	J.N.C. Car Care Centre, Unit 33/272 Victoria St, Wetherill Park 2164	97061	1991	Premise Match	53m	West
	Shop &/or Office Fittings Mfrs &/or Dists	K.A. Manufacturing, Unit 13/272 Victoria St Wetherill Park 2164	62409	1991	Premise Match	53m	West
	Catering Equipment Mfrs &/or Dists	K.A. Manufacturing., Unit 13/272 Victoria St., Wetherill Park 2164	38673	1991	Premise Match	53m	West
	Cleaning Equipment Supplies &/or Repairs	K'A'rcher Service Centre, Unit 20/272 Victoria St., Wetherill Park 2164	39099	1991	Premise Match	53m	West
	Cleaners Industrial &/or Marine Steam &/or Water Pressure	K'A'rcher Service Centre., Unit 20/272 Victoria St, Wetherill Park 2164	39063	1991	Premise Match	53m	West
	Signs General	Newtech Signs, Unit 14/272 Victoria St Wetherill Park 2164	62532	1991	Premise Match	53m	West
	Glass Merchants &/or Glaziers	P & H Jenning's Heavy Machinery Glass., Unit 17/272 Victoria St., Wetherill Park. 2164	47774	1991	Premise Match	53m	West
	Printers Lithographic (Offset)	Peachy print., 18/272 Victoria St., Wetherill Park, 2164	59266	1991	Premise Match	53m	West
	Engineers Electrical	Powermaster Electrical Pty Ltd, Unit 25/272 Victoria St Wetherill Park 2164	43642	1991	Premise Match	53m	West
	Electrical Contractors	Powermaster Electrical Pty. Ltd., Unit 25/272 Victoria St, Wetherill Park 2164	42554	1991	Premise Match	53m	West
	Motor Body Builders Supplies	Sage, A. J. & Company Pty. Ltd., Unit 1/272 Victoria St., Wetherill Park. 2164	52163	1991	Premise Match	53m	West
	Electric Motor Winding &/or Rewinding Specialists	Star Motor Rewinds, Unit 9/272 Victoria St, Wetherill Park 2164	42234	1991	Premise Match	53m	West
	Shop &/or Office Fittings Mfrs &/or Dists	Supreme Furniture & Joinery Pty Ltd, Unit 21/272 Victoria St Wetherill Park 2164	62426	1991	Premise Match	53m	West
	Furniture Mfrs &/or W/salers Custom Built	Supreme Furniture & Joinery Pty Ltd, Unit 21/272 Victoria St., Wetherill Park.2164	47002	1991	Premise Match	53m	West
	Swimming Pool Mfrs &/or Construction Contractors	Sydney Pools & Spas, Unit 34/272 Victoria St Wetherill Park 2164	63817	1991	Premise Match	53m	West
	Fencing Contractors	Vusovic Fencing Contractors, Unit 16/272 Victoria St Wetherill Park 2164	45430	1991	Premise Match	53m	West
	Steel Fabricators	Vusovic Fencing Contractors, Unit 16/272 Victoria St Wetherill Park 2164	63445	1991	Premise Match	53m	West
16	Material Handling Equipment Mfrs &/or Imps &/or Dists	Conrol Pty Ltd, 13 Blackfriar Ave., Wetherill Park 2164	51391	1991	Premise Match	63m	North West
	Conveyor &/or Conveying Equip Mfrs &/or Imps &/or Dists	Conrol Pty. Ltd., 13 Blackfriar Ave., Wetherill Park 2164	40800	1991	Premise Match	63m	North West
	Mining Machinery &/or Equipment Mfrs &/or Imps &/or Dists	Conrol Pty. Ltd., 13 Blackfriar Ave., Wetherill Park. 2164	51873	1991	Premise Match	63m	North West
	Roller Mfrs &/or Dists	Control Pty. Ltd., 13 Blackfriar Ave Wetherill Park 2164	61160	1991	Premise Match	63m	North West
17	Material Handling Equipment Mfrs &/or Imps &/or Dists	Halbach & Braun (Australia) Pty Limited, 12 Blackfriar Pl., Wetherill Park 2164	51401	1991	Premise Match	63m	North West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
17	Conveyor &/or Conveying Equip Mfrs &/or Imps &/or Dists	Halbach & Braun (Australia) Pty. Limited, 12 Blackfriar Pl., Wetherill Park 2164	40809	1991	Premise Match	63m	North West
	Mining Machinery &/or Equipment Mfrs &/or Imps &/or Dists	Halbach & Braun (Australia) Pty. Limited., 12 Blackfriar Pl., Wetherill Park. 2164	51879	1991	Premise Match	63m	North West
	Mining Machinery &/or Equipment Mfrs &/or Imps &/or Dists	HALBACH & BRAUN (AUSTRALIA) PTY. LTD. 12 Blackfriar Place., Wetherill Park. 2164	51880	1991	Premise Match	63m	North West
18	Sheet Metal Workers	Neil Ellis & Co Pty Ltd, 11 Blackfriar Pl Wetherill Park 2164	62130	1991	Premise Match	63m	West
	Spray Booth Painters Mfrs &/or Dists	Neill Ellis & Co Pty Ltd, 11 Blackfriar Pl Wetherill Park 2164	62950	1991	Premise Match	63m	West
19	Buildings Pre-Fabricated, Portable &/or Modular Mfrs &/or Dists &/or Erectors	Australian Portable Building Pty. Ltd., (Inc. In N.S.W), 58 Redfern St, Wetherill Park 2164	37511	1991	Premise Match	81m	North West
	BUILDINGS-PRE-FABRICATED, PORTABLE &/OR CARRIERS &/OR CARTAGE CONTRACTORS. MODULAR MFRS. &/OR DISTS. &/OR ERECTORS.	Australian Portable Buildings Pty Ltd., 58-60 Redfern St Wetherill Park, New South Wales	80907	1991	Premise Match	81m	North West
	Hire Services	Australian Portable Buildings Pty. Ltd. (Inc in NSW), 58 Redfern St., Wetherill Park. 2164	48373	1991	Premise Match	81m	North West
20	Bakers	Lavash Australia, 22 Redfern St, Wetherill Park 2164	35311	1991	Premise Match	98m	North East
21	Metal Cutters	Alfred Steel-Coil Supplies Pty. Ltd., Unit 15/276 Victoria St. Wetherill Park. 2164	51597	1991	Premise Match	107m	West
	Engineers Supplies	Alltools, 33/276 Victoria St., Wetherill Park 2164	44893	1991	Premise Match	107m	West
	Upholsterers	Burns S. & A., Unit 20/276 Victoria St Wetherill Park 2164	65403	1991	Premise Match	107m	West
	Rustproofing Supplies &/or Equipment Mfrs &/or Dists	Corrosion Concepts Pty. Ltd., Unit 4/276 Victoria St Wetherill Park 2164	61387	1991	Premise Match	107m	West
	Pollution Control Equipment Mfrs &/or Dists	Corrosion Concepts Pty. Ltd., Unit 4/276 Victoria St., Wetherill Park. 2164	58430	1991	Premise Match	107m	West
	Hydraulic Hose Mfrs &/or Dists	Enzed Service Center, 34/276 Victoria St., Wetherill Park. 2164	48821	1991	Premise Match	107m	West
	Hydraulic Equipment Mfrs &/or Imps &/or Dists	Enzed Service Centre, 34/276 Victoria St., Wetherill Park. 2164	48746	1991	Premise Match	107m	West
	Auto Electricians	Esquivel, J & N., Unit 7/276 Victoria St., Wetherill Park 2164	34937	1991	Premise Match	107m	West
	Signs General	Fairfield Signs, Unit 31/276 Victoria St Wetherill Park 2164	62504	1991	Premise Match	107m	West
	Stationers Commercial	Fairfield Signs, Unit 31/276 Victoria St Wetherill Park 2164	63166	1991	Premise Match	107m	West
	Motor Engineers	Gomez J M Mechanical Repairs, Unit 18/276 Victoria St, Wetherill Park 2164	53191	1991	Premise Match	107m	West
	Motor Garages & Service Stations	Gomez, J. M. Mechanical Repairs, Unit 18/276 Victoria St, Wetherill Park 2164	53743	1991	Premise Match	107m	West
	Clothing Mfrs &/or W/salers Shirt &/or Collar &/or Pyjama	Merglint Pty. Ltd., Unit 8/276 Victoria St., Wetherill Park 2164	39542	1991	Premise Match	107m	West
	Concrete Mould Mfrs &/or Dists	Mould Parts Australia Pty. Ltd., Unit 6/276 Victoria St, Wetherill Park 2164	40504	1991	Premise Match	107m	West
	French Polishers	Prospect Franch Polishing, Unit 21/276 Victoria St., Wetherill Park 2164	46559	1991	Premise Match	107m	West
	Furniture Repairers &/or Remodellers	Prospect Franch Polishing, Unit 21/276 Victoria St., Wetherill Park. 2164	47401	1991	Premise Match	107m	West
	Motor Panel Beaters &/or Spray Painters	Specialist Auto Spray, Unit 1/276 Victoria St Wetherill Park 2164	54817	1991	Premise Match	107m	West
	Recycling Waste Products	Steves Rag Supplies, Unit 10/276 Victoria St Wetherill Park 2164	60908	1991	Premise Match	107m	West
	Confectionery Mfrs &/or Imps &/or W/salers	Sweetlady Confectionery, Unit 11/276 Victoria St., Wetherill Park 2164	40709	1991	Premise Match	107m	West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
21	Welders	Yap Engineering Pty Ltd, Unit 29/276 Victoria St Wetherill Park 2164	66089	1991	Premise Match	107m	West
22	Carriers &/or Cartage Contractors	Thompson Bros. Transport., Lot 1/68 Redfern St., Wetherill Park 2164	38501	1991	Premise Match	130m	North West
23	Gas Industrial &/or Medical Mfrs &/or Dists	R & R Industrial Supplies., 1 Verrell St., Wetherill Park. 2164	47514	1991	Premise Match	146m	North East

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Business Directory Records 1950-1991
Road or Area Matches

Universal Business Directory records from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
24	Aluminum &/or Aluminum Alloy Mfrs &/or Dists	A & P Aluminum Pty. Ltd., Lot 412 Victoria St., Wetherill Park 2164	34292	1991	Road Match	0m
	Dairy Product Mfrs &/or W/salers	Australian Co-operative Foods Limited, The, Victoria St., Wetherill Park 2164	41235	1991	Road Match	0m
	Gas Industrial &/or Medical Mfrs &/or Dists	C.I.G., Victoria St., Wetherill Park. 2164	47498	1991	Road Match	0m
	Spa Baths &/or Hot Tubs &/or Equipment Mfrs &/or Dists &/or Installers	Spa Serve, Unit 2 Lot 202 Victoria St Wetherill Park 2164	62875	1991	Road Match	0m
	Timber Merchants &/or Sawmillers	Taylor Allen & Co., Victoria St Wetherill Park 2164	64404	1991	Road Match	0m
	Stainless Steel Mfrs &/or Suppliers	Tubemakers Metal Centre, Victoria St Wetherill Park 2164	63106	1991	Road Match	0m
	Aluminum &/or Aluminum Alloy Mfrs &/or Dists	Tubemakers Metal Centre, Victoria St., Wetherill Park 2164	34323	1991	Road Match	0m
	CLUTCH MFRS. &/OR DISTS.-INDUSTRIAL.	Tubemakers William Adams Metal Centre, Victoria St, Wetherill Park. 2164	19033	1986	Road Match	0m
	COUNTING MACHINES &/OR DEVICES MFRS.	Tubemakers William Adams Metal Centre, Victoria St, Wetherill Park. 2164	20591	1986	Road Match	0m
	CHAIN-HEAVY-MFRS. &/OR IMPS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St, Wetherill Park.2164	13452	1986	Road Match	0m
	AUTOMATIC CONTROL EQUIPMENT IMPS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	4764	1986	Road Match	0m
	DATA PROCESSING EQUIPMENT MFRS. &/OR DISTS. &/ OR HIRERS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	21364	1986	Road Match	0m
	ELECTRIC SWITCH & CONTROL GEAR MFRS. &/OR IMPS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	26842	1986	Road Match	0m
	ELECTRONIC EQUIPMENT MFRS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	28032	1986	Road Match	0m
	ELECTRONIC EQUIPMENT REPAIRS &/OR SERVICING.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	28071	1986	Road Match	0m
	GEAR BOX MFRS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	38624	1986	Road Match	0m
	GRINDING MACHINES ¬PRECISION MFRS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	40398	1986	Road Match	0m
	INSTRUMENT-INDUSTRIAL-MFRS. &/OR IMPS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	48317	1986	Road Match	0m
	INSTRUMENT-MEASURING-MFRS, &/OR IMPS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	48414	1986	Road Match	0m
	LATHE MFRS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	51059	1986	Road Match	0m
	MACHINE TOOL MFRS. &/OR IMPS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	51996	1986	Road Match	0m
	MANUFACTURERS AGENTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	52676	1986	Road Match	0m
	MILLING MACHINE MFRS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	59492	1986	Road Match	0m
	POWER TRANSMISSION EQUIPMENT MFRS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	75791	1986	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
24	SAW BLADES - BAND, CIRCULAR, - MFRS. &/OR IMPS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	84533	1986	Road Match	0m
	STEEL MERCHANTS - GENERAL.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164	89201	1986	Road Match	0m
	TRANSMISSION EQUIPMENT MFRS. &/OR DISTS.	Tubemakers William Adams Metal Centre, Victoria St., Wetherill Park. 2164.	95120	1986	Road Match	0m
25	Builders &/or Building Contractors	Auburn United Formwork & Fixing Pty. Ltd, Lot 10, Redfern St, Wetherill Park 2164	36732	1991	Road Match	0m
	Builders &/or Building Contractors	Axis Building Group Pty. Ltd., Unit 1, Lot 6. Redfern St, Wetherill Park 2164	36741	1991	Road Match	0m
	Builders &/or Building Contractors	Axis Constructions Pty. Ltd., Unit 1, Lot 6. Redfern St, Wetherill Park 2164	96091	1991	Road Match	0m
	Roofing Contractors &/or Repairers	Axis Metal Roofing Pty. Ltd., Unit 1 Lot 6 Redfern St Wetherhill Park. 2164	61192	1991	Road Match	0m
	Roofing Material Mfrs &/or Dists	Axis Metal Roofing Pty. Ltd., Unit 1 Lot 6 Redfern St Wetherill Park 2164	61224	1991	Road Match	0m
	Cool Room Builders	Bondor Pty. Ltd., Lot 6, Redfern St., Wetherill Park 2164	40834	1991	Road Match	0m
	Insulating Material Mfrs &/or Dists &/or Suppliers	Bondor Pty. Ltd., Lot 6., Redfern St., Wetherill Park. 2164	49370	1991	Road Match	0m
	Truck &/or Bus Repairs	Brantam Pty Ltd, Lot 21 Redfern St Wetherill Park 2164	64974	1991	Road Match	0m
	Bakers & Pastrycooks Supplies	Cereform, Redfern St, Wetherill Park 2164	35399	1991	Road Match	0m
	Scrap Metal Merchants	Challenge Metalds, Lot 5 Redfern St Wetherill Park 2164	61650	1991	Road Match	0m
	Metal Merchants Non Ferrous	Challenge Metalds, Lot 5, Redfern St., Wetherill Park. 2164	51631	1991	Road Match	0m
	Furniture Removalists &/or Storage	Dawsons Removals Pty. Ltd., Lot 17 Redfern St., Wetherill Park. 2164	47339	1991	Road Match	0m
	Engineers Fabricating	Multi Select Services Pty Ltd, Lot 10 Redfern St., Wetherill Park 2164	43783	1991	Road Match	0m
	Buildings Pre-Fabricated, Portable &/or Modular Mfrs &/or Dists &/or Erectors	Pacesetter Portable Buildings, Lot 6, Redfern St., Wetherill Park 2164	37534	1991	Road Match	0m
	Hire Services	Pacestter Portable Buildings, Lot 6., Redfern St., Wetherill Park. 2164	48475	1991	Road Match	0m
	Powder Coating Equipment Service	Polycoaters Pty. Ltd., Dock 4, Lot 9, Redfern St., Wetherill Park. 2164	58522	1991	Road Match	0m
	Motor Engineers	Reed John Automotive, Redfern St Wetherill Park 2164	53407	1991	Road Match	0m
	Motor Garages & Service Stations	Reed, John Automotive, Redfern St., Wetherill Park 2164	53806	1991	Road Match	0m
	Camping Equipment Mfrs &/or Dists	Vita Pacific Limited, Lot 2, Redfern St., Smithfield 2164	38000	1991	Road Match	0m
	Plastic Goods Mfrs &/or Imps &/or Dists	Vita Pacific Limited., Lot 2, Redfern St., Smithfield. 2164	57957	1991	Road Match	0m
	Furniture Removalists &/or Storage	Williamson Bros Pty Ltd, Lot 17., Redfern St., Wetherill Park. 2164	47385	1991	Road Match	0m
	BUILDING-PORTABLE-MFRS.	APB Pty Ltd., Redfern St., Wetherill Park. 2164	9147	1986	Road Match	0m
	FLY SCREEN DOOR &/OR WINDOW MFRS. &/OR DISTS.	Delvec Screens, Redfern St., Smithfield. 2164	34050	1986	Road Match	0m
	SECURITY SERVICES.	Derek, John Security Pty. Ltd., Redfern St., Wetherill Park. 2164	85650	1986	Road Match	0m
	HARDWARE MFRS. &/OR DISTS.	Doric Products, Lot 9 Redfern St., Wetherill Park. 2164	44406	1986	Road Match	0m
	LOCK MFRS. &/OR DISTS.	Doric Products, Lot 9 Redfern St., Wetherill Park. 2164	51747	1986	Road Match	0m
	CRANES &/OR HOISTS INSTALLATION &/OR SERVICING.	E.C.S.A. Pty. Limited, Lot 3 Redfern St., Wetherill Park. 2164	20700	1986	Road Match	0m
	ELECTRIC HOISTS.	E.C.S.A. Pty. Limited, Lot 3 Redfern St., Wetherill Park. 2164	26308	1986	Road Match	0m
	HOIST MFRS. &/OR DISTS.	E.C.S.A. Pty. Limited, Lot 3 Redfern St., Wetherill Park. 2164	46036	1986	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
25	MATERIAL HANDLING EQUIPMENT MFRS. &/OR IMPS. &/OR DISTS.	E.C.S.A. Pty. Limited, Lot 3 Redfern St., Wetherill Park. 2164	53078	1986	Road Match	0m
	CRANES-MOBILE & TRAVEL TOWER-PROPRIETORS &/OR HIRERS.	Kone Cranes Aust. Pty. Ltd., Lot 3 Redfern St., Wetherill Park. 2164	20747	1986	Road Match	0m
	MOTOR BODY BUILDERS.	R.A.V. Body Works Pty. Ltd, Lot 9 Redfern St., Wetherill Park. 2164	61314	1986	Road Match	0m
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	R.A.V. Body Works Pty. Ltd., Lot 9 Redfern St., Wetherill Park. 2164	66674	1986	Road Match	0m
	SHEET METAL WORKERS.	R.A.V. Body Works Pty. Ltd., Lot 9 Redfern St., Wetherill Park. 2164	86121	1986	Road Match	0m
	DOOR MFRS. &/OR DISTS. &/OR INSTALLERS.	Vista Walls, Lot 9 Redfern St., Wetherill Park. 2164	24711	1986	Road Match	0m
	WINDOW FRAME MFRS. &/OR DISTS.	Vista Walls, Lot 9 Redfern St., Wetherill Park. 2164.	98993	1986	Road Match	0m
26	Carriers &/or Cartage Contractors	Alternate Transport Services Pty. Ltd., Victoria St., Smithfield 2164	38300	1991	Road Match	118m
	Tyre Dealers &/or Retreaders &/or Vulcanisers	Victoria Street Tyre & Brake Service Pty Ltd, Victoria St Smithfield 2164	65364	1991	Road Match	118m
	Motor Brake Specialists	Victoria Street Tyre & Brake Service Pty Ltd, Victoria St., Smithfield 2164	52335	1991	Road Match	118m
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Canto Smash Repairs, Victoria St., Smithfield. 2164	66159	1986	Road Match	118m
	MOTOR GARAGES & SERVICE STATIONS.	Independent Service Station, The, Victoria St., Smithfield. 2164	64888	1986	Road Match	118m
	TYRE DEALERS &/OR RETREADERS &/OR VULCANISERS.	Independent Service Station, The, Victoria St., Smithfield. 2164	96370	1986	Road Match	118m
	CABINET MAKERS.	Key Industries Pty. Ltd., Victoria St., Smithfield. 2164	11061	1986	Road Match	118m
	STEREOPHONIC EQUIPMENT MFRS. &/OR DISTS.	Key Industries Pty. Ltd., Victoria St., Smithfield. 2164	89326	1986	Road Match	118m
	MOTOR ELECTRICIANS.	P.C. Auto Electrical Service, Victoria St., Smithfield. 2164	62979	1986	Road Match	118m
	ENGINEERS – FLOUR MILLING.	Silo Constructions Pty., Victoria St., Smithfield 2164	29632	1986	Road Match	118m
	MOTOR GARAGES & SERVICE STATIONS.	Spinelli Automotive, Victoria St., Smithfield. 2164	65496	1986	Road Match	118m
	SPORTS GOODS MFRS. (S4815)	Key Industries Pty. Ltd., Victoria St., Smithfield. 2164.	75368	1982	Road Match	118m
	STORAGE & DISTRIBUTION CENTRES.	B & R. Storage & Distribution, Victoria St., Smithfield. 2164	68699	1978	Road Match	118m
	CLOTHING - MENS & BOYS WEAR MFRS. &/OR W/SALERS.	Stewart, R. & Co. Pty. Ltd., Victoria St., Smithfield. 2164	17574	1975	Road Match	118m
	ALUMINIUM DISTRIBUTORS (A310)	Alcover Pty. Ltd., Victoria St, Smithfield	261165	1970	Road Match	118m
	ALUMINIUM PRODUCTS MFRS. (A320)	Alcover Pty. Ltd., Victoria St, Smithfield	261216	1970	Road Match	118m
	ALUMINIUM MANUFACTURERS-SHEETS, STRIPS, Etc.	Alcover Pty. Ltd., Victoria St., Smithfield	261201	1970	Road Match	118m
	ALUMINIUM WARE MFRS. &/OR WHOLESALERS (A330)	Alcover Pty. Ltd., Victoria St., Smithfield	261296	1970	Road Match	118m
	BUILDERS' SUPPLIERS (B814)	Alcover Pty. Ltd., Victoria St., Smithfield	271199	1970	Road Match	118m
	WELDERS-ELECTRIC &/OR OXY	Fenon Industries, Victoria Rd., Smithfield	373640	1970	Road Match	118m
	ENGINEERS-FABRICATING (E580)	Fenon Industries., Victoria Rd., Smithfield	298498	1970	Road Match	118m
	ENGINEERS-GENERAL &/OR MFRG.&/OR MECHANICAL (E615)	Fenon Industries., Victoria Rd., Smithfield	299119	1970	Road Match	118m
	WELDERS-ELECTRIC &/OR OXY	Harvie & Wilbow, Victoria St., Smithfield	373703	1970	Road Match	118m
	BUILDERS & CONTRACTORS (B800)	Harvie & Wilbow., Victoria St., Smithfield	270157	1970	Road Match	118m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
26	ALUMINIUM PRODUCTS MFRS. (A320)	Impact Aluminium Pty. Ltd., Victoria St., Smithfield	261241	1970	Road Match	118m
	ENGINEERS-GENERAL &/OR MFRG.&/OR MECHANICAL (E615)	R. & M. Fabrications, Victoria St., Smithfield	299546	1970	Road Match	118m
	ENGINEERS-FABRICATING (E580)	R. & M. Fabrications., Victoria St., Smithfield	298601	1970	Road Match	118m
	Wire Products Mfrs.	Australian Pet Supplies Pty. Ltd, Victoria Rd, Smithfield	157631	1965	Road Match	118m
	Produce Merch. - W'Sale	Australian Pet Supplies Pty. Ltd., Victoria Rd., Smithfield	136882	1965	Road Match	118m
	Animal & Bird Dealers	Australian Pet Supplies Pty. Ltd., Victoria St., Smithfield	46172	1965	Road Match	118m
	Animal & Bird Food Supplies	Australian Pet Supplies Pty. Ltd., Victoria St., Smithfield	46220	1965	Road Match	118m
	Aquariums & Supplies	Australian Pet Supplies Pty. Ltd., Victoria St., Smithfield	46521	1965	Road Match	118m
	Veterinary Supplies & Instruments - Mfrs. &/or Distributors	Australian Pet Supplies Pty. Ltd., Victoria St., Smithfield	155398	1965	Road Match	118m
	Earth-Moving Contractors	Carristor Pty. Ltd., Lot 7, Victoria St., Smithfield	76730	1965	Road Match	118m
	Earth-Moving Mach. Hirers	Carristor Pty. Ltd., Lot 7, Victoria St., Smithfield	76966	1965	Road Match	118m
	Concrete Products Mfrs.	Everhard Concrete Products (N.S.W.) Pty. Ltd., Victoria St., Smithfield	69906	1965	Road Match	118m
	Welders - Electric &/or Oxy	Harvie & Wilbow., Victoria St. Smithfield	156510	1965	Road Match	118m
	Builders & Contractors	Harvie & Wilbow., Victoria St., Smithfield	55340	1965	Road Match	118m
	WELDERS-ELECTRIC &/OR OXY	Harvie & Wilbow, Victoria St, Smithfield	262141	1961	Road Match	118m
	BUILDERS & CONTRACTORS	Harvie & Wilbow, Victoria St., Smithfield	276396	1961	Road Match	118m
	STEEL ERECTORS	Harvie & Wilbow, Victoria St., Smithfield	253341	1961	Road Match	118m
	STEEL FABRICATORS	Harvie & Wilbow, Victoria St., Smithfield	253459	1961	Road Match	118m
	FIBROUS PLASTER MFRS.	Hey, D. J., Victoria St., Smithfield	310179	1961	Road Match	118m
	TUBE-COLLAPSIBLE-MFRS.	Impact Containers Pty Ltd (Wetherill Park) Lots 3-5, Victoria St., Smithfield	259780	1961	Road Match	118m
	ALUMINIUM PRODUCTS MFRS.	Impact Containers Pty Ltd . Lots 3-5, Victoria St., Smithfield	267659	1961	Road Match	118m
	WOODWORKERS/TURNERS	Roberts, W. H., Victoria St., Smithfield	263656	1961	Road Match	118m
	TANNERS	Page Bros., Victoria St., Smithfield	107024	1950	Road Match	118m

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Dry Cleaners, Motor Garages & Service Stations

250 Victoria Street, Wetherill Park, NSW 2164

Legend

- Site Boundary
- Buffer 500m
- Property Boundary
- Business directory records mapped to a specific premise
- Business directory records mapped to a road intersection
- Business directory records mapped to a road corridor
- Business directory records mapped to a general area

Scale: 0 100 200 300 400 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 February 2021

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

Historical Business Directories

250 Victoria Street, Wetherill Park, NSW 2164

Dry Cleaners, Motor Garages & Service Stations 1948-1993 Premise or Road Intersection Matches

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

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	MOTOR GARAGES & SERVICE STATIONS.	Harry's Auto Services, Unit 26/272 Victoria St., Wetherill Park. 2164	19014	1993	Premise Match	53m	West
	MOTOR GARAGES & SERVICE STATIONS.	J N C Car Care Centre, Unit 33/272 Victoria St., Wetherill Park. 2164	19032	1993	Premise Match	53m	West
	Motor Garages & Service Stations	Harry's Auto Services, Unit 26/272 Victoria St., Wetherill Park 2164	97207	1991	Premise Match	53m	West
	Motor Garages & Service Stations	J.N.C. Car Care Centre, Unit 33/272 Victoria St, Wetherill Park 2164	97061	1991	Premise Match	53m	West
2	Motor Garages & Service Stations	Gomez, J. M. Mechanical Repairs, Unit 18/276 Victoria St, Wetherill Park 2164	53743	1991	Premise Match	107m	West
3	MOTOR GARAGES & SERVICE STATIONS.	D & O Mechanical Repairs, Unit A5/159 Chifley St., Wetherill Park. 2164	18890	1993	Premise Match	242m	East
	Motor Garages & Service Stations	D & O Mechanical Repairs, Unit A5/159 Chifley St, Wetherill Park 2164	53676	1991	Premise Match	242m	East
4	MOTOR GARAGES & SERVICE STATIONS.	Sams Mechanical Service, 895 The Horsley Dr., Smithfield. 2164	20302	1993	Premise Match	429m	South East
	Motor Garages & Service Stations	Sams Mechanical Service, 895 The Horsely Dr, Smithfield 2164	53831	1991	Premise Match	429m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Sams Mechanical Service, 895 The Horsley Dr., Smithfield. 2164	12074	1990	Premise Match	429m	South East
	MOTOR GARAGE & SERVICE STATIONS.	Sams Mechanical Service, 895 The Horsley Dr., Smithfield. 2164	5497	1989	Premise Match	429m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Sams Mechanical Service, 895 The Horsley Dr., Smithfield. 2164	59886	1988	Premise Match	429m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Sams Mechanical Service, 895 The Horsley Dr., Smithfield. 2164	65389	1986	Premise Match	429m	South East
	MOTOR GARAGES & SERVICE STATIONS.	Sams Mechanical Service, 895 The Horsley Dr., Smithfield. 2164	45504	1985	Premise Match	429m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sams Mechanical Service, 895 The Horsley Dr Smithfield. 2164	34076	1984	Premise Match	429m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sams Mechanical Service., 895 The Horsley Dr., Smithfield 2164	21528	1983	Premise Match	429m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Sams Mechanical Service, 895 The Horsley Dr., Smithfield. 2164.	57519	1982	Premise Match	429m	South East
5	MOTOR GARAGES & SERVICE STATIONS.	Solo Oil Australia Pty Ltd., Unit 5/91 Redfern St., Wetherill Park. 2164	25457	1993	Premise Match	434m	North West
	Motor Garages & Service Stations	Solo Oil Australia Pty Ltd, Unit 5/91 Redfern St., Wetherill Park 2164	53902	1991	Premise Match	434m	North West
6	MOTOR GARAGES & SERVICE STATIONS.	Vaccan. R G Mechanical Repairs, 1/76 Hassall St., Smithfield. 2164	25516	1993	Premise Match	437m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
6	MOTOR GARAGES & SERVICE STATIONS.	Vaccari R. Mechanical Repairs, 1/76 Hassall St., Smithfield. 2164	18358	1990	Premise Match	437m	North East
	MOTOR GARAGE & SERVICE STATIONS.	Vaccari, R. Mechanical Repairs, 1/76 Hassell St., Smithfield. 2164	5689	1989	Premise Match	437m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Vaccari R. Mechanical Repairs, 1/76 Hassell St., Smithfield. 2164	64166	1988	Premise Match	437m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Roy Vaccari Mechanical Repairs 1, 76 Hassall Street, Smithfield. 2164	63837	1986	Premise Match	437m	North East
7	MOTOR GARAGES & SERVICE STATIONS.	Independant Motor Repairs (Sydney) Pty. Ltd., 88 Hassall St., Wetherill Park. 2164	11710	1990	Premise Match	492m	North East
	MOTOR GARAGE & SERVICE STATIONS.	Independant Motor Repairs (Sydney) Pty. Ltd., 88 Hassell St., Wetherill Park. 2164	5102	1989	Premise Match	492m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Independant Motor Repairs (Sydney) Pty. Ltd., 88 Hassall St., Wetherill Park. 2164	59442	1988	Premise Match	492m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Independent Motor Repairs (Sydney) Pty. Ltd., 88 Hassall St., Wetherill Park. 2164	64887	1986	Premise Match	492m	North East

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Dry Cleaners, Motor Garages & Service Stations 1948-1993 Road or Area Matches

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

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
8	Motor Garages & Service Stations	Reed, John Automotive, Redfern St., Wetherill Park 2164	53806	1991	Road Match	0m
	MOTOR GARAGES & SERVICE STATIONS.	Solo Oil Australia Pty. Ltd.Unit 5, Lot 100 Redfern St., Wetherill Park 2164	12160	1990	Road Match	0m
	MOTOR GARAGE & SERVICE STATIONS.	Solo Oil Australia Pty. Ltd., Unit 5, Lot 100 Redfern St., Wetherill Park. 2164	5579	1989	Road Match	0m
9	MOTOR GARAGE & SERVICE STATIONS.	T & S Auto Repair Unit 11, Lot 202, Victoria St., Wetherill Park. 2164	5638	1989	Road Match	0m
10	MOTOR GARAGES & SERVICE STATIONS.	Independent Service Station, The, Victoria St., Smithfield. 2164	59443	1988	Road Match	118m
	MOTOR GARAGES & SERVICE STATIONS.	Spinelli Automotive, Victoria St., Smithfield. 2164	59992	1988	Road Match	118m
	MOTOR GARAGES & SERVICE STATIONS.	Independent Service Station, The, Victoria St., Smithfield. 2164	64888	1986	Road Match	118m
	MOTOR GARAGES & SERVICE STATIONS.	Spinelli Automotive, Victoria St., Smithfield. 2164	65496	1986	Road Match	118m
	MOTOR GARAGES & SERVICE STATIONS.	Independent Service Station, The Victoria St., Smithfield. 2164	44990	1985	Road Match	118m
	MOTOR GARAGES & SERVICE STATIONS.	Spinelli Automotive, Victoria St., Smithfield. 2164	45607	1985	Road Match	118m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Independent Service Station, The Victoria St., Smithfield. 2164	28490	1984	Road Match	118m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Spinelli Automotive, Victoria St., Smithfield. 2164	34168	1984	Road Match	118m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Independent Service Station., The Victoria St., Smithfield 2164	14918	1983	Road Match	118m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Spinelli Automotive., Victoria St., Smithfield 2164	21617	1983	Road Match	118m
11	MOTOR GARAGES &/OR ENGINEERS.	Arterial Service Station., The Horsley Drv Smithfield	13071	1972	Road Match	261m
	MOTOR GARAGES &/OR ENGINEERS.	Arterial Service Station., The Horsley Drv Smithfield	62728	1971	Road Match	261m
	MOTOR GARAGES & ENGINEERS(M6S6)	Arterial Service Station., The Horsley Drv., SMITHFIELD	337211	1970	Road Match	261m
	MOTOR GARAGES & ENGINEERS.	Arterial Service Station., The Horsley Drv Smithfield	47173	1969	Road Match	261m
	MOTOR GARAGES & ENGINEERS	Arterial Service Station., The Horsley Drv Smithfield	26548	1968	Road Match	261m
	MOTOR GARAGES & ENGINEERS.	Arterial Service Station., The Horsley Drv Smithfield	11038	1967	Road Match	261m
	MOTOR GARAGES & ENGINEERS.	Arterial Service Station., The Horsley Drv Smithfield	60764	1966	Road Match	261m
	Motor Garages & Engineers	Arterial Service Station, The Horsley Drv. Smithfield	123400	1965	Road Match	261m
	MOTOR GARAGES & ENGINEERS	Arterial Service Station., The Horsley Drv Smithfield	48677	1964	Road Match	261m

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Aerial Imagery 2020

250 Victoria Street, Wetherill Park, NSW 2164

Aerial Imagery 2015

250 Victoria Street, Wetherill Park, NSW 2164

Scale: 0 40 80 120 160 Meters	Data Sources: Aerial Imagery © Aerometrex Pty Ltd	Coordinate System: GDA 1994 MGA Zone 56	Date: 16 February 2021

Aerial Imagery 2009

250 Victoria Street, Wetherill Park, NSW 2164

Data Sources: Aerial Imagery © Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56

Date: 16 February 2021

Aerial Imagery 2000

250 Victoria Street, Wetherill Park, NSW 2164

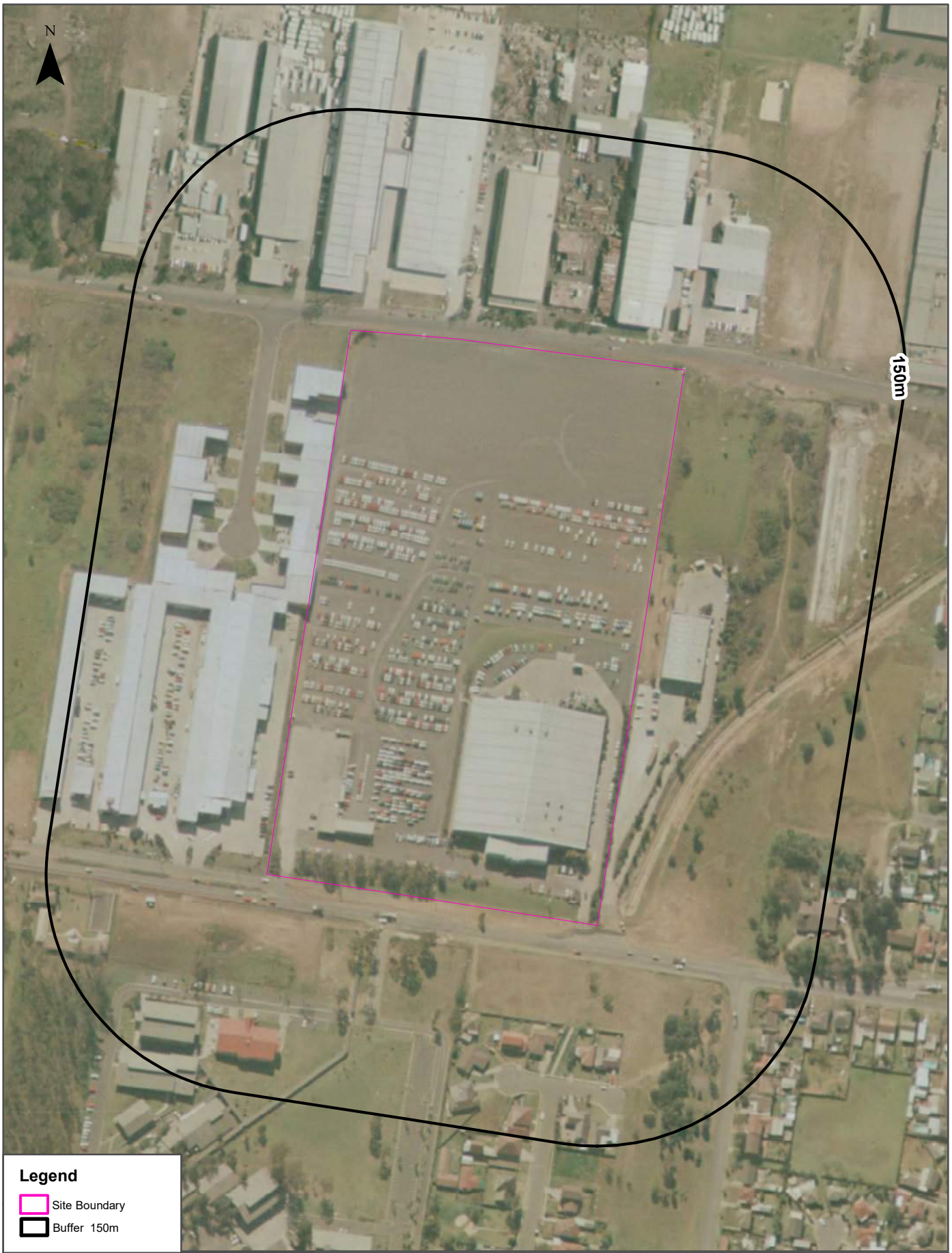
Scale: 0 40 80 120 160 Meters	Data Sources: Aerial Imagery © Aerometrex Pty Ltd	Coordinate System: GDA 1994 MGA Zone 56	Date: 16 February 2021

Aerial Imagery 1994

250 Victoria Street, Wetherill Park, NSW 2164

Aerial Imagery 1991

250 Victoria Street, Wetherill Park, NSW 2164



Aerial Imagery 1986

250 Victoria Street, Wetherill Park, NSW 2164

Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 12 February 2021
0 40 80 120 160 Meters	© NSW Department of Customer Service	GDA 1994 MGA Zone 56	

Aerial Imagery 1982

250 Victoria Street, Wetherill Park, NSW 2164

Aerial Imagery 1978

250 Victoria Street, Wetherill Park, NSW 2164

Aerial Imagery 1970

250 Victoria Street, Wetherill Park, NSW 2164

Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 15 February 2021
0 40 80 120 160 Meters	© NSW Department of Customer Service	GDA 1994 MGA Zone 56	

Aerial Imagery 1965

250 Victoria Street, Wetherill Park, NSW 2164

Aerial Imagery 1961

250 Victoria Street, Wetherill Park, NSW 2164

Aerial Imagery 1955

250 Victoria Street, Wetherill Park, NSW 2164

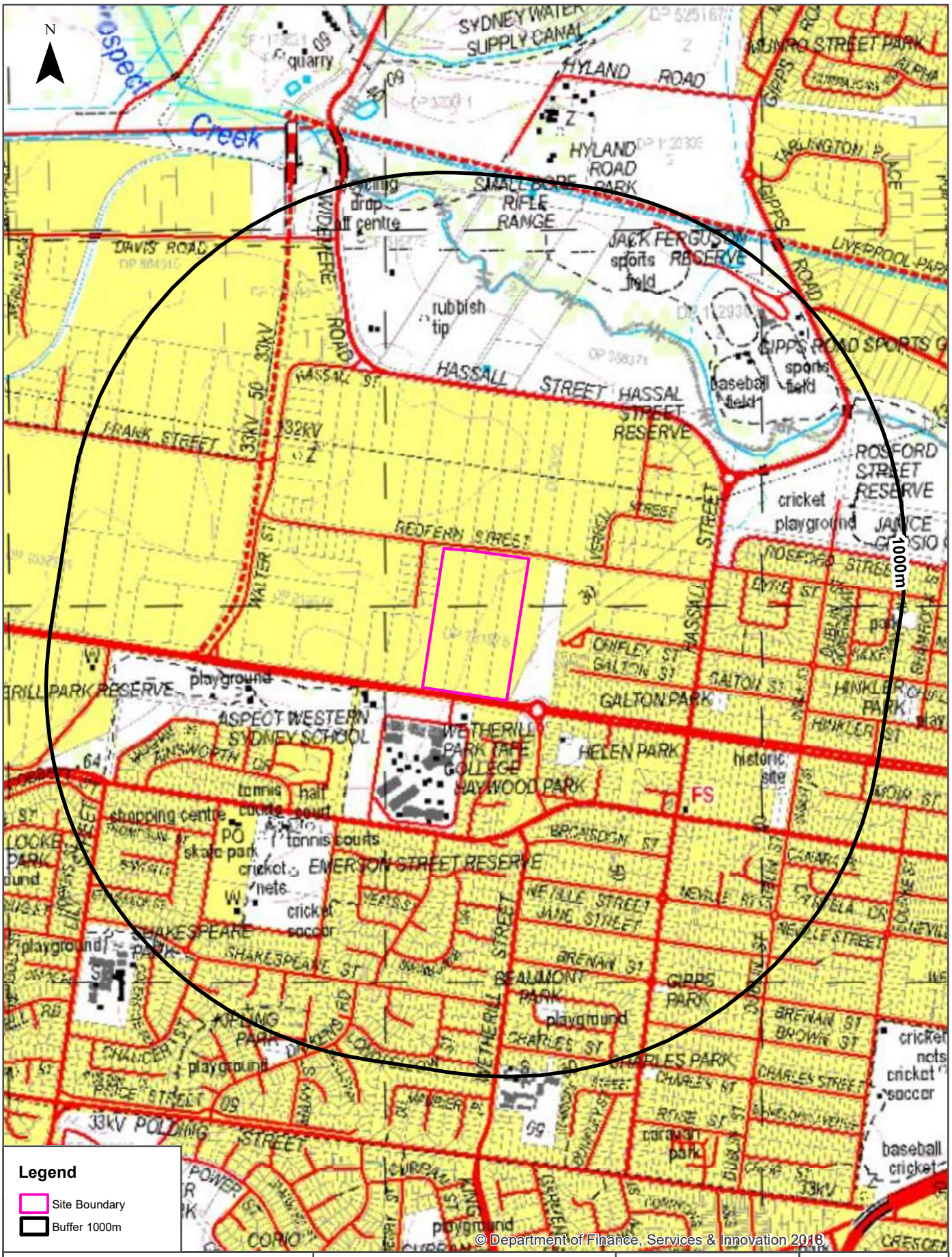
Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 12 February 2021
0 40 80 120 160 Meters	© NSW Department of Customer Service	GDA 1994 MGA Zone 56	

Aerial Imagery 1930

250 Victoria Street, Wetherill Park, NSW 2164

Topographic Map 2015

250 Victoria Street, Wetherill Park, NSW 2164



Legend

- Site Boundary
- Buffer 1000m

Scale: 0 100 200 400 600 Meters

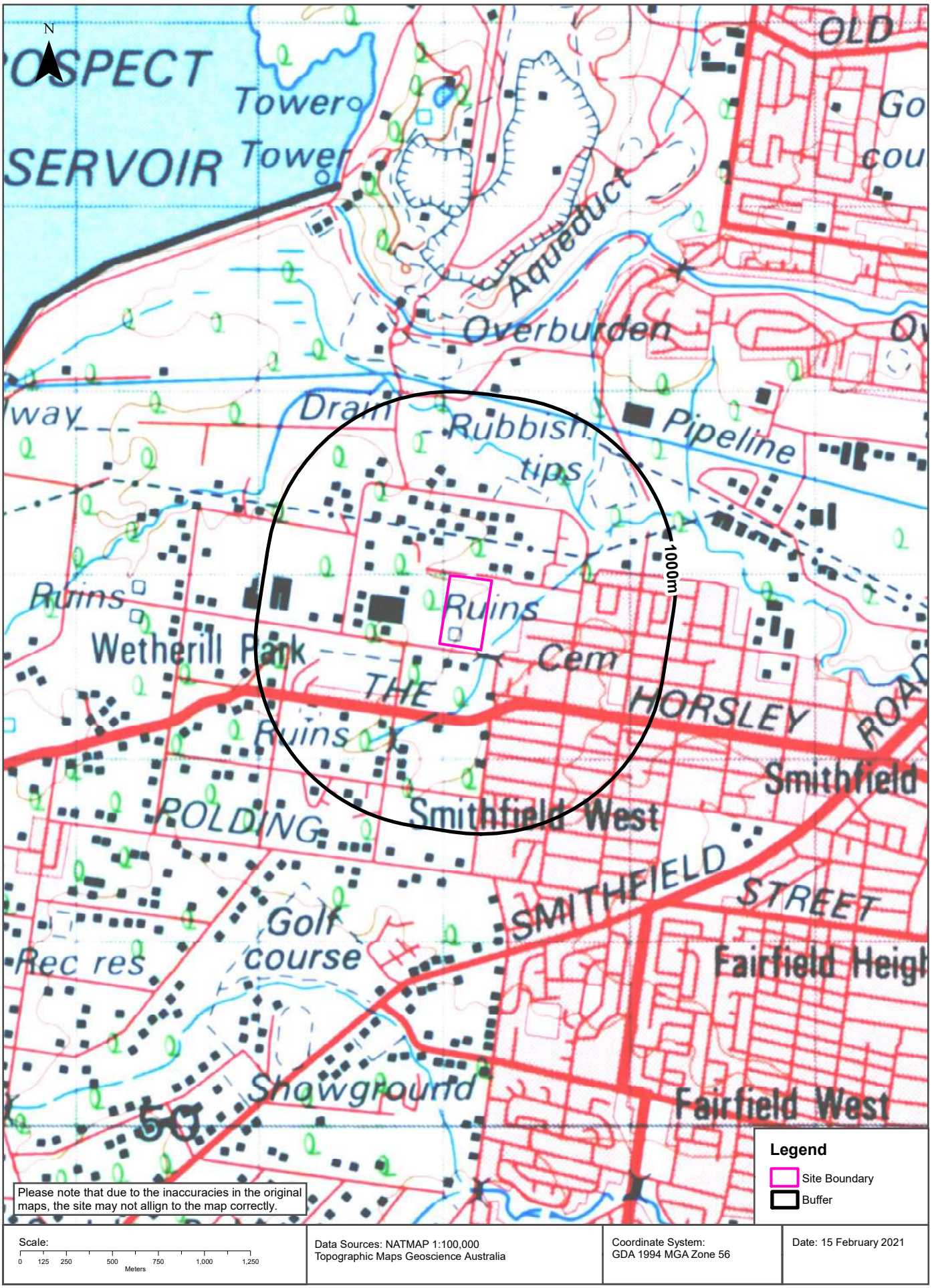
Data Sources: Topographic Map Data
© NSW Land and Property Information

Coordinate System:
GDA 1994 MGA Zone 56

Date: 15 February 2021

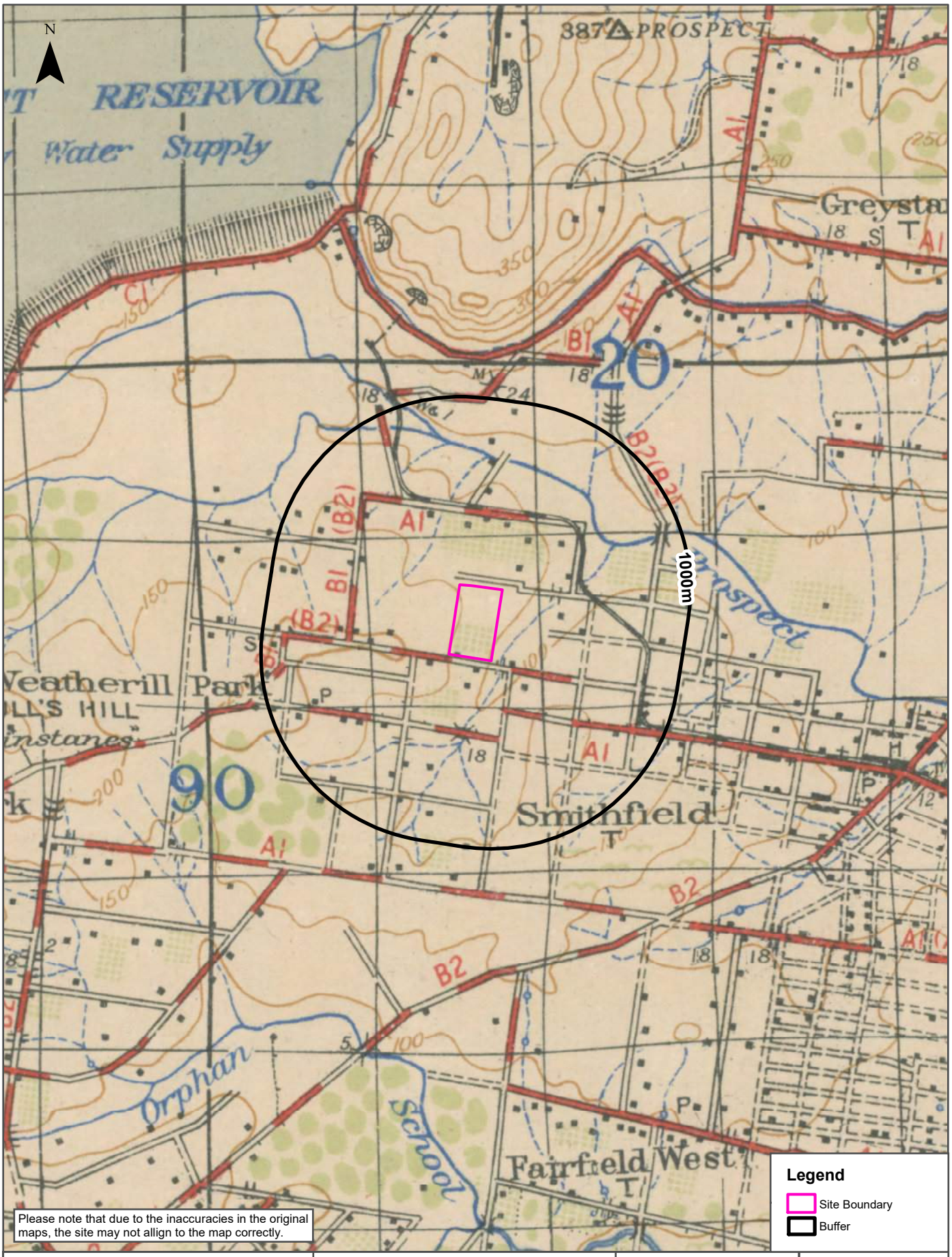
Historical Map 1975

250 Victoria Street, Wetherill Park, NSW 2164



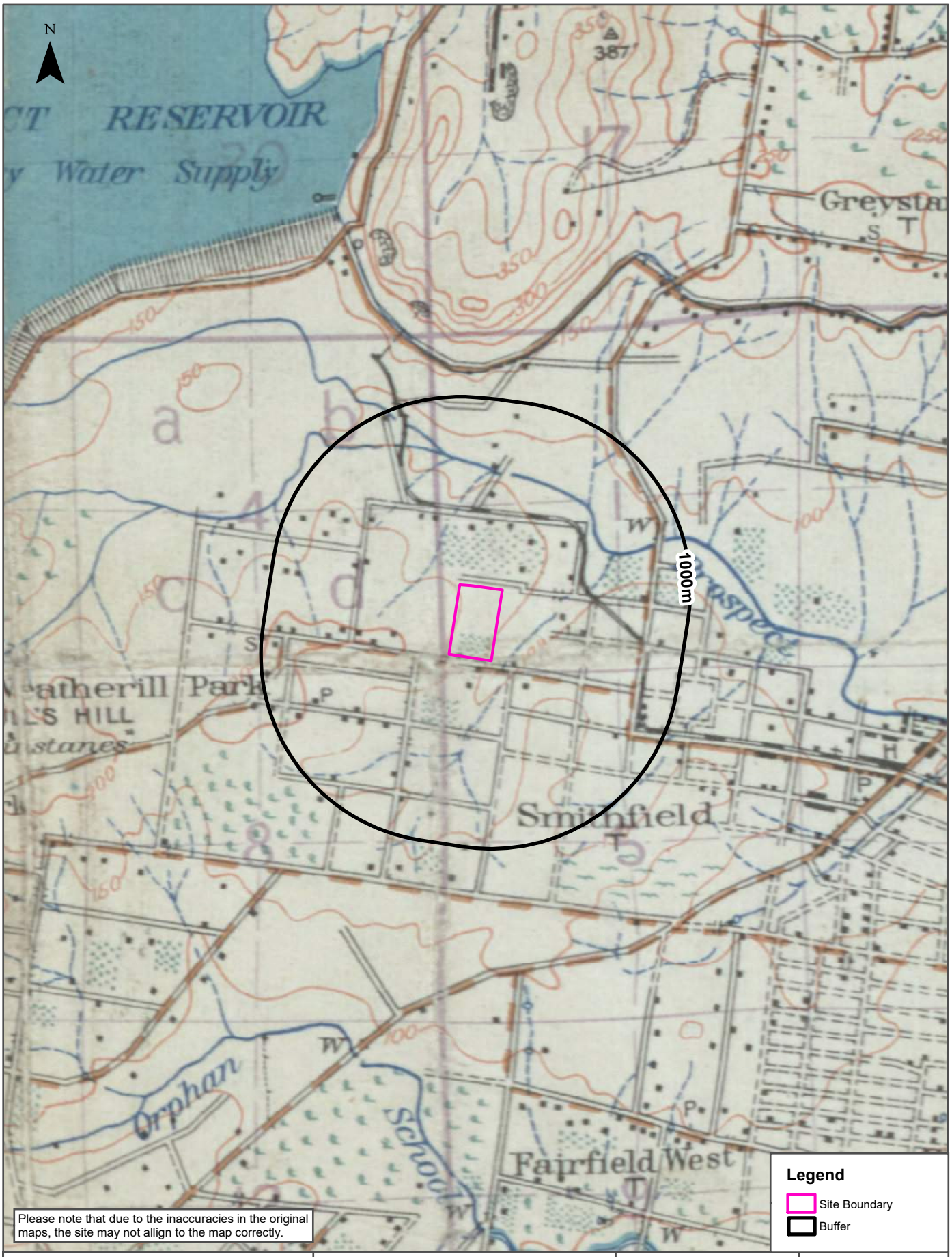
Historical Map c.1942

250 Victoria Street, Wetherill Park, NSW 2164



Historical Map c.1929

250 Victoria Street, Wetherill Park, NSW 2164



Scale: 0 125 250 500 750 1,000 1,250 Meters

Data Sources: Australia 1:63360, Produced by Australian Section Imperial General Staff

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 February 2021

Topographic Features

250 Victoria Street, Wetherill Park, NSW 2164

Topographic Features

250 Victoria Street, Wetherill Park, NSW 2164

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
1611558	Parking Area	Parking Area	57m	South West
1610991	Special School	ASPECT WESTERN SYDNEY SCHOOL	141m	South West
1611387	Technical College	WETHERILL PARK TAFE COLLEGE	184m	South
1611023	Park	HAYWOOD PARK	215m	South
1610980	Park	HELEN PARK	225m	South East
1611559	Parking Area	Parking Area	259m	South West
1611560	Parking Area	Parking Area	276m	South
1611017	Sports Court	HALF COURT	478m	South West
1611020	Picnic Area	PLAYGROUND	490m	West
1610984	Sports Court	TENNIS COURTS	502m	South West
1610798	Community Facility	WETHERILL PARK TENNIS CENTRE	523m	South West
1610985	Sports Court	TENNIS COURTS	534m	South West
1611032	Park	GALTON PARK	549m	East
1611561	Parking Area	Parking Area	549m	South West
1611016	Sports Court	PARKOUR TRAINING AREA	551m	South West
1610972	Fire Station	SMITHFIELD FIRE STATION	557m	South East
1611002	Park	HASSAL STREET RESERVE	562m	North East
1611015	Sports Court	SKATE PARK	583m	South West
1611024	Park	EMERSON STREET RESERVE	584m	South West
1611014	Sports Court	CRICKET NETS	601m	South West
1611034	Rubbish Depot	SUSTAINABLE RESOURCE CENTRE	608m	North
1610993	Post Office	SMITHFIELD WEST POST OFFICE	611m	South West
1610973	Shopping Centre	WETHERILL PARK SHOPPING CENTRE	622m	South West
1611027	Park	WETHERILL PARK RESERVE	649m	West
1611018	Sports Field	CRICKET SOCCER	678m	South West
1611010	Sports Field	CRICKET	735m	East
1691233	Sports Field	BASEBALL FIELD	743m	North East
1611012	Historic Site	SMITHFIELD CEMETERY	772m	South East
1611006	Place Of Worship	SPANISH SEVENTH DAY ADVENTIST CHURCH	774m	South West
1691237	Park	GIPPS ROAD SPORTS GROUND	808m	North East
1611028	Park	BEAUMONT PARK	832m	South

Map Id	Feature Type	Label	Distance	Direction
1611011	Park	PLAYGROUND	837m	East
1611009	Park	PLAYGROUND	838m	South
1611582	Parking Area	Parking Area	847m	East
1691225	Sports Field	Sports Field	848m	North East
1691227	Sports Field	Sports Field	848m	North East
1611022	Rubbish Depot	RECYCLING DROP OFF CENTRE	850m	North
1691226	Sports Field	Sports Field	863m	North East
1610981	Park	GIPPS PARK	871m	South East
1611008	Place Of Worship	PHUOC HUE TEMPLE	878m	West
1611030	Park	ROSFORD STREET RESERVE	880m	East
1691955	Parking Area	Parking Area	925m	North East
1611003	Park	WINDEMERE ROAD RESERVE	928m	North
1611099	Sports Field	JANICE CROSIO OVAL	935m	East
1691238	Park	JACK FERGUSON RESERVE	980m	North East

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

250 Victoria Street, Wetherill Park, NSW 2164

Tanks (Areas)

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

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

Tanks (Points)

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

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

Tanks Data Source: © Land and Property Information (2015)
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Major Easements

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

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120119473	Primary	Undefined		205m	North
178878223	Primary	Right of way	6.506M & VAR	232m	South East
120111666	Primary	Undefined		344m	North East
120118091	Primary	Undefined		398m	South East
120115587	Primary	Undefined		564m	West
120114323	Primary	Undefined		579m	North East
120107813	Primary	Undefined		619m	North East
120115861	Primary	Undefined		628m	South
120118173	Primary	Undefined		680m	West
120122116	Primary	Undefined		695m	South East
120122212	Primary	Undefined		722m	South East
120119924	Primary	Undefined		774m	North
120116038	Primary	Undefined		835m	North West

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
167040787	Primary	Electricity	60m & Var	847m	North

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

250 Victoria Street, Wetherill Park, NSW 2164

State Forest

What State Forest exist within the dataset buffer?

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

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)
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National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N/A	No records in buffer				

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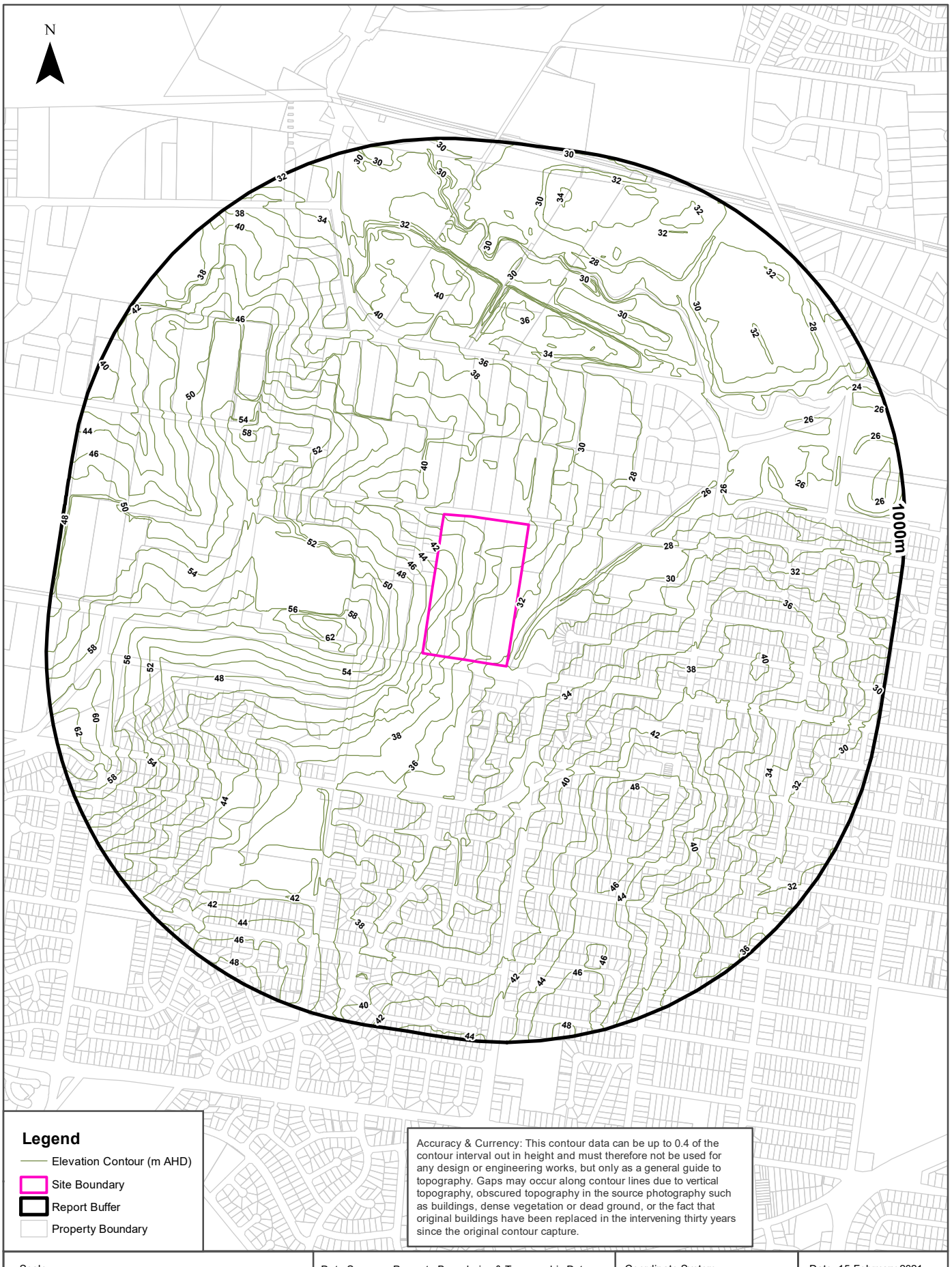
Elevation Contours (m AHD)

250 Victoria Street, Wetherill Park, NSW 2164



Hydrogeology & Groundwater

250 Victoria Street, Wetherill Park, NSW 2164

Hydrogeology

Description of aquifers on-site:

Description
Porous, extensive aquifers of low to moderate productivity

Description of aquifers within the dataset buffer:

Description
Porous, extensive aquifers of low to moderate productivity

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
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Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

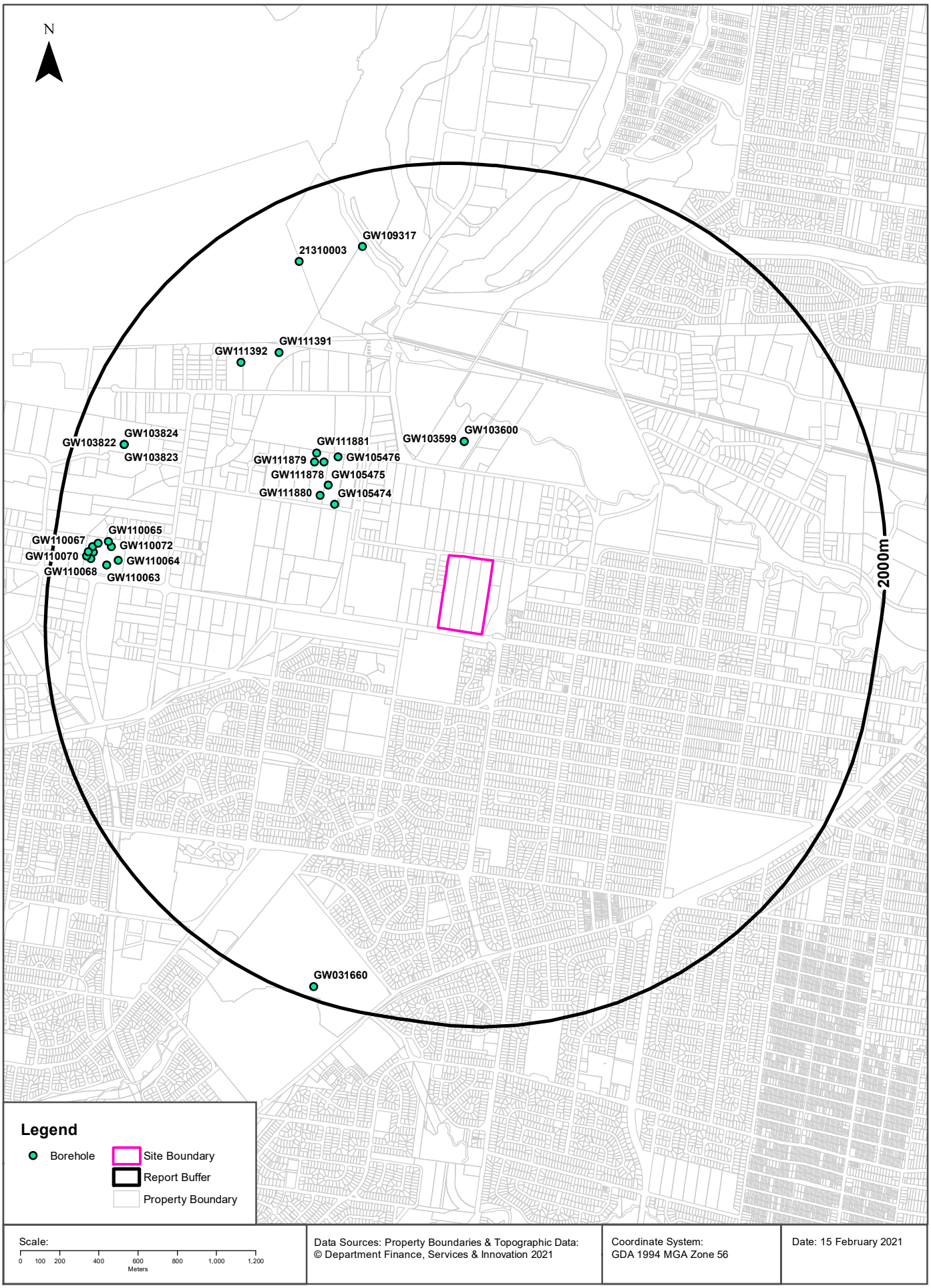
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

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

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

Groundwater Boreholes

250 Victoria Street, Wetherill Park, NSW 2164



Hydrogeology & Groundwater

250 Victoria Street, Wetherill Park, NSW 2164

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW103600	10BL157762	Bore		Monitoring Bore	Monitoring Bore		01/01/1999	5.00	5.00		1.00	0.347		584m	North
GW103599	10BL157762	Bore		Monitoring Bore	Monitoring Bore		01/01/1996	5.00	5.00					584m	North
GW105474	10BL162423	Bore		Monitoring Bore	Monitoring Bore		10/06/2003	9.30	9.30					636m	North West
GW105475	10BL162423	Bore		Monitoring Bore	Monitoring Bore		10/06/2003	9.50	9.50					711m	North West
GW111880	10BL603326	Bore	Private	Monitoring Bore	Monitoring Bore		23/04/2009	6.20	6.20					724m	North West
GW105476	10BL162423	Bore		Monitoring Bore	Monitoring Bore		10/06/2003	9.50						754m	North West
GW111878	10BL603326	Bore	Private	Monitoring Bore	Monitoring Bore		23/04/2009	5.50	5.50					793m	North West
GW111879	10BL603326	Bore	Private	Monitoring Bore	Monitoring Bore		23/04/2009	5.80	5.70					833m	North West
GW111881	10BL603326	Bore	Private	Monitoring Bore	Monitoring Bore		27/04/2009	6.50	6.50					852m	North West
GW111391	10BL604252	Bore	Private	Monitoring Bore	Monitoring Bore		06/10/2010	6.00	6.00					1348m	North West
GW111392	10BL604252	Bore	Private	Monitoring Bore	Monitoring Bore		06/10/2010	6.00	6.00					1444m	North West
GW109317	10BL602582	Bore	Private	Test Bore	Test Bore		09/09/2008	165.00	165.00	10000	19.00	2.100		1633m	North
GW110064	10BL600169	Well	Private	Monitoring Bore	Monitoring Bore		10/01/2006	1.10	1.10					1660m	West
21310003					UNK								33.48	1680m	North West
GW110072	10BL600169	Well	Private	Monitoring Bore	Monitoring Bore		10/01/2006	4.00	4.00					1707m	West
GW110063	10BL600169	Well	Private	Monitoring Bore	Monitoring Bore		09/01/2006	5.00	5.00					1715m	West
GW110065	10BL600169	Well	Private	Monitoring Bore	Monitoring Bore		09/01/2006	4.90	4.90					1724m	West
GW103823	10BL156668	Bore		Monitoring Bore	Monitoring Bore		31/05/1993	15.00	15.00					1748m	North West
GW103824	10BL156668	Bore		Monitoring Bore	Monitoring Bore		31/05/1993	15.00	15.00					1748m	North West
GW103822	10BL156668	Bore		Monitoring Bore	Monitoring Bore		30/01/1993	9.00	9.00					1748m	North West
GW110071	10BL600169	Well	Private	Monitoring Bore	Monitoring Bore		10/01/2006	5.10	5.10					1776m	West
GW110066	10BL600169	Well	Private	Monitoring Bore	Monitoring Bore		09/01/2006	4.20	4.20					1791m	West
GW110068	10BL600169	Well	Private	Monitoring Bore	Monitoring Bore		10/01/2006	5.00	5.00					1800m	West
GW110067	10BL600169	Well	Private	Monitoring Bore	Monitoring Bore		09/01/2006	4.20	4.20					1800m	West
GW110069	10BL600169	Well	Private	Monitoring Bore	Monitoring Bore		10/01/2006	3.90	3.90					1818m	West
GW110070	10BL600169	Well	Private	Monitoring Bore	Monitoring Bore		21/04/2009	5.10	5.10					1825m	West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW031660	10BL015924	Bore open thru rock	Local Govt	Industrial, Recreation (groundwater)	Irrigation		01/12/1965	152.40	152.40					1936m	South

Borehole Data Source : NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation for all bores prefixed with GW. All other bores © Commonwealth of Australia (Bureau of Meteorology) 2015. Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Hydrogeology & Groundwater

250 Victoria Street, Wetherill Park, NSW 2164

Driller's Logs

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

Groundwater No	Drillers Log	Distance	Direction
GW105474	0.00m-9.30m SHALE, BROWN	636m	North West
GW105475	0.00m-9.50m SHALE, BROWN	711m	North West
GW111880	0.00m-0.70m SILTY CLAY PALE BROWN 0.70m-1.20m SILTY CLAY,GREY 1.20m-2.00m BEDROCK WEATHERED,SILTY CLAY PURPLE/BROWN 2.00m-6.20m BEDROCK,CLAY,BROWN	724m	North West
GW111878	0.00m-0.20m FILL,DARK BROWN 0.20m-0.50m SILTY CLAY,RD/BROWN 0.50m-0.70m SILTY CLAY,DARK BROWN 0.70m-2.00m SILTY CLAY PALE BROWN/YELLOW 2.00m-3.00m CLAY GREY STIFF,DENSE 3.00m-5.00m SHALE/CLAY,WEATHERED BEDROCK,FREY 5.00m-5.50m BEDROCK SHALE,VERY HARD	793m	North West
GW111879	0.00m-0.30m FILL,SAND PALE YELLOW/BROWN 0.30m-0.50m SILTY CLAY,PALE BROWN,WITH MINOR GREY,PLASTIC 0.50m-0.70m IRONSTONE LAYER,DARK RED,DRY 0.70m-2.00m SILTY CLAY,PALE BROWN,PLASTIC 2.00m-3.00m BEDROCK WEATHERED,GREY,VERY HARAD 3.00m-4.50m BEDROCK,SHALE,MEDIUM BROWN AND GREY 4.50m-5.70m BEDROCK SHALE,VERY HARD	833m	North West
GW111881	0.00m-0.50m FILL,SILTY LOAM,MINOR SILTY CLAY 0.50m-1.20m FILL,NO SILTY CLAY 1.20m-2.00m SILTY CLAY,RED/BROWN,PLASTIC,FIRM 2.00m-3.00m SILTY CLAY,RED/BROWN,STIFF,NO ODOUR 3.00m-5.00m BEDROCK WEATHERED,SILTY CLAY,LILGHT M/BROWN 5.00m-6.50m BEDROCK,SHALE,SILTY CLAY,BROWN/GREY	852m	North West
GW111391	0.00m-1.40m FILL 1.40m-1.90m GRAVELLY CLAY ,BROWN 1.90m-3.50m CLAY,ORANGE,BROWN 3.50m-6.00m CLAY,BROWN,FIRM	1348m	North West
GW111392	0.00m-1.00m FILL 1.00m-3.50m CLAY,RED BROWN,FIRM 3.50m-4.00m SAND,CLAYEY 4.00m-5.00m CLAY GRAVELLY,BROWN 5.00m-6.00m CLAY AND SHALE INTERBEDDED	1444m	North West
GW109317	0.00m-1.50m FILL 1.50m-10.00m SANDY CLAY,HARD BANDS OF ROCKS 10.00m-12.00m BROWN SHALE 12.00m-15.00m SHALE V/SOFT 15.00m-37.50m SHALE GREY 37.50m-41.00m SILT,SANDSTONE HARD 41.00m-53.00m SANDSTONE V/HARD 53.00m-54.00m SILTS,SANDSTONE LIGHTLY FACTURED 54.00m-62.00m SILTS HARD 62.00m-64.00m SHALE HARD 64.00m-81.00m SILTS HARD 81.00m-101.50m SHALE, BLACK, HARD 101.50m-101.60m SHALE, FRACTURED 101.60m-127.10m SANDSTONE GREY 127.10m-127.20m SANDSTONE FRACTURED 127.20m-135.00m SANDSTONE GREY 135.00m-135.40m SANDSTONE F/QUARTZ 135.40m-163.80m SANDSTONE GREY 163.80m-163.90m SANDSTONE FRACTURED 163.90m-165.00m SANDSTONE GREY	1633m	North
GW110064	0.00m-1.10m FILL,GRAVEL,LOAM,SAND,SOME CLAY BROWN,FIRM,MOIST	1660m	West

Groundwater No	Drillers Log	Distance	Direction
GW110072	0.00m-0.10m FILL,CRUSHED ROCK,SHALE,SANDSTONE 0.10m-1.50m SILTY CLAY,BROWN PLASTIC,FIRM,HOMOGENOUS,MOIST 1.50m-2.60m MATERIAL BECOMING VERY HARD 2.60m-3.80m MINOR STONE GRAVEL 3.80m-4.00m WEATHERED SHALE/CLAY,BROWN,HARD,MOIST.	1707m	West
GW110063	0.00m-0.40m FILL, CRUSHED ROCK,SHALE,SANDSTONE,SOME CLAY,BROWN 0.40m-3.50m SILTY CLAY,BROWN,PLASTIC,FIRM HOMOGENOUS,MOIST 3.50m-4.50m MATERIAL BECOMING VERY HARD,NO ODOUR 4.50m-5.00m WEATHERED SHALE,CLAY,BROWN,SOME GREY WEAT.SHALE,GREY,	1715m	West
GW110065	0.00m-0.60m FILL,SANDY LOAM,BROWN,SOME GRAVEL AND ROCK 0.60m-1.50m SILTY CLAY,BROWN,PLASTIC,FIRM,HOMOGENOUS,MOIST 1.50m-3.50m MATERIAL BECOMING VERY HARD,L/BROWN GREY 3.50m-4.90m SOME IRONSTONE GRAVEL,L/BROWN,WEATHERED SHALE,CLAY BROWN	1724m	West
GW110071	0.00m-0.20m FILL, CRUSHED ROCK-SHALE,SANDSTONE AND SOME CLAY.BROWN 0.20m-3.00m SANDY SILT,(ALLUVIUM) BROWN,LOOSE GRAVEL,LOOSE,DRY 3.00m-3.90m SILTY CLAY,BROWN,PLASTIC,FIRM, HOMOGENOUS,MOIST 3.90m-5.10m WEATHERED SHALE/CLAY,BROWN,HARD AND SOFT SECTIONS,MUDDY	1776m	West
GW110066	0.00m-0.40m FILL,SANDY GRAVEL AND LOAM,BROWN,LOOSE,ROCK FRAGS.DRY 0.40m-1.50m SILTY CLAY BROWN,PLASTIC,FIRM HOMOGENOUS,DRY 1.50m-3.60m MATERIAL BECOMING VERY HARD,L/BROWN,GREY 3.60m-3.70m SOME IRONSTONE GRAVEL IN CLAY L/BROWN,MOIST 3.70m-4.20m WEATHERED SHALE,CLAY,BROWN HARD MOIST	1791m	West
GW110067	0.00m-0.50m FILL,(ALLUVIUM) SANDY GRAVEL AND LOAM LOOSE,DRY,BROWN 0.50m-3.50m SANDY SILT,BROWN,SPECS,WHITE MEDIUM BROWN,DRY 3.50m-4.20m SILTY CLAY,BROWN,PLASTIC,FIRM,HOMOGENOUS,MOIST,IRONS./GRAVEL	1800m	West
GW110068	0.00m-1.50m SANDY SILT (ALLUVIUM) BROWN,WHITE GRAVEL,LOOSE,DRY 1.50m-3.00m SILTY CLAY BROWN,PLASTIC,FIRM, HOMOGENOUS,MOIST 3.00m-4.40m MATERIAL BECOMING FIRM,TRACE OF GRIT,L/BROWN,GREY 4.40m-5.00m WEATHERED SHALE,CLAY,BROWN,FIRM,BROWN-GREY,MOIST	1800m	West
GW110069	0.00m-0.40m FILL,CRUSHED ROCK-SHALE,SANDSTONE,SOME CLAY BROWN 0.40m-3.00m SILTY CLAY,BROWN,PLASTIC,FIRM,HOMOGENOUS,MOIST 3.00m-3.80m MOIST,LIGHT BROWN SILTY CLAY,WET,MUDDY 3.80m-3.90m WEATHERED SHALE,CLAY,BROWN	1818m	West
GW110070	0.00m-0.40m FILL,CRUSHED ROCK SHALE,SANDSTONE AND SOME CLAY, BROWN 0.40m-1.30m SANDY SILT (ALLUVIUM) BROWN,LOOSE,GRAVEL, DRY 1.30m-4.00m SILTY CLAY,BROWN,PLASTIC,FIRM,HOMOGENOUS,MOIST 4.00m-5.10m WEATHERED SHALE.CLAY,BROWN,HARD AND SOFT SECTIONS,MUDDY.	1825m	West
GW031660	0.00m-10.66m Clay Interlayere 10.66m-11.58m Shale Hard 11.58m-12.80m Rock Grey Water Supply 12.80m-21.33m Shale Black Interlayere 21.33m-67.97m Shale 67.97m-75.28m Sandstone Grey Water Supply 75.28m-83.82m Shale Grey 83.82m-94.79m Sandstone White 94.79m-109.11m Shale Black Hard 109.11m-135.33m Sandstone Shale 135.33m-144.78m Shale 144.78m-150.26m Sandstone Shale 150.26m-152.40m Shale Black Oily	1936m	South

Drill Log Data Source: NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corp
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Geology 1:100,000

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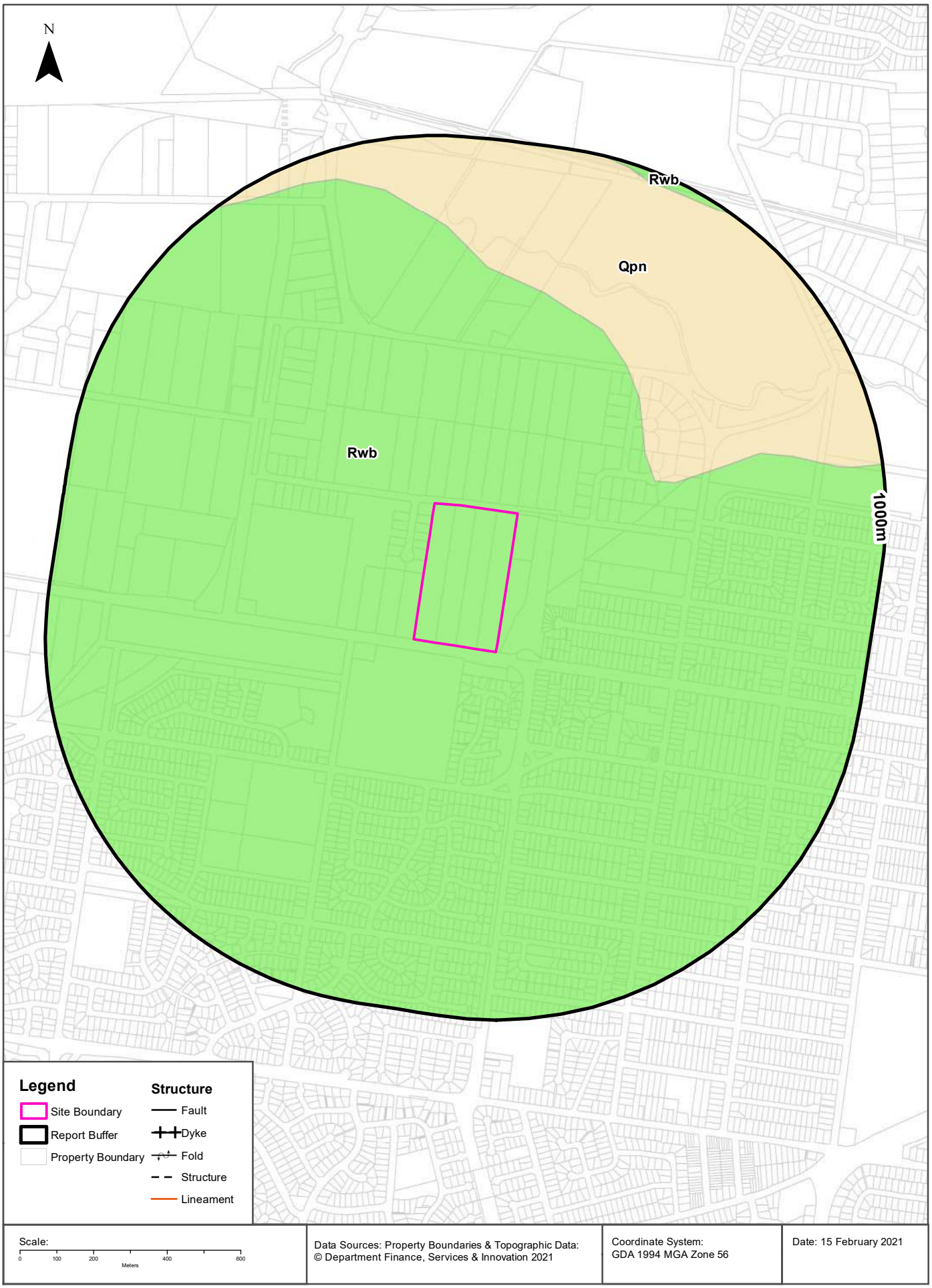

Geology

250 Victoria Street, Wetherill Park, NSW 2164

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Rwb	Shale, carbonaceous claystone,claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff	Bringelly Shale	Wianamatta Group (undifferentiated)		Middle Triassic		Penrith	1:100,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Qpn	Medium-grained sand, clay and silt				Quaternary		Penrith	1:100,000
Rwb	Shale, carbonaceous claystone,claystone, laminate, fine to medium-grained lithic sandstone, rare coal and tuff	Bringelly Shale	Wianamatta Group (undifferentiated)		Middle Triassic		Penrith	1:100,000

Geological Structures

What are the Geological Structures onsite?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

Geological Data Source : NSW Department of Industry, Resources & Energy
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Naturally Occurring Asbestos Potential

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Naturally Occurring Asbestos Potential

Naturally Occurring Asbestos Potential within the dataset buffer:

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

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

Atlas of Australian Soils

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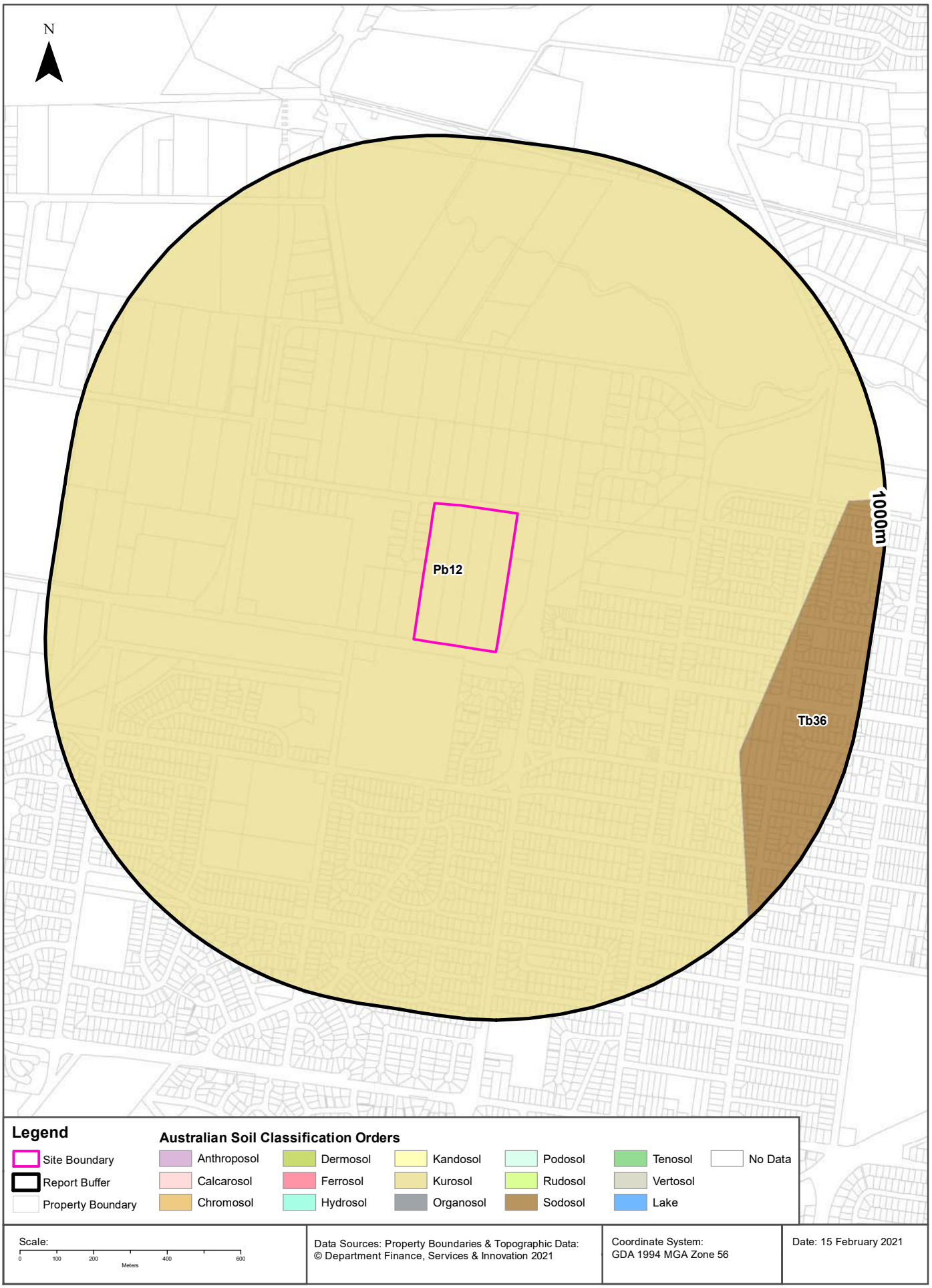

Soils

250 Victoria Street, Wetherill Park, NSW 2164

Atlas of Australian Soils

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

Map Unit Code	Soil Order	Map Unit Description	Distance
Pb12	Kurosol	Gently rolling to rounded hilly country with some steep slopes and broad valleys: chief soils are hard acidic red soils (Dr2.21) with hard neutral and acidic yellow mottled soils (Dy3.42 and Dy3.41) on lower slopes and in valleys. Associated are small areas of various soils including (Gn3.54) on some ridges, (Dr3.31) on some slopes; (Dr2.23) in saddles and some mid-slope positions, and some low- lying swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Small areas of other soils such as (Db1.2) are likely throughout.	0m
Tb36	Sodosol	Undulating: chief soils are hard acidic yellow mottled soils (Dy3.41) usually containing some ironstone gravels throughout the profile. Associated are small areas of units Pb12 and Pb13.	713m

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

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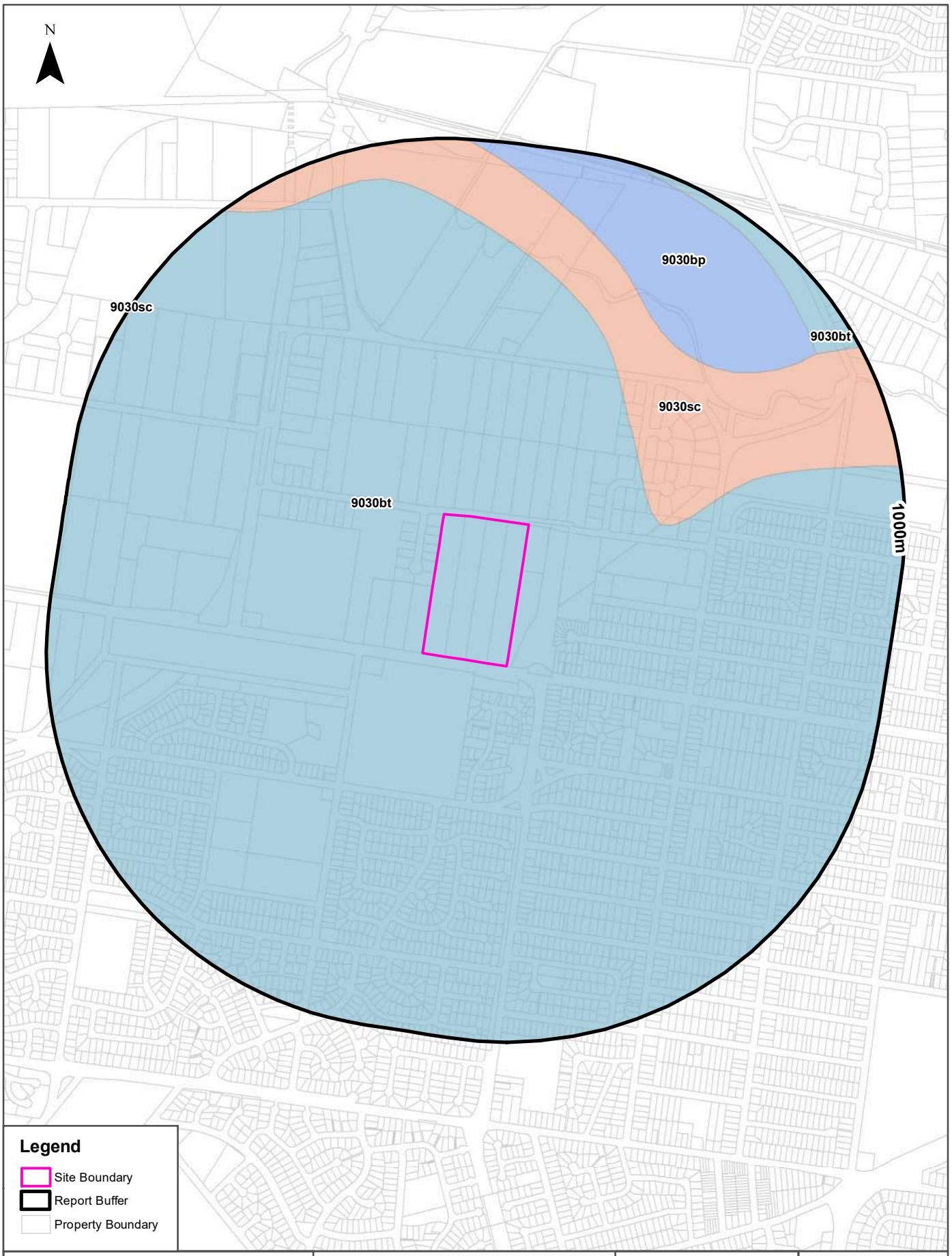

Soils

250 Victoria Street, Wetherill Park, NSW 2164

Soil Landscapes of Central and Eastern NSW

What are the on-site Soil Landscapes?

Soil Code	Name
9030bt	Blacktown

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name
9030bp	Berkshire Park
9030bt	Blacktown
9030sc	South Creek

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

250 Victoria Street, Wetherill Park, NSW 2164

Environmental Planning Instrument - Acid Sulfate Soils

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

Soil Class	Description	EPI Name
N/A		

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

Soil Class	Description	EPI Name	Distance	Direction
N/A				

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Atlas of Australian Acid Sulfate Soils

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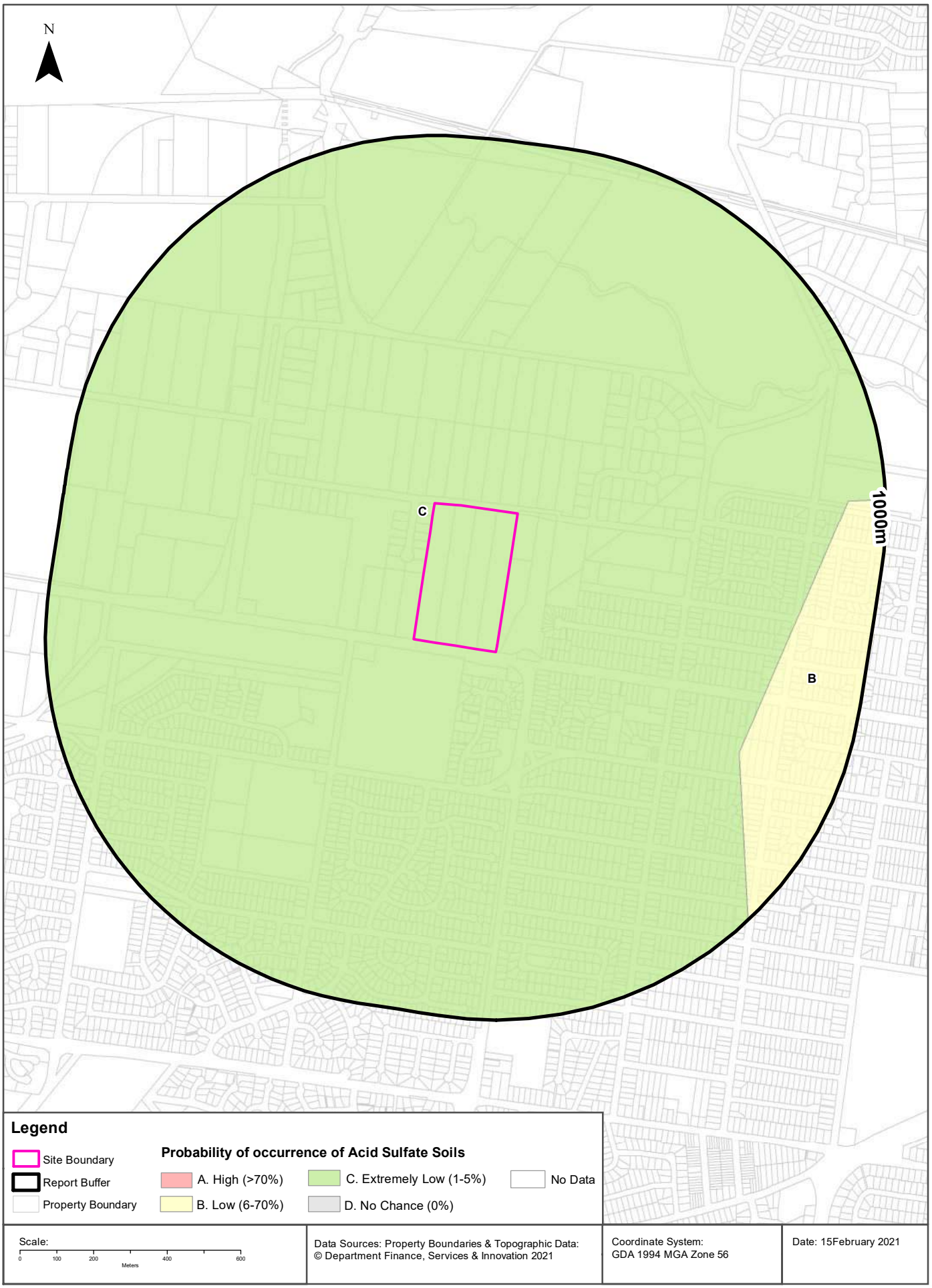

Acid Sulfate Soils

250 Victoria Street, Wetherill Park, NSW 2164

Atlas of Australian Acid Sulfate Soils

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

Class	Description	Distance
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m
B	Low Probability of occurrence. 6-70% chance of occurrence.	712m

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

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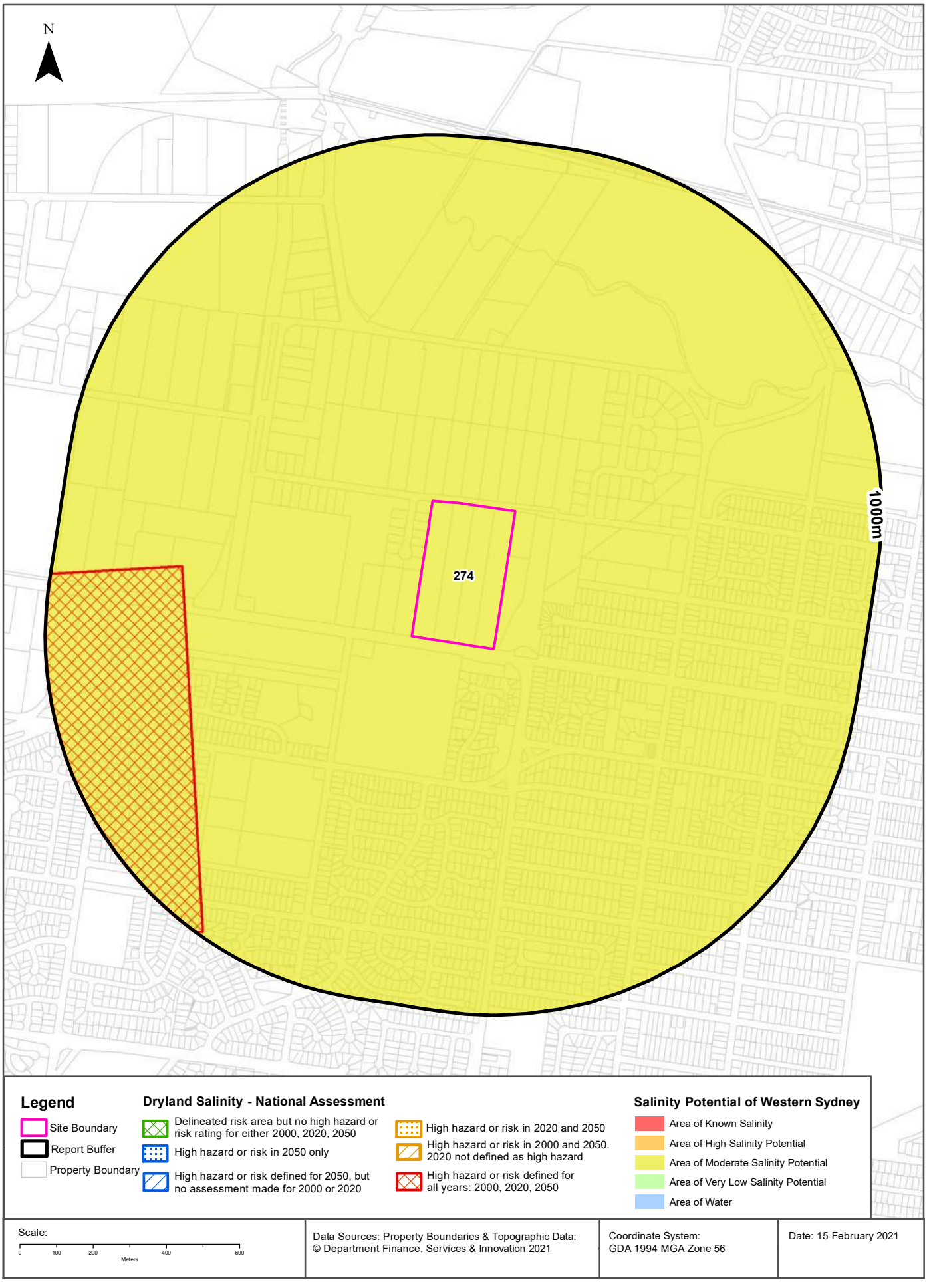

Dryland Salinity

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Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

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

Yes

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
High hazard or risk	High hazard or risk	High hazard or risk	614m	West

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

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
274	MODERATE	Area of Moderate Salinity Potential	0m	Onsite

Dryland Salinity Potential of Western Sydney Data Source : NSW Office of Environment and Heritage
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Mining

250 Victoria Street, Wetherill Park, NSW 2164

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

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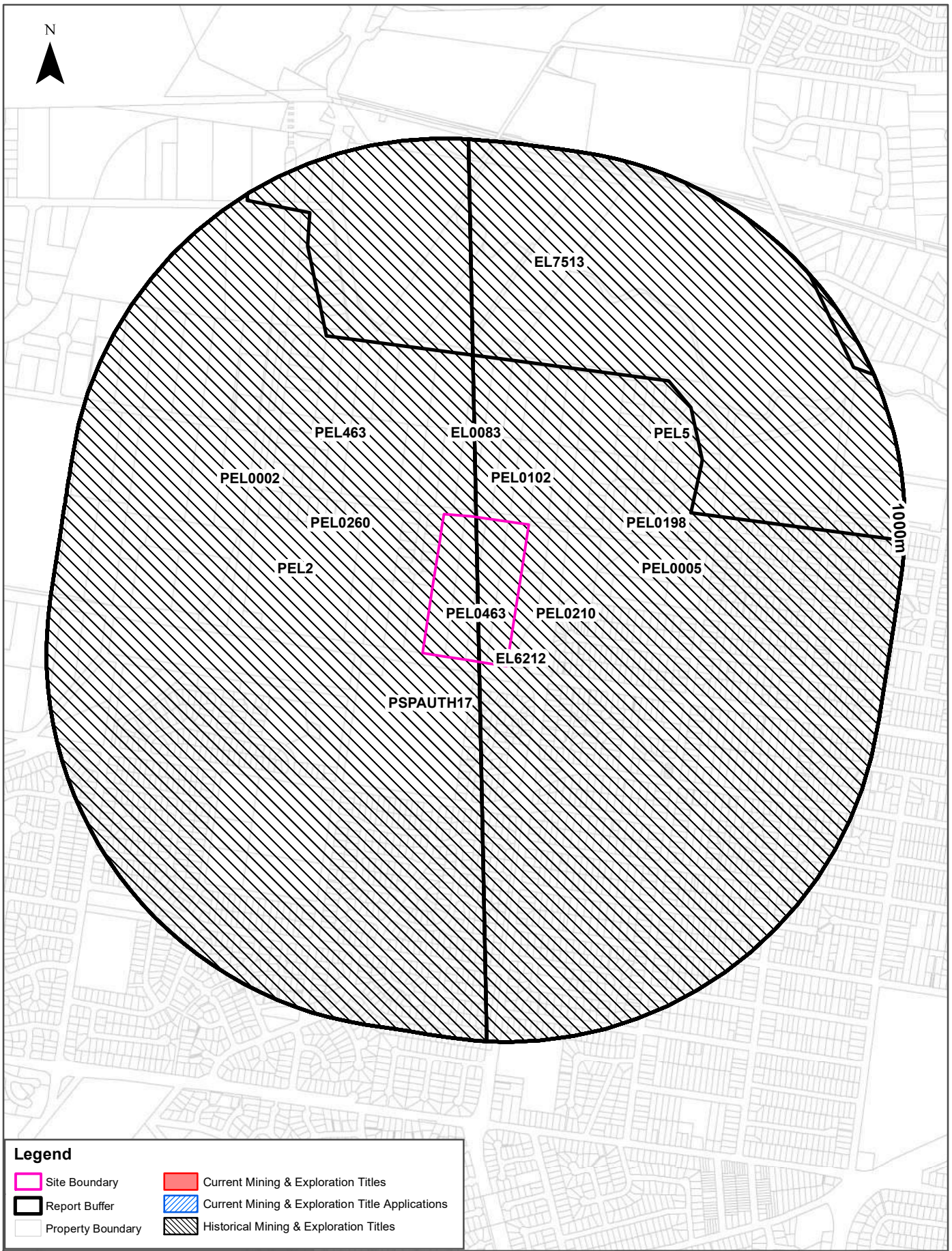
Mining & Exploration Titles

250 Victoria Street, Wetherill Park, NSW 2164



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 February 2021

Mining

250 Victoria Street, Wetherill Park, NSW 2164

Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Grant Date	Expiry Date	Last Renewed	Operation	Resource	Minerals	Dist (m)	Dir'
N/A	No Records in Buffer								

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

Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

Application Ref	Applicant	Application Date	Operation	Resource	Minerals	Dist (m)	Dir'
N/A	No Records in Buffer						

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

Mining

250 Victoria Street, Wetherill Park, NSW 2164

Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist (m)	Dir'
EL0083	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	01 Feb 1967	01 Feb 1968	MINERALS		0m	Onsite
EL6212	HOT ROCK ENERGY PTY LTD,LONGREACH OIL LIMITED	4 Mar 2004	3 Mar 2013	MINERALS	Geothermal	0m	Onsite
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	Onsite
PEL0198	JOHN STREVENS (TERRIGAL) NL			PETROLEUM	Petroleum	0m	Onsite
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	Onsite
PEL0260	NORTH BULLI COLLIERIES PTY LTD, AGL PETROLEUM OPERATIONS PTY LTD, THE AUSTRALIAN GAS LIGHT CO.	9/09/1981	8/03/1993	PETROLEUM	Petroleum	0m	Onsite
PEL0463	DART ENERGY (APOLLO) PTY LTD	22/10/2008	6/03/2015	PETROLEUM	Petroleum	0m	Onsite
PEL463	DART ENERGY (APOLLO) PTY LTD			MINERALS		0m	Onsite
PSPAUTH17	MACQUARIE ENERGY PTY LTD	8/03/2007	7/03/2008	PETROLEUM	Petroleum	0m	Onsite
PEL0002	AGL UPSTREAM INVESTMENTS PTY LIMITED	29/03/1993	6/07/2015	PETROLEUM	Petroleum	0m	Onsite
PEL2	AGL UPSTREAM INVESTMENTS PTY LIMITED			MINERALS		0m	Onsite
PEL0005	AGL UPSTREAM INVESTMENTS PTY LIMITED	11/11/1993	4/03/2015	PETROLEUM	Petroleum	0m	Onsite
PEL5	AGL UPSTREAM INVESTMENTS PTY LIMITED			MINERALS		0m	Onsite
EL7513	GRADIENT ENERGY LIMITED	7 Apr 2010	15 Apr 2011	MINERALS	Geothermal	426m	North East

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

State Environmental Planning Policy

250 Victoria Street, Wetherill Park, NSW 2164

State Significant Precincts

What SEPP State Significant Precincts exist within the dataset buffer?

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

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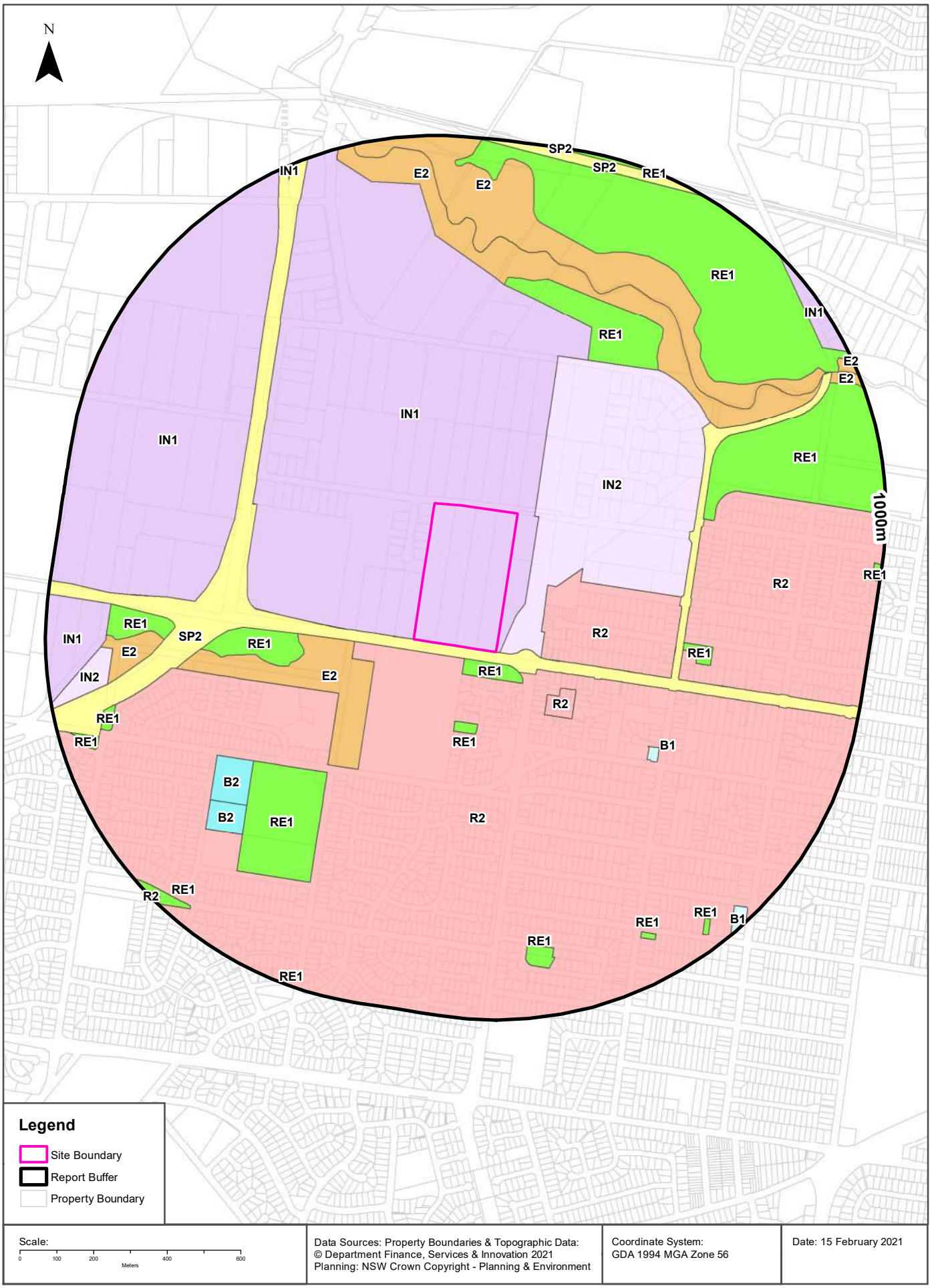
EPI Planning Zones

250 Victoria Street, Wetherill Park, NSW 2164



Environmental Planning Instrument

250 Victoria Street, Wetherill Park, NSW 2164

Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
IN1	General Industrial		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		0m	Onsite
SP2	Infrastructure	Classified Road	Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		0m	South
IN2	Light Industrial		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		8m	North East
R2	Low Density Residential		Fairfield Local Environmental Plan 2013	26/10/2018	26/10/2018	18/12/2020	Amendment No 27	30m	South
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		30m	South
R2	Low Density Residential		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		109m	East
E2	Environmental Conservation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		124m	South West
R2	Low Density Residential		Fairfield Local Environmental Plan 2013	25/07/2014	25/07/2014	18/12/2020	Amendment No 7	179m	South East
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		202m	South
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		300m	West
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		431m	South West
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		458m	North East
B1	Neighbourhood Centre		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		484m	South East
R2	Low Density Residential		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		497m	East
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		499m	East
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		502m	East
IN1	General Industrial		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		530m	West
E2	Environmental Conservation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		544m	North
B2	Local Centre		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		547m	South West
E2	Environmental Conservation		Holroyd Local Environmental Plan 2013	05/04/2013	05/08/2013	14/08/2020		595m	North
RE1	Public Recreation		Holroyd Local Environmental Plan 2013	05/04/2013	05/08/2013	14/08/2020		638m	North East
B2	Local Centre		Fairfield Local Environmental Plan 2013	07/03/2014	07/03/2014	18/12/2020	Amendment No 2	640m	South West
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		649m	West
E2	Environmental Conservation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		678m	West
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		800m	South
IN2	Light Industrial		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		818m	West
IN1	General Industrial		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		828m	West
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		828m	West

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		855m	South East
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		895m	South West
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		916m	South East
E2	Environmental Conservation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		918m	East
IN1	General Industrial		Holroyd Local Environmental Plan 2013	05/04/2013	05/08/2013	14/08/2020		940m	East
B1	Neighbourhood Centre		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		943m	South East
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		944m	South West
E2	Environmental Conservation		Holroyd Local Environmental Plan 2013	05/04/2013	05/08/2013	14/08/2020		949m	East
SP2	Infrastructure	Special Purpose Utilities	Holroyd Local Environmental Plan 2013	05/04/2013	05/08/2013	14/08/2020		960m	North East
IN1	General Industrial		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		966m	North
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		976m	East
RE1	Public Recreation		Holroyd Local Environmental Plan 2013	05/04/2013	05/08/2013	14/08/2020		988m	North East
SP2	Infrastructure	Special Purpose Utilities	Holroyd Local Environmental Plan 2013	05/04/2013	05/08/2013	14/08/2020		993m	North
RE1	Public Recreation		Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	18/12/2020		999m	South West

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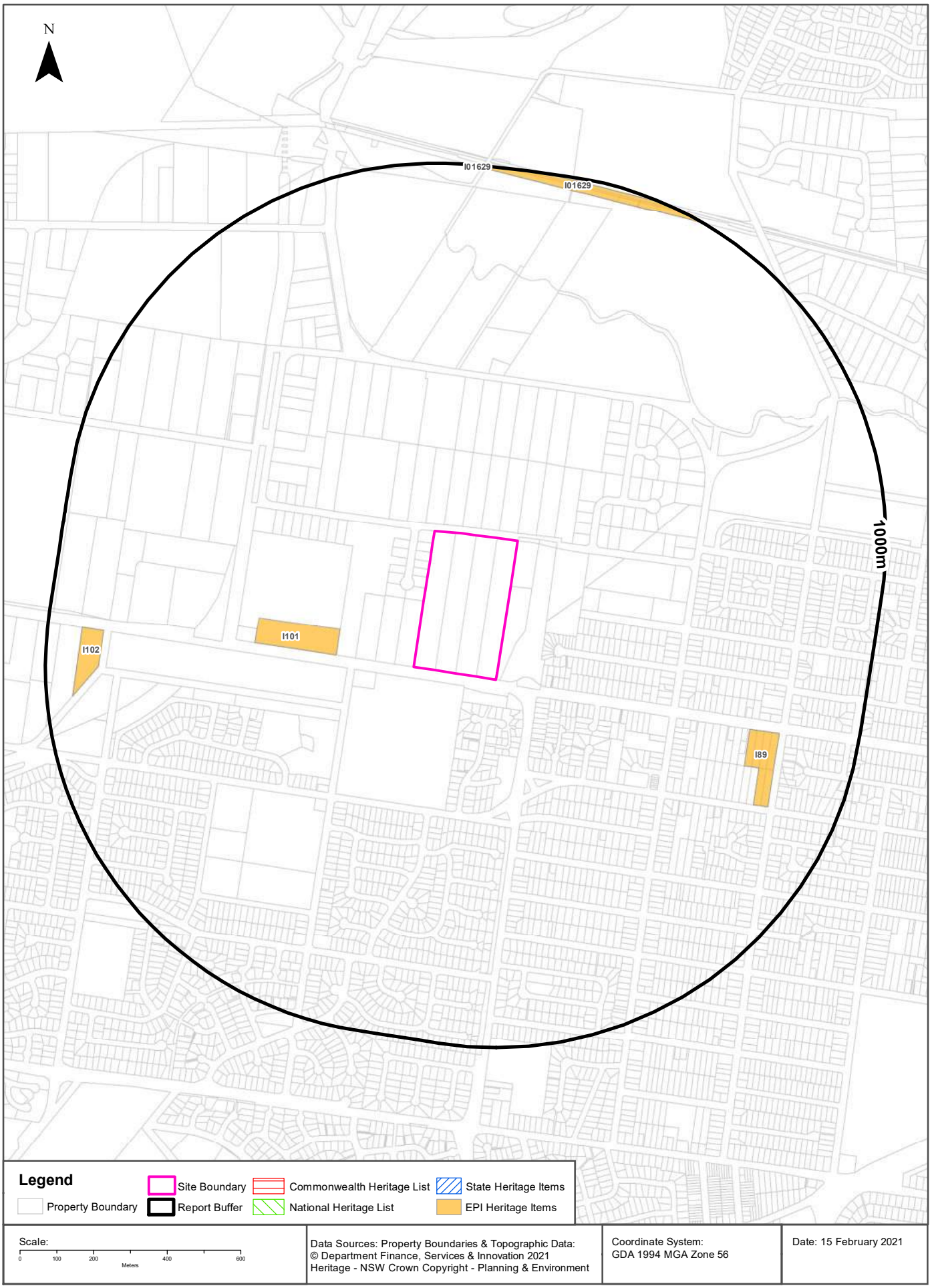
Heritage Items

250 Victoria Street, Wetherill Park, NSW 2164



Heritage

250 Victoria Street, Wetherill Park, NSW 2164

Commonwealth Heritage List

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

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

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

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

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

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

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

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

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

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

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I101	Bunya pines	Item - General	Local	Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	04/09/2020	214m	West
I89	Smithfield Cemetery	Item - General	Local	Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	04/09/2020	701m	South East
I102	Monastery	Item - General	Local	Fairfield Local Environmental Plan 2013	17/05/2013	31/05/2013	04/09/2020	849m	West

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I01629	Pipehead, water supply canal and associated works	Item - General	State	Holroyd Local Environmental Plan 2013	05/04/2013	05/08/2013	09/10/2015	960m	North
I01629	Pipehead, water supply canal and associated works	Item - General	State	Holroyd Local Environmental Plan 2013	05/04/2013	05/08/2013	09/10/2015	995m	North

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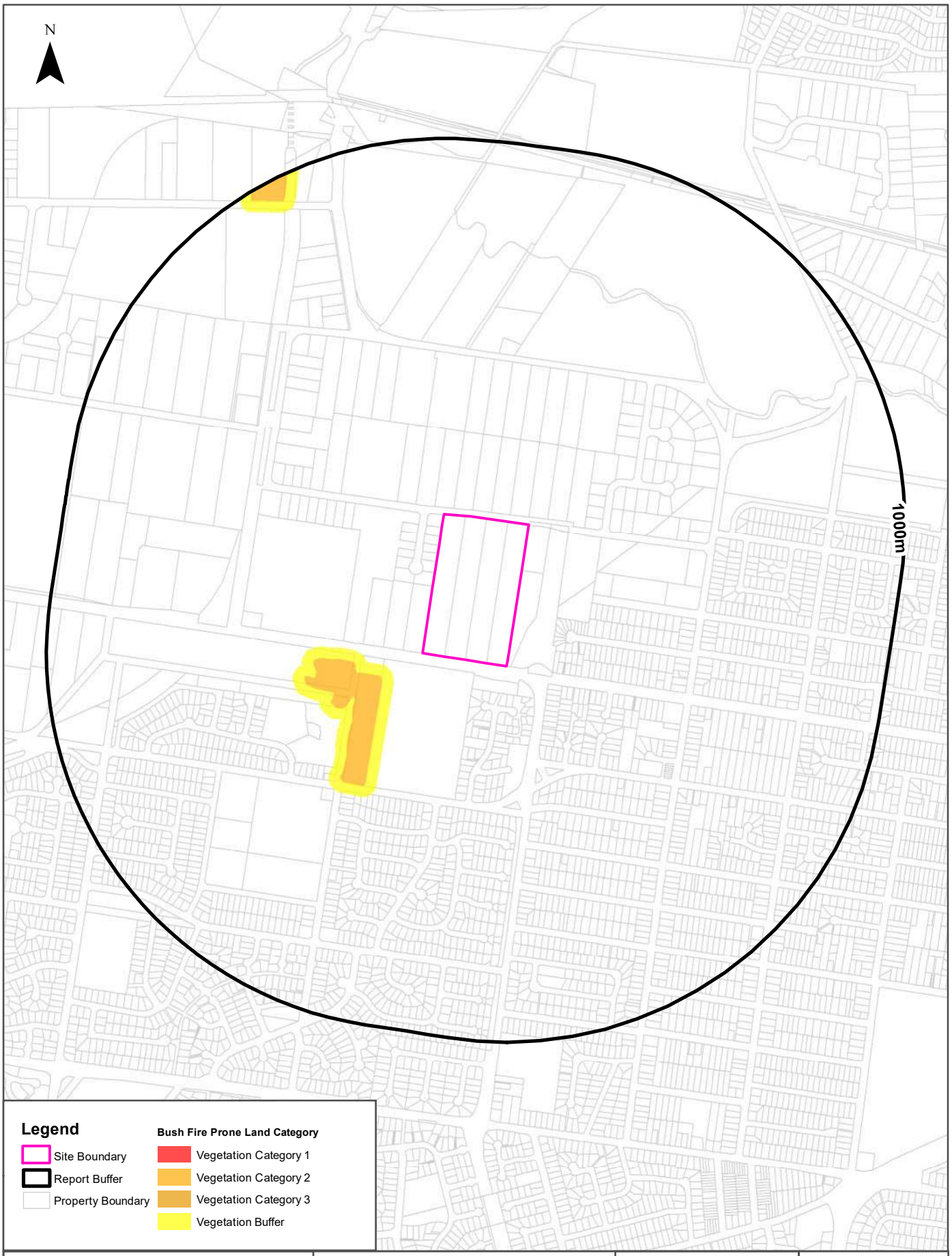
Natural Hazards - Bush Fire Prone Land

250 Victoria Street, Wetherill Park, NSW 2164



Data Sources: Bush Fire Prone Land: © NSW Rural Fire Service 2021. Property Boundaries: © Department Finance, Services & Innovation 2021

Coordinate System: GDA 1994 MGA Zone 56

Date: 15 February 2021

Natural Hazards

250 Victoria Street, Wetherill Park, NSW 2164

Bush Fire Prone Land

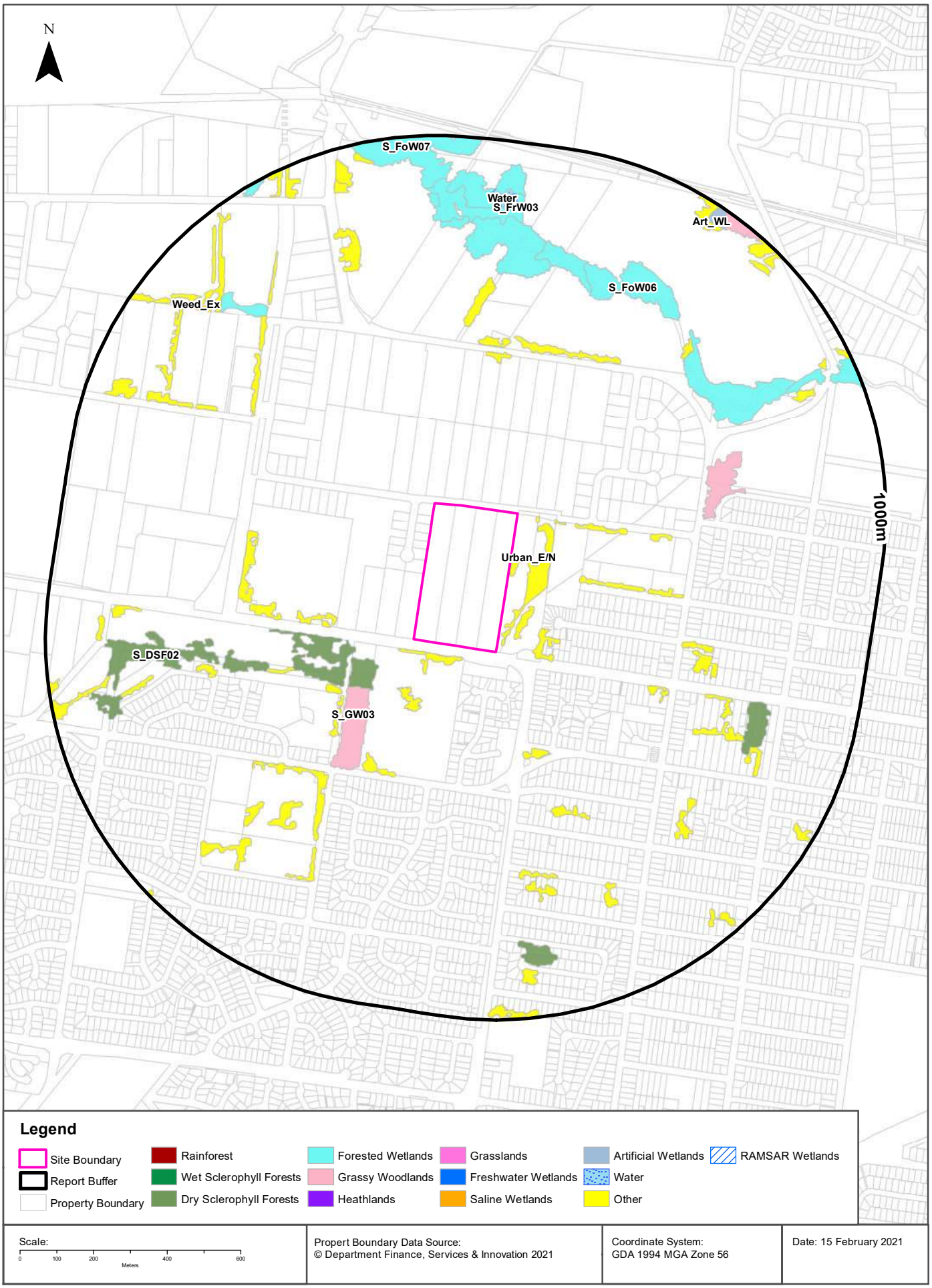
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	96m	South West
Vegetation Category 2	126m	South West

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

Ecological Constraints - Native Vegetation & RAMSAR Wetlands

250 Victoria Street, Wetherill Park, NSW 2164



Ecological Constraints

250 Victoria Street, Wetherill Park, NSW 2164

Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Map Unit Name	Threatened Ecological Community NSW	Threatened Ecological Community EPBC Act	Understorey	Disturbance	Disturbance Index	Dominant Species	Dist	Direction
Urban_E/N	Urban_E/N: Urban Exotic/Native			00: Not assessed	00: Not assessed	0: Not assessed	Urban Exotic/Native	0m	Onsite
S_DSF02	S_DSF02: Castlereagh Shale-Gravel Transition Forest	Shale Gravel Transition Forest	Cumberland Plain Woodland/ Shale Gravel Forest (possible)	15: Grassy natives and exotics	14: Canopy gaps	2: Moderate	E.fibrosa/E.moluccanna/M.decora/E.longifolia	119m	South West
S_GW03	S_GW03: Cumberland Shale Plains Woodland	Cumberland Plain Woodland	Cumberland Plain Woodland/ Shale Gravel Forest (possible)	15: Grassy natives and exotics	14: Canopy gaps	2: Moderate	C.maculataE.moluccanna/E.crebra/E.tereticornis	177m	South West
Weed_Ex	Weed_Ex: Weeds and Exotics			00: Not assessed	00: Not assessed	0: Not assessed	Exotic Species >90%cover	538m	West
S_FoW07	S_FoW07: Cumberland Swamp Oak Riparian Forest	River Flat Eucalypt Forest		00: Not assessed	13: Weeds	3: High	C.glaucaEucalypts	577m	North East
S_FoW06	S_FoW06: Cumberland Riverflat Forest	River Flat Eucalypt Forest		30: Melaleuca dominant	13: Weeds	3: High	E.tereticornis/E.baueriana/A.floribunda	619m	North East
S_FrW03	S_FrW03: Coastal Freshwater Wetland	Freshwater Wetlands on Coastal Floodplains		00: Not assessed	00: Not assessed	0: Not assessed	T.orientalis/fresh water sedges	813m	North
Water	Water			00: Not assessed	00: Not assessed	0: Not assessed	Water	813m	North
Art_WL	Art_WL: Artificial Wetland			00: Not assessed	00: Not assessed	0: Not assessed	Artificial wetland	944m	North East

Native Vegetation of the Sydney Metropolitan Area : NSW Office of Environment and Heritage
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Ramsar Wetlands

What Ramsar Wetland areas exist within the dataset buffer?

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

Ramsar Wetlands Data Source: © Commonwealth of Australia - Department of Environment

Ecological Constraints - Groundwater Dependent Ecosystems Atlas

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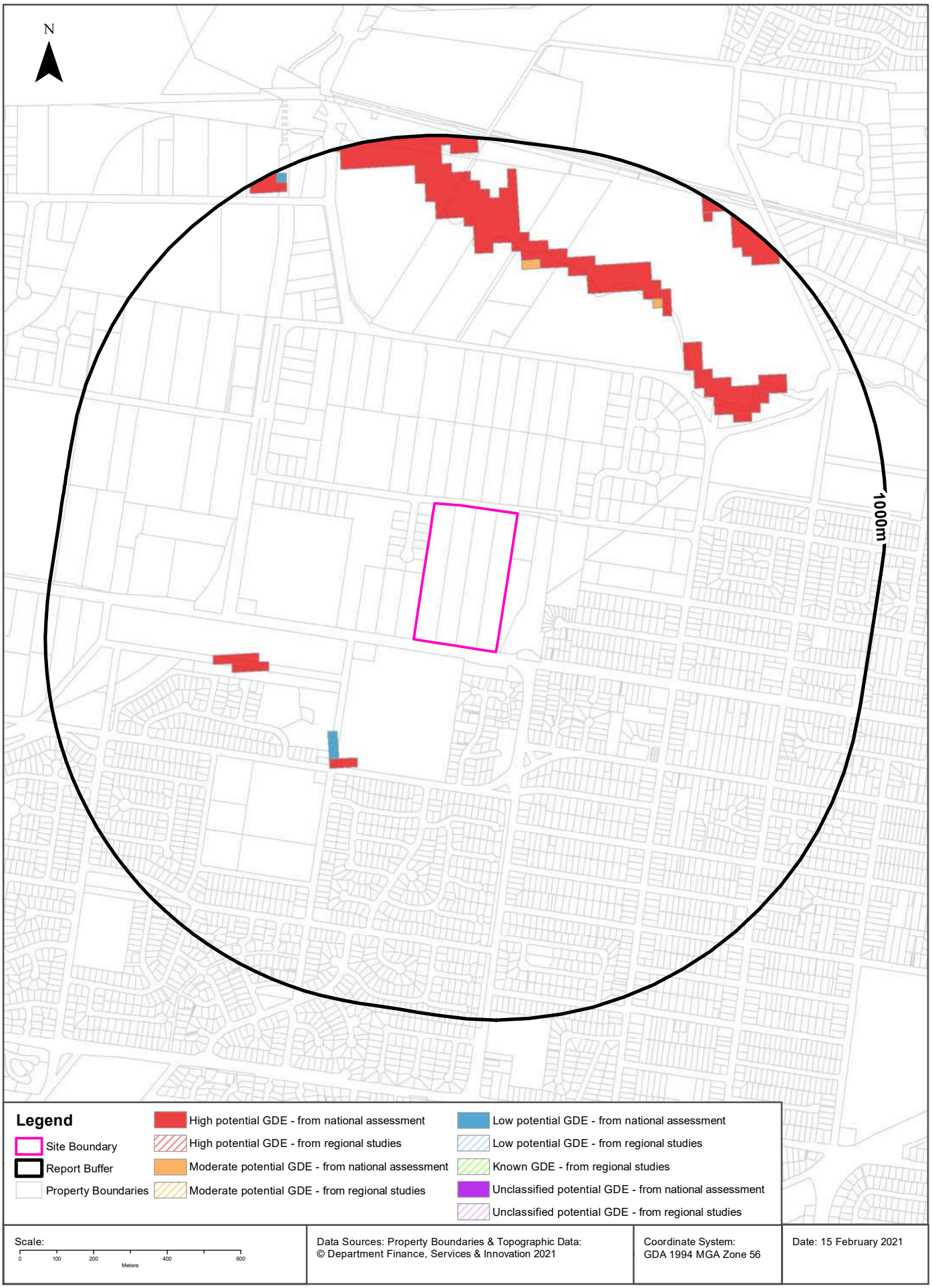

Ecological Constraints

250 Victoria Street, Wetherill Park, NSW 2164

Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	Low potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	324m
Terrestrial	High potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	355m
Terrestrial	Moderate potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	657m

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

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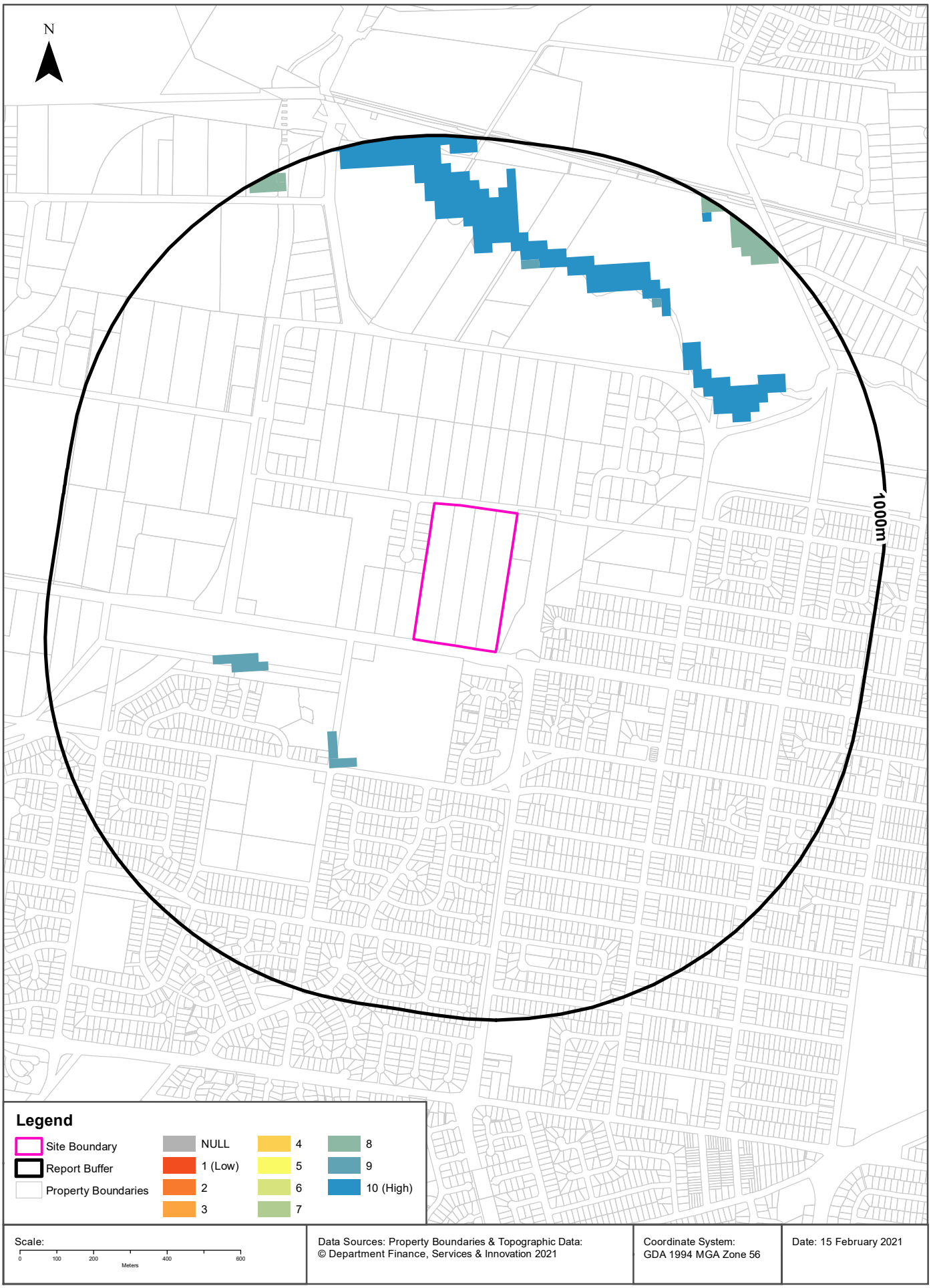

Ecological Constraints

250 Victoria Street, Wetherill Park, NSW 2164

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	9	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	324m
Terrestrial	10	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	587m
Terrestrial	8	Undulating to low hilly country, mainly on shale.	Vegetation	Consolidated sedimentary	925m

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

250 Victoria Street, Wetherill Park, NSW 2164

NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Calyptorhynchus lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Circus assimilis	Spotted Harrier	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Geophaps scripta scripta	Squatter Pigeon (southern subspecies)	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Lophochroa leadbeateri	Major Mitchell's Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Onychoprion fuscata	Sooty Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pezoporus wallicus wallicus	Eastern Ground Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Todiramphus chloris	Collared Kingfisher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Gastropoda	Meridolum corneovirens	Cumberland Plain Land Snail	Endangered	Not Sensitive	Not Listed	
Animalia	Gastropoda	Pommerhelix duralensis	Dural Land Snail	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Vespadelus troughtoni	Eastern Cave Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Aspidites ramsayi	Woma	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Uvidicolus sphyrurus	Border Thick-tailed Gecko	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia pubescens	Downy Wattle	Vulnerable	Not Sensitive	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Argyrotegium nitidulum	Shining Cudweed	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Cynanchum elegans	White-flowered Wax Plant	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Dillwynia tenuifolia		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Diuris aequalis	Buttercup Doubletail	Endangered	Category 2	Vulnerable	
Plantae	Flora	Epacris purpurascens var. purpurascens		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Grevillea juniperina subsp. juniperina	Juniper-leaved Grevillea	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Hibbertia fumana		Critically Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Hibbertia puberula		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Hibbertia sp. Bankstown		Critically Endangered	Not Sensitive	Critically Endangered	
Plantae	Flora	Isotoma fluviatilis subsp. fluviatilis		Not Listed	Not Sensitive	Extinct	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Marsdenia viridiflora subsp. viridiflora	Native Pear	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Persoonia nutans	Nodding Geebung	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pilularia novae-hollandiae	Austral Pillwort	Endangered	Category 3	Not Listed	
Plantae	Flora	Pimelea curviflora var. curviflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Pimelea spicata	Spiked Rice-flower	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pomaderris brunnea	Brown Pomaderris	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Pomaderris prunifolia	Plum-leaf Pomaderris	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Pterostylis gibbosa	Illawarra Greenhood	Endangered	Category 2	Endangered	
Plantae	Flora	Pterostylis saxicola	Sydney Plains Greenhood	Endangered	Category 2	Endangered	
Plantae	Flora	Pultenaea parviflora		Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Pultenaea pedunculata	Matted Bush-pea	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Rhodamnia rubescens	Scrub Turpentine	Critically Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Tetratheca glandulosa		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Wahlenbergia multicaulis	Tadgell's Bluebell	Endangered Population	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.

NSW BioNet: © State of NSW and Office of Environment and Heritage

Location Confidences

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

LC Code	Location Confidence
Premise match	Georeferenced to the site location / premise or part of site
General area or suburb match	Georeferenced with the confidence of the general/approximate area
Road match	Georeferenced to the road or rail
Road intersection	Georeferenced to the road intersection
Feature is a buffered point	Feature is a buffered point
Land adjacent to geocoded site	Land adjacent to Georeferenced Site
Network of features	Georeferenced to a network of features

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SafeWork NSW Records

South Wales, 400 Kent Street, Sydney 2000, Telephone 9370 5000 ALL MAIL TO LOCKED BAG 10, CLARENCE STREET SYDNEY 2000
23688
SCIENTIFIC SERVICES BRANCH
Dangerous Goods Licensing
ph. (02) 9370 5187 fax (02) 9370 6105
e-mail: scid@workcover.nsw.gov.au
WORKCOVER NEW SOUTH WALES

Attn: ANTHONY THOMAS
Licensee: **INCHCAPE MOTORS AUST LTD** ACN 050 035 277
PRIVATE BAG 38 P O
WETHERILL PARK NSW 2164

LICENCE FOR THE KEEPING OF DANGEROUS GOODS

ISSUED UNDER AND SUBJECT TO THE PROVISIONS OF THE DANGEROUS GOODS ACT, 1975 AND REGULATIONS THEREUNDER

Licence Number 35/023688 **Expiry Date** 30/12/1998 **No. of Depots** 4

Licensee Contact ANTHONY THOMAS Ph. 9828 9199 Fax. 9828 9120

Premises Licensed to Keep Dangerous Goods
INCHCAPE MOTORS AUST LTD
250-266 VICTORIA ST WETHERILL PARK 2164

Nature of Site CAR RETAILING

Major Supplier of Dangerous Goods SHELL

Emergency Contact for this Site KEVIN RIDDLE (AH 9639 1352) Ph. 9828 9199

Site staffing 24HRS 7DAYS

Details of Depots

Depot No.	Depot Type	Goods Stored in Depot	Qty
1	**UNDERGROUND TANK**	**Class 3**	**10000 L**
	UN 1203 PETROL		10000 L
2	**EXEMPT - A/G TANK**	**Class 3**	**500 L**
	UN 1223 KEROSENE		500 KG
3	**EXEMPT - STORAGE AREA**	**Class 2.1**	**126 KG**
	UN 1075 PETROLEUM GASES, LIQUEFIED		18 KG
4	**EXEMPT - A/G TANK**	**Class C1**	**500 L**
	UN 00C1 DIESEL		500 L

PLEASE RETAIN AS PROOF OF LICENCE

Issued by Workcover Authority of New South Wales on 19 November 1998

THE NEW SOUTH WALES GOVERNMENT
Putting people first by managing better

PART A

WorkCover Authority

LICENCE TO KEEP DANGEROUS GOODS

(Dangerous Goods Act 1975)

Application for new licence, amendment or transfer

1. Name of applicant | ACN
   Inchcape Motors Australia Limited | 0500 35277

2. Site to be licensed
   No | Street
   250 | VICTORIA STREET
   Suburb/Town | Postcode
   WETHERILL PARK | 2164

3. Previous licence number (if known) 35/023688

4. Nature of site: Motor Vehicle Distribution

5. Emergency contact on site:
   Phone | Name
   W. 8289199
   H. 6306168 | Kevin Riddle

SCIENTIFIC SERVICES BRANCH 30 NOV 1994 DANGEROUS GOODS

6. Site staffing: Hours per day: 24 Hours | Days per week: 7

7. Major supplier of dangerous goods: Shell Australia

8. If new site or significant modification
   Plan stamped by: | Accredited consultant's name: | Date stamped

DATA 12 JAN 1995 ENTERED

9. Number of dangerous goods depots at site

10. Trading name or occupier's name
    Inchcape Motors Australia Limited

11. Postal address of applicant | Suburb/Town | Postcode
    Private Bag No. 38 | Wetherill Park | 2164

12. Contact for licence enquiries:
    Phone | Fax | Name
    8289199 | 8289120 | Anthony R. Thomas

I certify that the details contained in this application (or the accompanying computer disk) are true and correct

13. Signature of applicant | Date: 28.11.94

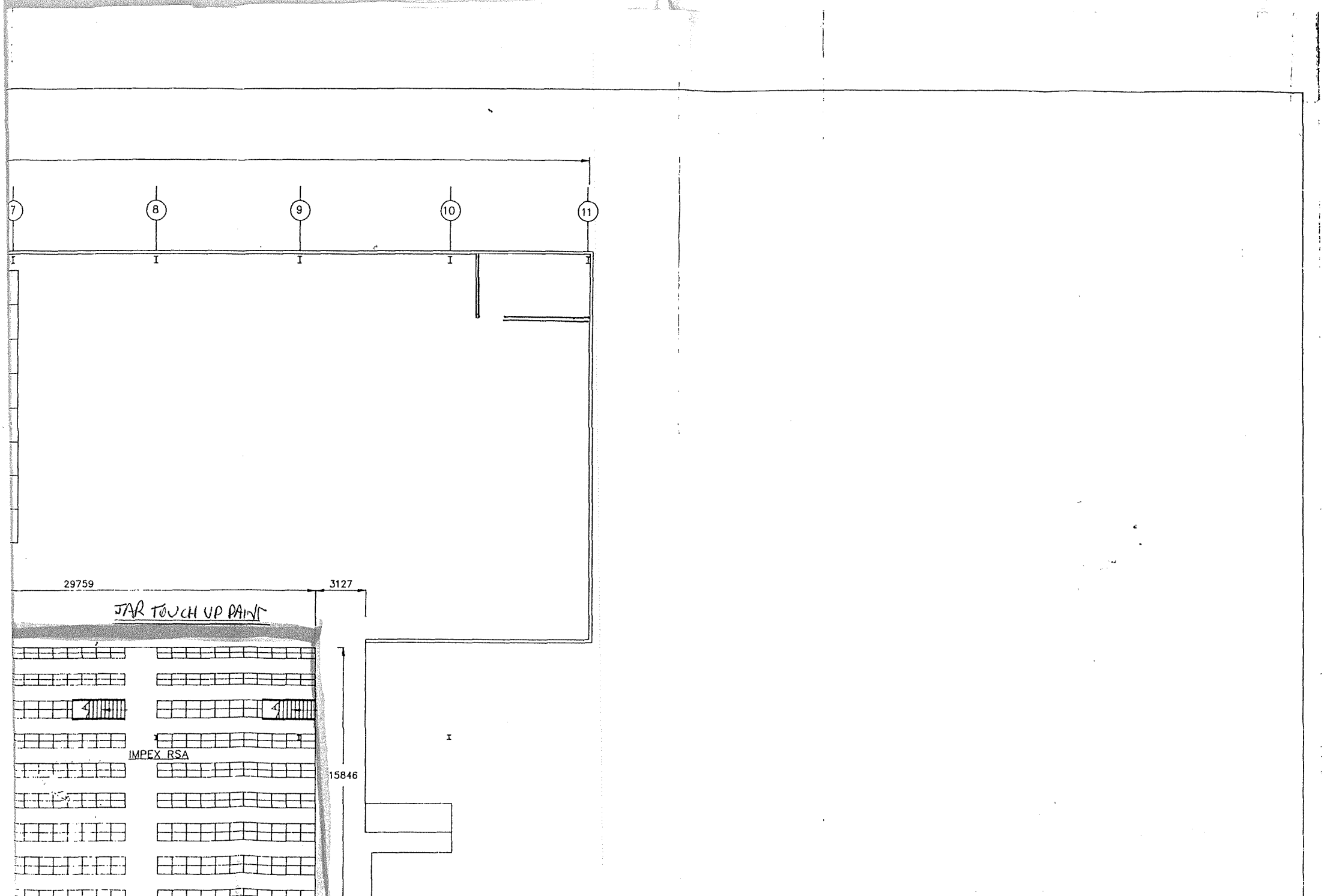
12 JAN 1995

Please complete attached site sketch, depot listing and check sheet (if required) and return to WorkCover Authority in envelope provided.

Form DG1

NOTE:

1. Total Parking lots for the whole site = 191
2. Total Disabled Parking as required by Council = 2 (Behind new Subaru building)
3. The number of parking lots on site behind existing warehouse may vary from the site plan as shown above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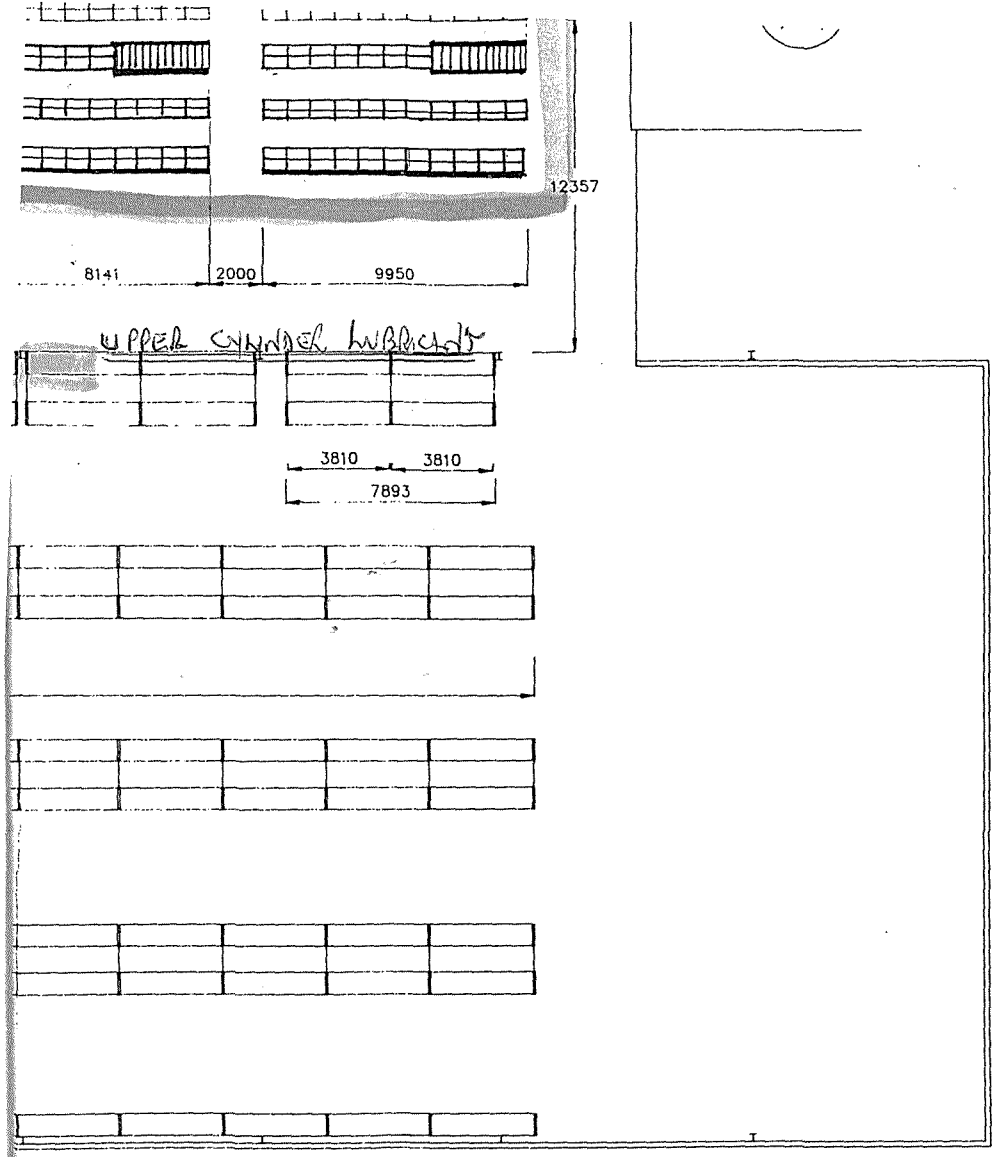

ITEM	DESCRIPTION	QTY

WAREHOUSE PLAN LAYOUT

SUBARU AUSTRALIA PTY. LIMITED

DEXION (AUSTRALIA) PTY. LIMITED

©

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DRAWN	
DATE	21.7.92
CHECK	
DATE	

SCALE: DO NOT SCALE

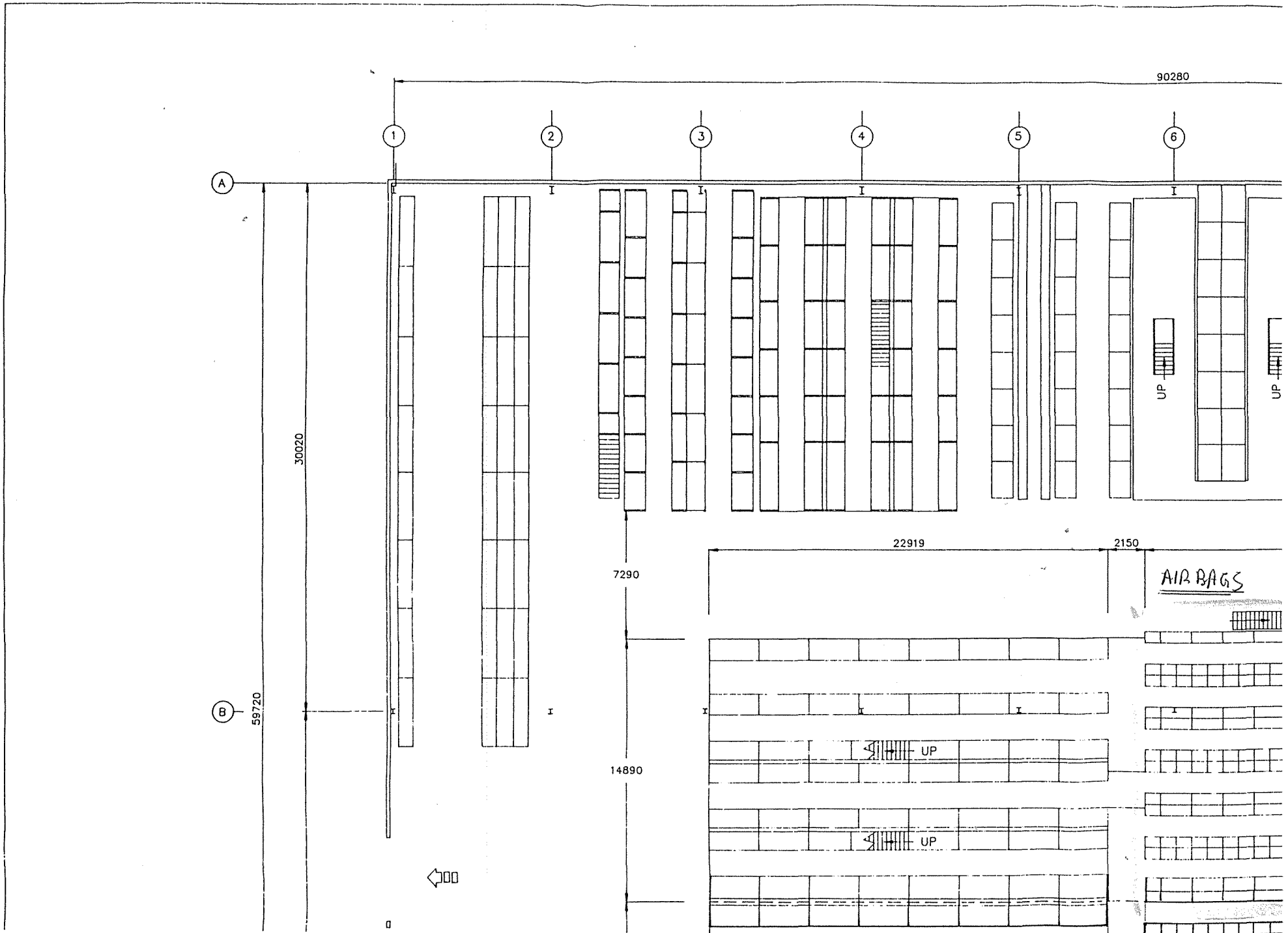
CAD A1 PLOT SCALE 1 = 200

DRAWING No. 007—3

DEXION STORAGE CENTRE

(STEEL SHELVING ASSEMBLERS PTY. LTD.)

ISSUE	DETAILS OF CHANGE	DATE
A	DETAILS CHANGED AT S.S.A REQUEST TO SUIT CONSTRUCTION BUILD	5/12/92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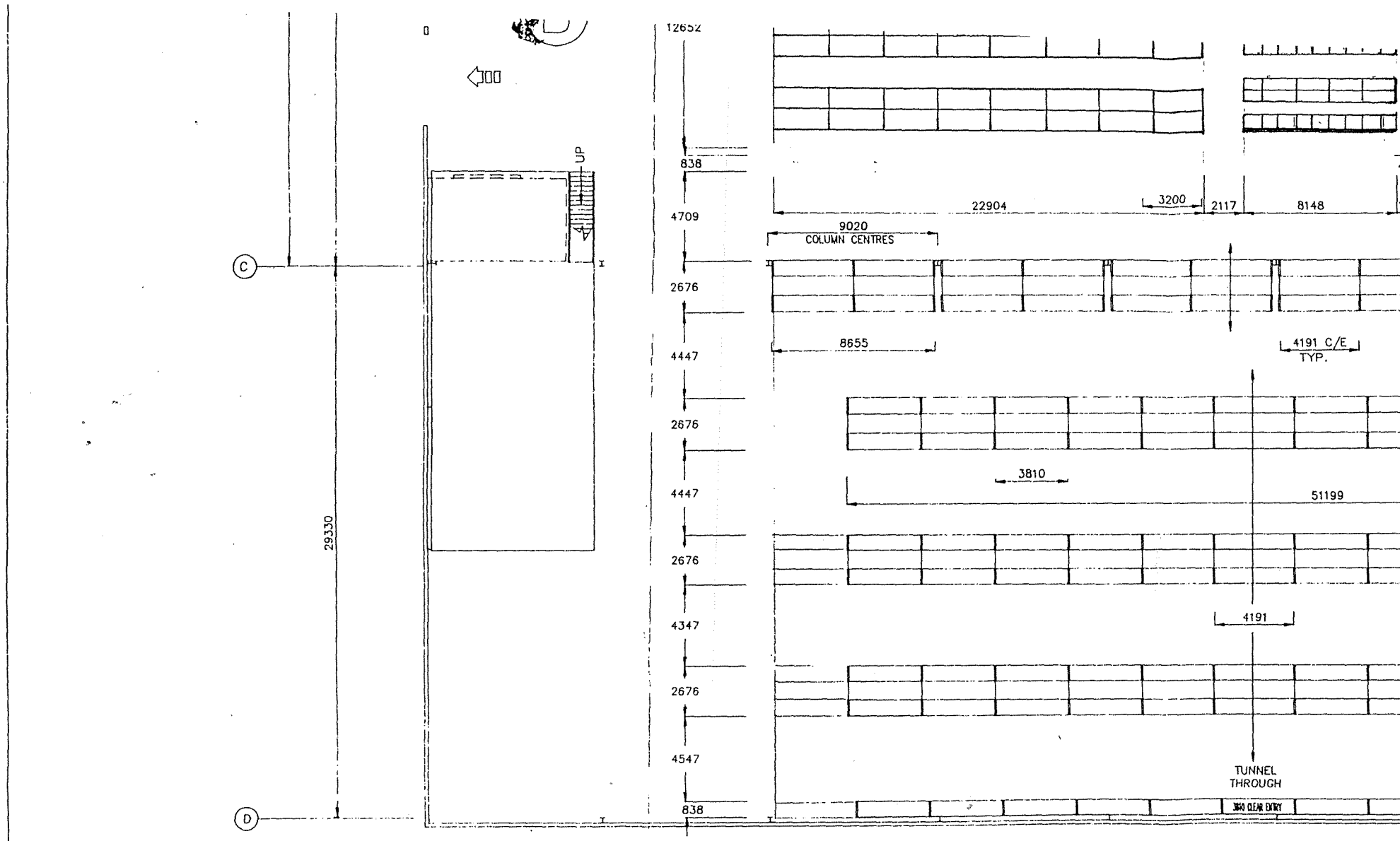
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COLUMN CENTRES
8655
4191 C/E
TYP.
3810
51199
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TUNNEL
THROUGH
3840 CLEAR ENTRY

N1A

Delete & Reinsert

Form DGI

Department of Industrial Relations & Employment

DANGEROUS GOODS ACT, 1975

LICENCE No. 35 - 010452.8

APPLICATION FOR LICENCE (or AMENDMENT or TRANSFER of LICENCE)* FOR THE KEEPING OF DANGEROUS GOODS

(* delete whichever is not required)

$15 for renewal fees

FEE: $15.00 per Depot for new licence. ~~$15.00 for amendment or transfer.~~

DG 8912 0001 90

Name of Applicant in full (see Item 1 - Explanatory notes - page 4)	NF	TOZER KEMSLEY & MILLBOURN AUTOMOTIVE
Trading name or occupier's name (if any)	TF	SUBARU AUSTRALIA (AUSTRALIA) LTD.
Postal Address	PF	P.O. BOX 186 PP SMITHFIELD 2164 Postcode 2164
Address of the premises to be licensed. (Including Street No.)	LF	~~266~~ "Victoria St" LL Wetherill Park Postcode 2164
Nature of premises (See Item 2 - Explanatory notes - page 4)		VEHICLE STORAGE
Telephone number of applicant		STD Code 02 Number 60440122

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (See item 3 - Explanatory notes - page 4)	Storage capacity	Dangerous goods: Product being stored	C & C Office use only
			DD	001.020.8
1	3.1	10,000L	UNLEADED MOTOR SPIRIT	2.020.14
2				
3				
4				
5	—			
6				
7				
8				
9				
10				
11				
12				

DE 10 APR 1990

RECEIPTS FIELD COLLECTIONS 0855A RECEIPT No. DATE 21/3/90 AMOUNT $15.00

Has site plan been approved by the Dangerous Goods Branch? (Yes) No — If yes, no plans required. If no, please attach site plan, or provide sketch plan overleaf.

Have premises previously been licensed? (Yes) No — If, yes, state name of previous occupier, and licence No. (if known).

Name of oil company supplying flammable liquid (if applicable). SHELL (MUST)

Signature of applicant ..... Date 13/3/90

For external explosives magazine(s), please fill in page 3.

FOR OFFICE USE ONLY

CERTIFICATE OF INSPECTION

I. being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector ..... Date .....

DANGEROUS GOODS ACT, 1975 INSERT

LICENCE No. 35-010452-8

DG 8312 0001 — A

APPLICATION FOR LICENCE (or AMENDMENT or TRANSFER of LICENCE) FOR THE KEEPING OF DANGEROUS GOODS

DATA ENTERED VERIFIED OP

Application is hereby made for— *a licence (or amendment of the licence) for the keeping of dangerous goods in or on the premise described below. 23 DEC 1983
*the transfer of the licence
(*delete whichever is not required)

FEE: $10.00 per Depot for new licence.
$10.00 for amendment or transfer.

Name of Applicant in full (see over)	OPERATOR FOUR MARK IV INDUSTRIES PTY. LIMITED
Trading name or occupier's name (if any)	MARK IV INDUSTRIES PTY. LIMITED
Postal address	P.O. BOX 467 CHATSWOOD Postcode 2067
Address of the premises including street number (if any)	250-266 VICTORIA STREET WETHERILL PARK N.S.W. Postcode 2164
Nature of premises (see over)	VEHICLE STORAGE AND DISTRIBUTION
Telephone number of applicant	STD Code 02 Number 412 4044

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (see over)	Storage capacity	Dangerous goods: Product being stored	C & C Office use only
1	UNDER GROUND TANK	28 000 Litres	PETROL - SUPER DD	001 020 2
2	" " "	1350 Litres	NOT IN USE (Distillate)	2 020 34
3				
4			cancelled	
5			20/2/84	
6				
7				
8				
9				
10				
11		Licence issued 27/2/84		
12		Dep licence issued 26/3/84 (cancelled)		DX 9606

Has site plan been approved? Yes ~~No~~ If yes, no plans required. If no, please attach site plan.

Have premises previously been licensed? Yes ~~No~~ If yes, state name of previous occupier. LNC INDUSTRIES LIMITED (PARENT COMPANY OF MARK IV INDUSTRIES PTY. LTD.)

Name of company supplying flammable liquid (if any) AMPOL LIMITED

MARK IV INDUSTRIES PTY LIMITED Signature of applicant ..... Date 16.12.83

For external explosives magazine(s), please fill in side 2.

FOR OFFICE USE ONLY

CERTIFICATE OF INSPECTION

I, K.O BISHOP being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector K O Bishop

24/2/84.

Bill

m. Ross of Mark IV Industries of Wattle Park rang re your letter concerning Keeping Licence 35.010452.8.

It concerns an abandoned tank. He stated that they still use the 25,000 underground tank (petrol). The company also has a diesel tank.

Would you please ring the company on ~~[redacted]~~ 4124044 and leave a message with Mrs. WILLIS as Mr. Ross will be in Melbourne on 27/2/84.

Rex

New South Wales Government

Dangerous Goods Branch

1 Oxford Street
Sydney
P.O. Box 847
Darlinghurst, N.S.W. 2010

Our reference:

Your reference:

Telephone: 2388

MARK IV Industries P/L
PO Box 467
Chatswood 2067

20/2/84.

Dear Sir

DANGEROUS GOODS ACT, 1975

Re: ABANDONING OF TANKS
at: 250-266 Victoria St, Wetherill Park

Under the abovementioned Act, premises licensed or registered for the keeping of dangerous goods shall, if unoccupied for a continuous period of 28 days, have all dangerous goods storage removed from such premises.

The same condition also applies to underground tanks in that should tanks be not in use for a continuous period of 28 days, such tanks shall be sealed and kept sealed until -

1) Such time as they are to be re-used
2) Or a period of three (3) months has expired, at such time tanks shall be removed or rendered safe in compliance with the above Act.

Would you please advise this office, whether the tank at your particular site is to be removed, used again or sealed (if latter applies, please forward contractor's certificate).

Yours faithfully

for Chief Inspector, Dangerous Goods.

1 tank in use

New South Wales Government

FORM B

INFLAMMABLE LIQUID ACT, 1915

C 10452-8

APPLICATION FOR: REGISTRATION OF PREMISES / STORE LICENCE / AMENDMENT TO REGISTRATION OR LICENCE } FOR THE KEEPING OF INFLAMMABLE LIQUID AND/OR DANGEROUS GOODS

06

Name of Occupier in full	LWC INDUSTRIES LIMITED (Surname/s) (First Names in full)
Trading Name (if any)	LWC INDUSTRIES LIMITED
Postal Address	P.O. BOX 467 CHATSWOOD 2067 Postcode 2067
Address of the premises in which the depot or depots are situated	250 – 266 VICTORIA STREET WEATHERILL PARK Postcode 2164
Occupation	MOTOR VEHICLE DISTRIBUTOR
Nature of Premises	STORAGE AREA FOR MOTOR VEHICLES

Particulars of construction of depots and maximum quantities of inflammable liquid and/or dangerous goods to be kep at any one time.

PLEASE SKETCH SITE ON BACK OR ATTACH PLAN

Tank or Depot Number	Construction of depots *			Inflammable Liquid		Dangerous Goods						
	Walls	Roof	Floor	Mineral spirit litres	Mineral oil litres	Class 1 litres	Class 2 litres	Class 3 kg	Class 4 m^3	Class 5A# litres	Class 5B# litres	Class 9 litres
1	UNDER GROUND TANK			27000.								
2	ABOVE GROUND TANK.				1350.							
3												
4												
5												
6												
7								CKG	25.00			
8								9-6-78				
9								Rec No.	2259			
10												
	TOTAL											

* If kept in tanks describe depots as underground or aboveground tanks.

\# Insert water capacity of tanks or cylinders.

Name of Company supplying inflammable liquid AMPOL PETROLEUM LIMITED

Have premises previously been licensed? NO Licence No.

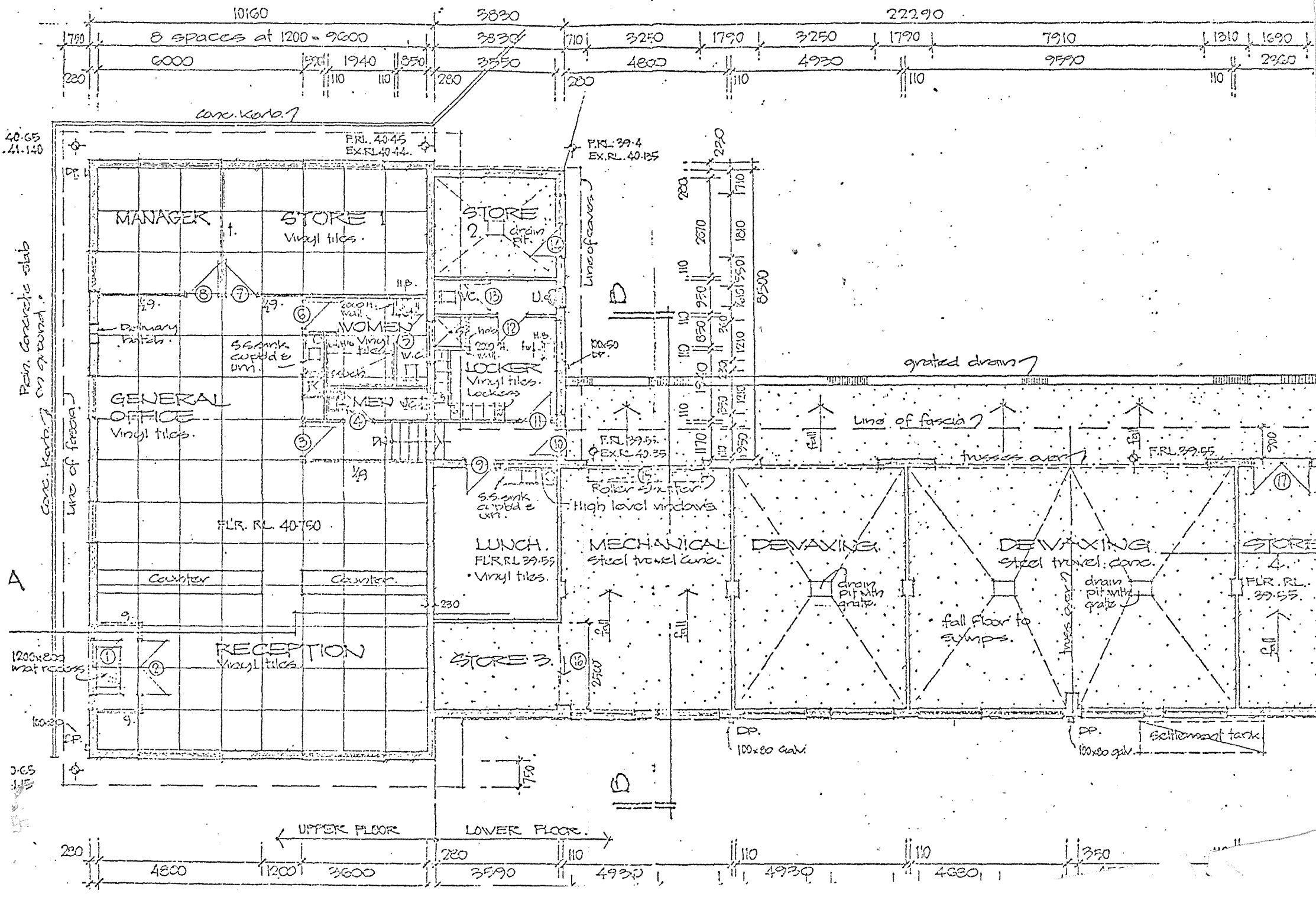
If known, state name of previous occupier

Signature of applicant [signature] Date 15.5.1978

FOR OFFICE USE ONLY:

CERTIFICATE OF INSPECTION

I, K.O. BISHOP being an Inspector under tl Inflammable Liquid Act, 1915, do hereby certify that the premises or store described above does comply with tl requirements of that Act and regulations with regard to its situation and construction for the keeping of inflammab



10160
3830
22290
8 spaces at 1200 = 9600
6000
1940
3550
4800
4930
9590
2360
conc. Kerb
F.RL. 40.45
EX.RL. 40.44
F.RL. 39.4
EX.RL. 40.135
MANAGER
STORE 1
Vinyl tiles
STORE 2
drain pit
Line of eaves
WOMEN
Vinyl tiles
LOCKER
Vinyl tiles
Lockers
MEN
GENERAL OFFICE
Vinyl tiles
Delivery hatch
S.S. sink cupbd & urn
grated drain
Line of fascia
trusses over
F.RL. 39.55
F.RL. 39.55
EX.RL. 40.35
Roller shutter
High level windows
S.S. sink cupbd & urn
FL'R. RL. 40.750
LUNCH
FL'R. RL. 39.55
Vinyl tiles
MECHANICAL
Steel trowel conc.
DEWAXING
drain pit with grate
DEWAXING
Steel trowel conc.
drain pit with grate
STORE 4
FL'R. RL. 39.55
fall floor to sumps
Counter
Counter
RECEPTION
Vinyl tiles
STORE 3
1200x800 mat recess
DP.
100x80 galv.
DP.
100x80 galv.
Settlement tank
Pen. Concrete slab on ground
Conc. Kerb
Line of fascia
UPPER FLOOR
LOWER FLOOR
4800
1200
3600
3590
4930
4930
4680

DANGEROUS GOODS ACT, 1975

INSERT

LICENCE No. 35-023688-0

Dec 84

DATA ENTERED
5 JAN 1984
VERIFIED
OP 4
OPERATOR THREE

APPLICATION FOR LICENCE (or AMENDMENT or TRANSFER of LICENCE) FOR THE KEEPING OF DANGEROUS GOODS

DG8312 0001 — — 84

Application is hereby made for— *a licence (or amendment of the licence) *the transfer of the licence for the keeping of dangerous goods in or on the premises described below.

(*delete whichever is not required)

FEE: $10.00 per Depot for new licence. $10.00 for amendment or transfer. 30.00

Name of Applicant in full (see over)	BENNETT HONDA PTY LIMITED 514 9/01/84 03A
Trading name or occupier's name (if any)	
Postal address	P.O. BOX 501, SMITHFIELD NSW Postcode 2164
Address of the premises including street number (if any)	250 VICTORIA STREET WETHERILL PARK Postcode 2164
Nature of premises (see over)	OFFICE AND WAREHOUSE
Telephone number of applicant	STD Code (02) Number 609 0600

Particulars of type of depots and maximum quantities of dangerous goods to be kept at any one time.

Depot number	Type of depot (see over)	Storage capacity	Dangerous goods: Product being stored	C & C Office use only
			DD	003 120 0
1	A/G. TANK.	2 TONNE.	L.P.G.	1 100 23
2	INTERNAL CABINET.	250 LT	Petrol ~~FUEL~~ 3.1	6 020 32
3	INTERNAL CABINET.	250 LT.	" ~~FUEL~~ 3.1.	6 020 32.
4				
5				
6				
7				
8				
9				
10				
11				
12				

4a.

INSPECTOR FIELD COLLECTION 53
RECEIPT No. 14641
DATE 1.12.83
AMOUNT 30.00

Has site plan been approved? Yes ✓ ~~No~~ If yes, no plans required. If no, please attach site plan.

Have premises previously been licensed? ~~Yes~~ No ✓ If yes, state name of previous occupier.

Name of company supplying flammable liquid (if any) SHELLGAS

FOR AND ON BEHALF OF BENNETT HONDA PTY. LIMITED (Incorporated in the State of New South Wales)

Signature of applicant ..... Date 1/12/83

For external explosives magazine(s), please fill in side 2.

Administration Manager

FOR OFFICE USE ONLY

CERTIFICATE OF INSPECTION

I, I O BISHOP being an Inspector under the Dangerous Goods Act, 1975, do hereby certify that the premises described above do comply with the requirements of the Dangerous Goods Act, 1975, and the Dangerous Goods Regulation with regard to their situation and construction for the keeping of dangerous goods of the nature and in the quantity specified.

Signature of Inspector K O Bishop Date 1.12.1983.

BENNETT HONDA PTY. LIMITED

A DIVISION OF LNC INDUSTRIES LIMITED

2 RALPH STREET, ALEXANDRIA, N.S.W. 2015 Tel.: 669-5722 Postal Address: BOX 96, STRAWBERRY HILLS, 2012
Cables: 'BENHONDA' Telex: AA26141

DM:KC: 28th July, 1982.

The Under Secretary,
Department of Industrial Relations,
P.O. Box 847,
DARLINGHURST. N.S.W. 2010

Dear Sir,

RE: PREMISES - OFFICE AND WAREHOUSES SITUATED AT

821059

a) ~~23 Pine Road - Yennora~~ ~~35-018860-7~~ ~~cancelled 21-78~~
b) ~~2 Ralph Street - Alexandria~~ ~~35-018034-0~~ to be cancel
No licence c) 250 Victoria Street - Wetherill Park ~~35-200~~ NIL.

This is to advise that our company has ceased operations at the premises at 23 Pine Road, Yennora as from 29th June 1982, and in addition, will also cease operations at 2 Ralph Street, Alexandria approximately mid August 1982.

We are in the process of moving stock etc., to new warehouse premises situated at 250 Victoria Street, Wetherill Park where full operation is expected to commence approximately 16th August 1982. The new premises are nearing building completion.

Accordingly, we would be pleased if you would retire the licences for Yennora, and then Alexandria at the above date.

Our new premises are being completed by the builders, Paynter & Dixon Pty. Limited for our associated property company, Larke Neave Investment Pty. Limited (a division of LNC Industries Limited).

Would you kindly acknowledge this letter and with your reply, provide the necessary application forms to complete registration of the Wetherill Park premises for

copy to Fa

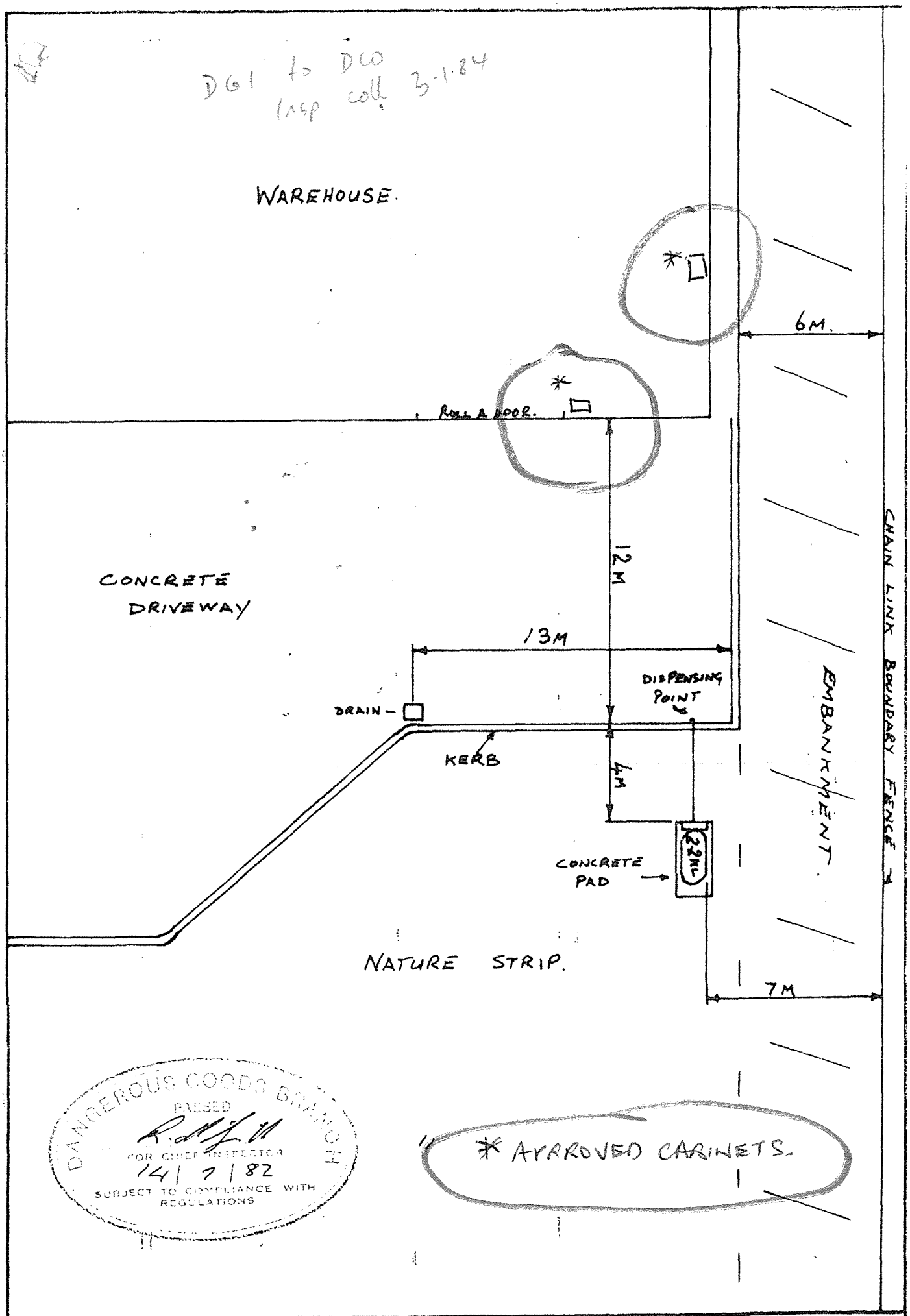
a) factory licence - motorcycle, & motor vehicle repairs.
b) dangerous goods storage.

Yours faithfully,
BENNETT HONDA PTY. LIMITED

please registered & return
12/8/84

REF KEN THOMAS
(OPS MANAGER)

D. W. Moylan,
ADMINISTRATION MANAGER.



PROPOSED LOCATION OF A 2.2KL DISPENSER AT BENNETT HONDA PTY LTD 250, VICTORIA STREET

THE SHELL COMPANY OF AUSTRALIA LIMITED

SCALE: 1:200 | DRN: H. STONE | BENNETT HONDA

Appendix C: Laboratory Results Summary Tables

ABBREVIATIONS AND EXPLANATIONS

Abbreviations used in the Tables:

ABC:	Ambient Background Concentration
ACM:	Asbestos Containing Material
ADWG:	AustralianDrinking Water Guidelines
AF:	Asbestos Fines
ANZG	Australian and New Zealand Guidelines
B(a)P:	Benzo(a)pyrene
CEC:	Cation Exchange Capacity
CRC:	Cooperative Research Centre
CT:	Contaminant Threshold
EILs:	Ecological Investigation Levels
ESLs:	Ecological Screening Levels
FA:	Fibrous Asbestos
GIL:	Groundwater Investigation Levels
GSW:	General Solid Waste
HILs:	Health Investigation Levels
HSLs:	Health Screening Levels
HSL-SSA:	Health Screening Level-SiteSpecific Assessment
kg/L	kilograms per litre
NA:	Not Analysed
NC:	Not Calculated
NEPM:	National Environmental Protection Measure
NHMRC:	National Health and Medical Research Council
NL:	Not Limiting
NSL:	No Set Limit
OCP:	Organochlorine Pesticides
OPP:	Organophosphorus Pesticides
PAHs:	Polycyclic Aromatic Hydrocarbons
%w/w:	weight per weight
ppm:	Parts per million
PCBs:	Polychlorinated Biphenyls
PCE:	Perchloroethylene (Tetrachloroethylene or Teterachloroethene)
pH_{KCL} :	pH of filtered 1:20, 1M KCL extract, shaken overnight
pH_{ox} :	pH of filtered 1:20 1M KCl after peroxide digestion
PQL:	Practical Quantitation Limit
RS:	Rinsate Sample
RSL:	Regional Screening Levels
RSW:	Restricted Solid Waste
SAC:	Site Assessment Criteria
SCC:	Specific Contaminant Concentration
S_{Cr}:	Chromium reducible sulfur
S_{POS}:	Peroxide oxidisable Sulfur
SSA:	Site Specific Assessment
SSHSLs:	Site Specific Health Screening Levels
TAA:	Total Actual Acidity in 1M KCL extract titrated to pH6.5
TB:	Trip Blank
TCA:	1,1,1 Trichloroethane (methyl chloroform)
TCE:	Trichloroethylene (Trichloroethene)
TCLP:	Toxicity Characteristics Leaching Procedure
TPA:	Total Potential Acidity, 1M KCL peroxide digest
TS:	Trip Spike
TRH:	Total Recoverable Hydrocarbons
TSA:	Total Sulfide Acidity (TPA-TAA)
UCL:	Upper Level Confidence Limit on Mean Value
USEPA	United States Environmental Protection Agency
VOCC:	Volatile Organic Chlorinated Compounds
WHO:	World Health Organisation

Table Specific Explanations:

HIL Tables:

- The chromium results are for Total Chromium which includes Chromium III and VI. For initial screening purposes, we have assumed that the samples contain only Chromium VI unless demonstrated otherwise by additional analysis.
- Carcinogenic PAHs is a toxicity weighted sum of analyte concentrations for a specific list of PAH compounds relative to B(a)P. It is also refered to as the B(a)P Toxic Equivalence Quotient (TEQ).
- Statistical calculations are undertaken using ProUCL (USEPA). Statistical calculation is usually undertaken using data from fill samples.

EIL/ESL Table:

- ABC Values for selected metals have been adopted from the published background concentrations presented in Olszowy et. al., (1995), Trace Element Concentrations in Soils from Rural and Urban New South Wales (the 25th percentile values for old suburbs with high traffic have been quoted).

Waste Classification and TCLP Table:

- Data assessed using the NSW EPA Waste Classification Guidelines, Part 1: Classifying Waste (2014).
- The assessment of Total Moderately Harmful pesticides includes: Dichlorovos, Dimethoate, Fenitrothion, Ethion, Malathion and Parathion.
- Assessment of Total Scheduled pesticides include: HBC, alpha-BHC, gamma-BHC, beta-BHC, Heptachlor, Aldrin, Heptachlor Epoxide, gamma-Chlordane, alpha-chlordane, pp-DDE, Dieldrin, Endrin, pp-DDD, pp-DDT, Endrin Aldehyde.

QA/QC Table:

- Field blank, Inter and Intra laboratory duplicate results are reported in mg/kg.
- Trip spike results are reported as percentage recovery.
- Field rinsate results are reported in µg/L.

Copyright JK Environments

JKEnvironments

TABLE S1
SOIL LABORATORY RESULTS COMPARED TO NEPM 2013.
HIL-D: 'Commercial/Industrial'

All data in mg/kg unless stated otherwise			HEAVY METALS								PAHs		ORGANOCHLORINE PESTICIDES (OCPs)							OP PESTICIDES (OPPs)	TOTAL PCBs	Phenol	ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	Carcinogenic PAHs	HCB	Endosulfan	Methoxychlor	Aldrin & Dieldrin	Chlordane	DDT, DDD & DDE	Heptachlor	Chlorpyrifos			
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5	100
Site Assessment Criteria (SAC)			3000	900	3600	240000	1500	730	6000	400000	4000	40	80	2000	2500	45	530	3600	50	2000	7	240000	Detected/Not Detected
Sample Reference	**Sample Depth**	**Sample Description**																					
TP101	0-0.3	Fill: Silty Clay	**18**	<0.4	**19**	**20**	**20**	<0.1	**11**	**45**	**0.2**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP102	0-0.25	Fill: Silty Clay	**14**	<0.4	**22**	**14**	**22**	<0.1	**7**	**39**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	NA
TP102 - [LAB_DUP]	0-0.25	Fill: Silty Clay	**13**	<0.4	**23**	**16**	**26**	<0.1	**7**	**47**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	NA
TP102	0.3-0.5	Fill: Silty Clay	**8**	<0.4	**15**	**14**	**12**	<0.1	**5**	**18**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH103	0-0.2	Fill: Silty Clay	**6**	<0.4	**14**	**17**	**24**	<0.1	**7**	**74**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH103	0.4-0.8	Fill: Silty Clay	**9**	<0.4	**12**	**20**	**14**	<0.1	**7**	**34**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP104	0-0.1	Fill: Silty Sand	**<4**	<0.4	**95**	**23**	**17**	<0.1	**11**	**74**	**0.2**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	NA
TP104	0.2-0.4	Fill: Silty Clayey Sand	**<4**	<0.4	**13**	**24**	**3**	<0.1	**56**	**26**	**0.1**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH105	0.03-0.3	Fill: Silty Sandy Gravel	**<4**	<0.4	**10**	**41**	**<1**	<0.1	**130**	**35**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH106	0.19-0.4	Fill: Silty Sand	**<4**	<0.4	**2**	**3**	**2**	<0.1	**3**	**10**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH106	0.8-0.95	Silty Clay	**6**	<0.4	**3**	**12**	**4**	<0.1	**1**	**15**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH107	0.22-0.5	Fill: Silty Clay	**4**	<0.4	**8**	**22**	**11**	<0.1	**12**	**46**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH108	0.03-0.2	Fill: Silty Gravelly Sand	**<4**	<0.4	**7**	**37**	**1**	<0.1	**84**	**26**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH108 - [LAB_DUP]	0.03-0.2	Fill: Silty Gravelly Sand	**<4**	<0.4	**10**	**45**	**2**	<0.1	**95**	**31**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA
BH109	0-0.2	Fill: Silty Sand	**<4**	<0.4	**7**	**14**	**10**	<0.1	**8**	**69**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH110	0-0.2	Fill: Silty Clay	**<4**	<0.4	**21**	**26**	**16**	<0.1	**38**	**79**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH111	0.2-0.5	Fill: Silty Clay	**<4**	<0.4	**29**	**33**	**3**	<0.1	**130**	**42**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH111	0.5-0.95	Fill: Silty Clay	**9**	<0.4	**19**	**18**	**16**	<0.1	**9**	**29**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH112	0-0.2	Fill: Silty Clay	**24**	<0.4	**20**	**19**	**27**	<0.1	**12**	**65**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH112	0.4-0.5	Fill: Silty Clay	**6**	<0.4	**14**	**13**	**11**	<0.1	**10**	**33**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH113	0-0.2	Fill: Silty Clay	**6**	<0.4	**12**	**15**	**14**	<0.1	**11**	**64**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP114	0-0.2	Fill: Silty Sand	**<4**	<0.4	**18**	**25**	**7**	<0.1	**23**	**150**	**0.57**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP115	0-0.2	Fill: Silty Sand	**<4**	<0.4	**21**	**15**	**2**	<0.1	**31**	**22**	**0.3**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH116	0.03-0.3	Fill: Silty Clay	**<4**	<0.4	**26**	**19**	**4**	<0.1	**38**	**33**	**0.58**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH116 - [LAB_DUP]	0.03-0.3	Fill: Silty Clay	**<4**	<0.4	**25**	**23**	**4**	<0.1	**39**	**34**	**1.2**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA
BH116	0.3-0.5	Silty Clay	**6**	<0.4	**15**	**12**	**11**	<0.1	**5**	**11**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP117	0-0.2	Fill: Silty Sand	**<4**	<0.4	**3**	**55**	**3**	<0.1	**5**	**15**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH118	0-0.2	Fill: Silty Gravelly Clay	**<4**	<0.4	**4**	**4**	**6**	<0.1	**3**	**11**	**0.94**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH118	0.2-0.4	Fill: Silty Clay	**NA**	NA	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH119	0.16-0.3	Fill: Silty Gravelly Clay	**<4**	<0.4	**6**	**19**	**2**	<0.1	**65**	**25**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
TP120	0-0.2	Fill: Sandy Clay	**<4**	<0.4	**5**	**13**	**12**	<0.1	**22**	**24**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP121	0-0.2	Fill: Silty Clay	**6**	<0.4	**6**	**10**	**7**	<0.1	**5**	**22**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP122	0-0.2	Fill: Silty Clay	**<4**	<0.4	**6**	**13**	**6**	<0.1	**12**	**31**	**0.54**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	NA
TP122- [LAB_DUP]	0-0.2	Fill: Silty Clay	**NA**	NA	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	NA
TP122	0.6-0.8	Fill: Silty Clay	**<4**	<0.4	**6**	**19**	**6**	<0.1	**23**	**40**	**1.9**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH123	0-0.2	Fill: Silty Gravelly Sand	**<4**	<0.4	**20**	**5**	**2**	<0.1	**3**	**10**	**0.74**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
TP124	0-0.2	Fill: Silty Sand	**<4**	<0.4	**11**	**8**	**5**	<0.1	**10**	**16**	**0.1**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP125	0-0.2	Fill: Silty Sand	**<4**	<0.4	**22**	**20**	**5**	<0.1	**24**	**26**	**0.4**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
TP125 - [LAB_DUP]	0-0.2	Fill: Silty Sand	**<4**	<0.4	**20**	**19**	**4**	<0.1	**23**	**29**	**0.2**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA
TP126	0-0.2	Fill: Silty Sand	**<4**	<0.4	**17**	**12**	**5**	<0.1	**19**	**19**	**0.2**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH127	0-0.2	Fill: Silty Sandy Gravel	**<4**	<0.4	**5**	**7**	**6**	<0.1	**2**	**7**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH128	0-0.2	Fill: Silty Sandy Gravel	**<4**	<0.4	**5**	**7**	**7**	<0.1	**4**	**12**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH128	1.3-1.5	Fill: Silty Clay	**<4**	<0.4	**10**	**11**	**7**	<0.1	**15**	**22**	**0.4**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH129	0.5-0.7	Fill: Silty Sandy Gravel	**<4**	<0.4	**2**	**7**	**4**	<0.1	**3**	**14**	**0.4**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP130	0-0.2	Fill: Silty Clay	**4**	<0.4	**10**	**61**	**39**	<0.1	**21**	**130**	**2.9**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH131	0-0.2	Fill: Silty Gravelly Sand	**<4**	<0.4	**3**	**5**	**3**	<0.1	**2**	**10**	**0.4**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP132	0-0.15	Fill: Silty Sand	**<4**	<0.4	**10**	**11**	**7**	<0.1	**6**	**31**	**0.3**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA
TP132 - [LAB_DUP]	0-0.15	Fill: Silty Sand	**<4**	<0.4	**7**	**8**	**6**	<0.1	**3**	**16**	**0.1**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA
TP132 - [TRIPLICATE]	0-0.15	Fill: Silty Sand	**<4**	<0.4	**9**	**9**	**5**	<0.1	**7**	**27**	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP133	0-0.2	Fill: Silty Sand	**<4**	<0.4	**23**	**23**	**4**	<0.1	**27**	**38**	**0.2**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH134	0-0.2	Fill: Silty Sandy Gravel	**<4**	<0.4	**8**	**52**	**2**	<0.1	**130**	**37**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	NA
TP135	0-0.2	Fill: Silty Sand	**<4**	<0.4	**20**	**10**	**4**	<0.1	**19**	**27**	**0.3**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
TP136	0-0.2	Fill: Silty Sand	**<4**	<0.4	**21**	**11**	**5**	<0.1	**24**	**28**	**0.2**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH137	0-0.3	Fill: Silty Gravelly Sand	**<4**	<0.4	**2**	**2**	**1**	<0.1	**1**	**5**	**0.79**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH138	0.05-0.3	Fill: Silty Clay	**<4**	<0.4	**17**	**12**	**5**	<0.1	**17**	**19**	**0.1**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH139	0.05-0.3	Fill: Silty Sand	**<4**	<0.4	**22**	**15**	**6**	<0.1	**22**	**26**	**0.9**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH140	0.05-0.3	Fill: Silty Gravelly Sand	**<4**	<0.4	**4**	**4**	**2**	<0.1	**4**	**8**	**0.59**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH140 - [LAB_DUP]	0.05-0.3	Fill: Silty Gravelly Sand	**<4**	<0.4	**12**	**15**	**11**	<0.1	**11**	**24**	**0.52**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA
BH140 - [TRIPLICATE]	0.05-0.3	Fill: Silty Gravelly Sand	**<4**	<0.4	**10**	**12**	**7**	<0.1	**8**	**19**	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH140	0.3-0.5	Fill: Silty Gravelly Sand	**<4**	<0.4	**2**	**5**	**3**	<0.1	**<1**	**3**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH141	0-0.2	Fill: Silty Sand	**<4**	<0.4	**8**	**11**	**6**	<0.1	**11**	**23**	**0.52**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH142	0-0.2	Fill: Silty Gravelly Clay	**<4**	<0.4	**3**	**4**	**9**	<0.1	**2**	**12**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH142	0.5-0.95	Fill: Silty Clay	**NA**	NA	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
BH143	0-0.2	Fill: Silty Sandy Gravel	**<4**	<0.4	**12**	**27**	**4**	<0.1	**13**	**22**	**0.1**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
TP144	0-0.2	Fill: Silty Sand	**<4**	<0.4	**14**	**20**	**5**	<0.1	**30**	**29**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH145	0-0.2	Fill: Silty Clay	**6**	<0.4	**20**	**7**	**9**	<0.1	**6**	**8**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	Not Detected
BH145 - [LAB_DUP]	0-0.2	Fill: Silty Clay	**NA**	NA	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<5	NA
BH145	0.5-0.95	Fill: Silty Clay	**<4**	<0.4	**9**	**6**	**6**	<0.1	**<1**	**3**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH146	0-0.2	Fill: Silty Sandy Clay	**<4**	<0.4	**6**	**15**	**30**	<0.1	**6**	**59**	**1.3**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH146	1.3-1.5	Fill: Silty Clay	**<4**	<0.4	**10**	**7**	**7**	<0.1	**1**	**5**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Not Detected
SDUP1	-	Fill: Silty Sandy Clay	**<4**	<0.4	**8**	**22**	**43**	<0.1	**7**	**83**	**1.4**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP4	-	Fill: Silty Clay	**7**	<0.4	**12**	**13**	**19**	<0.1	**5**	**40**	**<0.05**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP7	-	Fill: Silty Clay	**6**	<0.4	**20**	**9**	**10**	<0.1	**6**	**10**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	NA
SDUP7 - [LAB_DUP]	-	Fill: Silty Clay	**6**	<0.4	**21**	**10**	**11**	<0.1	**6**	**11**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	NA	NA
SDUP10	-	Fill: Silty Sand	**<4**	<0.4	**2**	**2**	**2**	<0.1	**2**	**7**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	<0.1	<5	NA
SDUP101	-	Fill: Silty Clay	**16**	<0.4	**23**	**23**	**26**	<0.1	**9**	**50**	**0.06**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP101 - [LAB_DUP]	-	Fill: Silty Clay	**13**	<0.4	**20**	**22**	**20**	<0.1	**8**	**45**	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA
SDUP102	-	Fill: Silty Clay	**7**	<0.4	**11**	**20**	**9**	<0.1	**20**	**41**	**1.6**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	NA
SDUP102 - [LAB_DUP]	-	Fill: Silty Clay	**NA**	NA	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**1.1**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	NA	NA	NA
SDUP103	-	Fill: Silty Clay	**10**	**0.4**	**31**	**76**	**64**	<0.1	**18**	**260**	**2**	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SDUP111	-	Fill: Silty Clay	**5**	<0.4	**26**	**30**	**16**	<0.1	**37**	**92**	**<0.05**	<0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	NA	NA
FCF1	Surface	Fragment	**NA**	NA	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Detected
Total Number of Samples			76	76	76	76	76	76	76	76	74	74	33	33	33	33	33	3	33	0	33	25	40
Maximum Value			24	0.4	95	76	64	<PQL	130	260	2.9	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	Detected

Concentration above the SAC — **VALUE**
Concentration above the PQL — **Bold**
Standard deviation exceeds data assessment criteria — **VALUE**

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TABLE S2
SOIL LABORATORY RESULTS COMPARED TO HSLs
All data in mg/kg unless stated otherwise

					C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	Field PID Measurement
PQL - Envirolab Services					25	50	0.2	0.5	1	1	1	ppm
NEPM 2013 HSL Land Use Category					HSL-D: COMMERCIAL/INDUSTRIAL							
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**								
TP101	0-0.3	Fill: Silty Clay	0m to <1m	Sand	<25	**130**	<0.2	<0.5	<1	<3	<1	0
TP102	0-0.25	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP102 - [LAB_DUP]	0-0.25	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP102	0.3-0.5	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH103	0-0.2	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH103	0.4-0.8	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0.1
TP104	0-0.1	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP104	0.2-0.4	Fill: Silty Clayey Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH105	0.03-0.3	Fill: Silty Sandy Gravel	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH106	0.19-0.4	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH106	0.8-0.95	Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH107	0.22-0.5	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH108	0.03-0.2	Fill: Silty Gravelly Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH108 - [LAB_DUP]	0.03-0.2	Fill: Silty Gravelly Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH109	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH110	0-0.2	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH111	0.2-0.5	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH111	0.5-0.95	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH112	0-0.2	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH112	0.4-0.5	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH113	0-0.2	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP114	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP115	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH116	0.03-0.3	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH116 - [LAB_DUP]	0.03-0.3	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH116	0.3-0.5	Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP117	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH118	0-0.2	Fill: Silty Gravelly Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH119	0.16-0.3	Fill: Silty Gravelly Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP120	0-0.2	Fill: Sandy Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP121	0-0.2	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP122	0-0.2	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP122	0.6-0.8	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH123	0-0.2	Fill: Silty Gravelly Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP124	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP125	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP125 - [LAB_DUP]	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP126	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH127	0-0.2	Fill: Silty Sandy Gravel	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH128	0-0.2	Fill: Silty Sandy Gravel	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH128	1.3-1.5	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH129	0.5-0.7	Fill: Silty Sandy Gravel	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP130	0-0.2	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH131	0-0.2	Fill: Silty Gravelly Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP132	0-0.15	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP132 - [LAB_DUP]	0-0.15	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP133	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH134	0-0.2	Fill: Silty Sandy Gravel	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP135	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP136	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH137	0-0.3	Fill: Silty Gravelly Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH138	0.05-0.3	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH139	0.05-0.3	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH140	0.05-0.3	Fill: Silty Gravelly Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH140 - [LAB_DUP]	0.05-0.3	Fill: Silty Gravelly Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH140	0.3-0.5	Fill: Silty Gravelly Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH141	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH142	0-0.2	Fill: Silty Gravelly Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH143	0-0.2	Fill: Silty Sandy Gravel	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
TP144	0-0.2	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH145	0-0.2	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH145	0.5-0.95	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH146	0-0.2	Fill: Silty Sandy Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
BH146	1.3-1.5	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
SDUP1	-	Fill: Silty Sandy Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	-
SDUP4	-	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
SDUP7	-	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
SDUP7 - [LAB_DUP]	-	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
SDUP10	-	Fill: Silty Sand	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
SDUP101	-	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
SDUP101 - [LAB_DUP]	-	Fill: Silty Clay	0m to <1m	Sand	<25	**NA**	<0.2	<0.5	<1	<3	<1	0
SDUP102	-	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
SDUP102 - [LAB_DUP]	-	Fill: Silty Clay	0m to <1m	Sand	NA	**<50**	NA	NA	NA	NA	NA	0
SDUP103	-	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
SDUP111	-	Fill: Silty Clay	0m to <1m	Sand	<25	**<50**	<0.2	<0.5	<1	<3	<1	0
Total Number of Samples					74	74	74	74	74	74	74	74
Maximum Value					<PQL	130	<PQL	<PQL	<PQL	<PQL	<PQL	0.1

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**
The guideline corresponding to the concentration above the SAC is highlighted in grey in the Site Assessment Criteria Table below

HSL SOIL ASSESSMENT CRITERIA

Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
TP101	0-0.3	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP102	0-0.25	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP102 - [LAB_DUP]	0-0.25	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP102	0.3-0.5	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH103	0-0.2	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH103	0.4-0.8	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP104	0-0.1	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP104	0.2-0.4	Fill: Silty Clayey Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH105	0.03-0.3	Fill: Silty Sandy Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH106	0.19-0.4	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH106	0.8-0.95	Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH107	0.22-0.5	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH108	0.03-0.2	Fill: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH108 - [LAB_DUP]	0.03-0.2	Fill: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH109	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH110	0-0.2	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH111	0.2-0.5	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH111	0.5-0.95	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH112	0-0.2	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH112	0.4-0.5	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH113	0-0.2	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP114	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP115	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH116	0.03-0.3	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH116 - [LAB_DUP]	0.03-0.3	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH116	0.3-0.5	Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP117	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH118	0-0.2	Fill: Silty Gravelly Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH119	0.16-0.3	Fill: Silty Gravelly Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP120	0-0.2	Fill: Sandy Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP121	0-0.2	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP122	0-0.2	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP122	0.6-0.8	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH123	0-0.2	Fill: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP124	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP125	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP125 - [LAB_DUP]	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP126	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH127	0-0.2	Fill: Silty Sandy Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH128	0-0.2	Fill: Silty Sandy Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH128	1.3-1.5	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH129	0.5-0.7	Fill: Silty Sandy Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP130	0-0.2	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH131	0-0.2	Fill: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP132	0-0.15	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP132 - [LAB_DUP]	0-0.15	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP133	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH134	0-0.2	Fill: Silty Sandy Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP135	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP136	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH137	0-0.3	Fill: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH138	0.05-0.3	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH139	0.05-0.3	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH140	0.05-0.3	Fill: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH140 - [LAB_DUP]	0.05-0.3	Fill: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH140	0.3-0.5	Fill: Silty Gravelly Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH141	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH142	0-0.2	Fill: Silty Gravelly Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH143	0-0.2	Fill: Silty Sandy Gravel	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
TP144	0-0.2	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH145	0-0.2	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH145	0.5-0.95	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH146	0-0.2	Fill: Silty Sandy Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
BH146	1.3-1.5	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP1	-	Fill: Silty Sandy Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP4	-	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP7	-	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP7 - [LAB_DUP]	-	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP10	-	Fill: Silty Sand	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP101	-	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP101 - [LAB_DUP]	-	Fill: Silty Clay	0m to <1m	Sand	260	NA	3	NL	NL	230	NL
SDUP102	-	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP102 - [LAB_DUP]	-	Fill: Silty Clay	0m to <1m	Sand	NA	NL	NA	NA	NA	NA	NA
SDUP103	-	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL
SDUP111	-	Fill: Silty Clay	0m to <1m	Sand	260	NL	3	NL	NL	230	NL

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TABLE S3
SOIL LABORATORY RESULTS COMPARED TO MANAGEMENT LIMITS
All data in mg/kg unless stated otherwise

			C_6-C_{10} (F1) plus BTEX	>C_{10}-C_{16} (F2) plus napthalene	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)
PQL - Envirolab Services			25	50	100	100
NEPM 2013 Land Use Category			COMMERCIAL/INDUSTRIAL			
Sample Reference	**Sample Depth**	**Soil Texture**				
TP101	0-0.3	Coarse	<25	**130**	**290**	<100
TP102	0-0.25	Coarse	<25	**<50**	**<100**	<100
TP102 - [LAB_DUP]	0-0.25	Coarse	<25	**<50**	**<100**	<100
TP102	0.3-0.5	Coarse	<25	**<50**	**<100**	<100
BH103	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH103	0.4-0.8	Coarse	<25	**<50**	**<100**	<100
TP104	0-0.1	Coarse	<25	**<50**	**340**	**180**
TP104	0.2-0.4	Coarse	<25	**<50**	**<100**	<100
BH105	0.03-0.3	Coarse	<25	**<50**	**160**	**240**
BH106	0.19-0.4	Coarse	<25	**<50**	**<100**	<100
BH106	0.8-0.95	Fine	<25	**<50**	**<100**	<100
BH107	0.22-0.5	Coarse	<25	**<50**	**<100**	<100
BH108	0.03-0.2	Coarse	<25	**<50**	**210**	**330**
BH108 - [LAB_DUP]	0.03-0.2	Coarse	<25	**<50**	**120**	**190**
BH109	0-0.2	Coarse	<25	**<50**	**140**	<100
BH110	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH111	0.2-0.5	Coarse	<25	**<50**	**<100**	<100
BH111	0.5-0.95	Coarse	<25	**<50**	**<100**	<100
BH112	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH112	0.4-0.5	Coarse	<25	**<50**	**<100**	<100
BH113	0-0.2	Coarse	<25	**<50**	**140**	**110**
TP114	0-0.2	Coarse	<25	**<50**	**460**	**520**
TP115	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH116	0.03-0.3	Coarse	<25	**<50**	**<100**	<100
BH116 - [LAB_DUP]	0.03-0.3	Coarse	<25	**<50**	**<100**	<100
BH116	0.3-0.5	Fine	<25	**<50**	**<100**	<100
TP117	0-0.2	Coarse	<25	**<50**	**290**	**540**
BH118	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH119	0.16-0.3	Coarse	<25	**<50**	**<100**	<100
TP120	0-0.2	Coarse	<25	**<50**	**<100**	<100
TP121	0-0.2	Coarse	<25	**<50**	**<100**	<100
TP122	0-0.2	Coarse	<25	**<50**	**<100**	<100
TP122	0.6-0.8	Coarse	<25	**<50**	**160**	**220**
BH123	0-0.2	Coarse	<25	**<50**	**<100**	<100
TP124	0-0.2	Coarse	<25	**<50**	**200**	<100
TP125	0-0.2	Coarse	<25	**<50**	**340**	**320**
TP125 - [LAB_DUP]	0-0.2	Coarse	<25	**<50**	**330**	**360**
TP126	0-0.2	Coarse	<25	**<50**	**200**	**300**
BH127	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH128	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH128	1.3-1.5	Coarse	<25	**<50**	**<100**	<100
BH129	0.5-0.7	Coarse	<25	**<50**	**<100**	<100
TP130	0-0.2	Coarse	<25	**<50**	**270**	**280**
BH131	0-0.2	Coarse	<25	**<50**	**<100**	<100
TP132	0-0.15	Coarse	<25	**<50**	**320**	**300**
TP132 - [LAB_DUP]	0-0.15	Coarse	<25	**<50**	**330**	**330**
TP133	0-0.2	Coarse	<25	**<50**	**400**	**360**
BH134	0-0.2	Coarse	<25	**<50**	**<100**	<100
TP135	0-0.2	Coarse	<25	**<50**	**<100**	<100
TP136	0-0.2	Coarse	<25	**<50**	**220**	**270**
BH137	0-0.3	Coarse	<25	**<50**	**180**	**220**
BH138	0.05-0.3	Coarse	<25	**<50**	**<100**	<100
BH139	0.05-0.3	Coarse	<25	**<50**	**<100**	<100
BH140	0.05-0.3	Coarse	<25	**<50**	**190**	**270**
BH140 - [LAB_DUP]	0.05-0.3	Coarse	<25	**<50**	**190**	**290**
BH140	0.3-0.5	Coarse	<25	**<50**	**<100**	<100
BH141	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH142	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH143	0-0.2	Coarse	<25	**<50**	**<100**	<100
TP144	0-0.2	Coarse	<25	**<50**	**420**	**390**
BH145	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH145	0.5-0.95	Coarse	<25	**<50**	**<100**	<100
BH146	0-0.2	Coarse	<25	**<50**	**<100**	<100
BH146	1.3-1.5	Coarse	<25	**<50**	**<100**	<100
SDUP1	-	Coarse	<25	**<50**	**<100**	<100
SDUP4	-	Coarse	<25	**<50**	**<100**	<100
SDUP7	-	Coarse	<25	**<50**	**<100**	<100
SDUP7 - [LAB_DUP]	-	Coarse	<25	**<50**	**<100**	<100
SDUP10	-	Coarse	<25	**<50**	**<100**	<100
SDUP101	-	Coarse	<25	**<50**	**<100**	<100
SDUP101 - [LAB_DUP]	-	Coarse	<25	**NA**	**NA**	NA
SDUP102	-	Coarse	<25	**<50**	**<100**	<100
SDUP102 - [LAB_DUP]	-	Coarse	NA	**<50**	**<100**	<100
SDUP103	-	Coarse	<25	**<50**	**<100**	<100
SDUP111	-	Coarse	<25	**<50**	**<100**	<100
Total Number of Samples			74	74	74	74
Maximum Value			<PQL	130	460	540

Concentration above the SAC — **VALUE**
Concentration above the PQL — **Bold**

MANAGEMENT LIMIT ASSESSMENT CRITERIA

Sample Reference	**Sample Depth**	**Soil Texture**	C_6-C_{10} (F1) plus BTEX	>C_{10}-C_{16} (F2) plus napthalene	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)
TP101	0-0.3	Coarse	700	1000	3500	10000
TP102	0-0.25	Coarse	700	1000	3500	10000
TP102 - [LAB_DUP]	0-0.25	Coarse	700	1000	3500	10000
TP102	0.3-0.5	Coarse	700	1000	3500	10000
BH103	0-0.2	Coarse	700	1000	3500	10000
BH103	0.4-0.8	Coarse	700	1000	3500	10000
TP104	0-0.1	Coarse	700	1000	3500	10000
TP104	0.2-0.4	Coarse	700	1000	3500	10000
BH105	0.03-0.3	Coarse	700	1000	3500	10000
BH106	0.19-0.4	Coarse	700	1000	3500	10000
BH106	0.8-0.95	Fine	800	1000	5000	10000
BH107	0.22-0.5	Coarse	700	1000	3500	10000
BH108	0.03-0.2	Coarse	700	1000	3500	10000
BH108 - [LAB_DUP]	0.03-0.2	Coarse	700	1000	3500	10000
BH109	0-0.2	Coarse	700	1000	3500	10000
BH110	0-0.2	Coarse	700	1000	3500	10000
BH111	0.2-0.5	Coarse	700	1000	3500	10000
BH111	0.5-0.95	Coarse	700	1000	3500	10000
BH112	0-0.2	Coarse	700	1000	3500	10000
BH112	0.4-0.5	Coarse	700	1000	3500	10000
BH113	0-0.2	Coarse	700	1000	3500	10000
TP114	0-0.2	Coarse	700	1000	3500	10000
TP115	0-0.2	Coarse	700	1000	3500	10000
BH116	0.03-0.3	Coarse	700	1000	3500	10000
BH116 - [LAB_DUP]	0.03-0.3	Coarse	700	1000	3500	10000
BH116	0.3-0.5	Fine	800	1000	5000	10000
TP117	0-0.2	Coarse	700	1000	3500	10000
BH118	0-0.2	Coarse	700	1000	3500	10000
BH119	0.16-0.3	Coarse	700	1000	3500	10000
TP120	0-0.2	Coarse	700	1000	3500	10000
TP121	0-0.2	Coarse	700	1000	3500	10000
TP122	0-0.2	Coarse	700	1000	3500	10000
TP122	0.6-0.8	Coarse	700	1000	3500	10000
BH123	0-0.2	Coarse	700	1000	3500	10000
TP124	0-0.2	Coarse	700	1000	3500	10000
TP125	0-0.2	Coarse	700	1000	3500	10000
TP125 - [LAB_DUP]	0-0.2	Coarse	700	1000	3500	10000
TP126	0-0.2	Coarse	700	1000	3500	10000
BH127	0-0.2	Coarse	700	1000	3500	10000
BH128	0-0.2	Coarse	700	1000	3500	10000
BH128	1.3-1.5	Coarse	700	1000	3500	10000
BH129	0.5-0.7	Coarse	700	1000	3500	10000
TP130	0-0.2	Coarse	700	1000	3500	10000
BH131	0-0.2	Coarse	700	1000	3500	10000
TP132	0-0.15	Coarse	700	1000	3500	10000
TP132 - [LAB_DUP]	0-0.15	Coarse	700	1000	3500	10000
TP133	0-0.2	Coarse	700	1000	3500	10000
BH134	0-0.2	Coarse	700	1000	3500	10000
TP135	0-0.2	Coarse	700	1000	3500	10000
TP136	0-0.2	Coarse	700	1000	3500	10000
BH137	0-0.3	Coarse	700	1000	3500	10000
BH138	0.05-0.3	Coarse	700	1000	3500	10000
BH139	0.05-0.3	Coarse	700	1000	3500	10000
BH140	0.05-0.3	Coarse	700	1000	3500	10000
BH140 - [LAB_DUP]	0.05-0.3	Coarse	700	1000	3500	10000
BH140	0.3-0.5	Coarse	700	1000	3500	10000
BH141	0-0.2	Coarse	700	1000	3500	10000
BH142	0-0.2	Coarse	700	1000	3500	10000
BH143	0-0.2	Coarse	700	1000	3500	10000
TP144	0-0.2	Coarse	700	1000	3500	10000
BH145	0-0.2	Coarse	700	1000	3500	10000
BH145	0.5-0.95	Coarse	700	1000	3500	10000
BH146	0-0.2	Coarse	700	1000	3500	10000
BH146	1.3-1.5	Coarse	700	1000	3500	10000
SDUP1	-	Coarse	700	1000	3500	10000
SDUP4	-	Coarse	700	1000	3500	10000
SDUP7	-	Coarse	700	1000	3500	10000
SDUP7 - [LAB_DUP]	-	Coarse	700	1000	3500	10000
SDUP10	-	Coarse	700	1000	3500	10000
SDUP101	-	Coarse	700	1000	3500	10000
SDUP101 - [LAB_DUP]	-	Coarse	700	NA	NA	NA
SDUP102	-	Coarse	700	1000	3500	10000
SDUP102 - [LAB_DUP]	-	Coarse	NA	1000	3500	10000
SDUP103	-	Coarse	700	1000	3500	10000
SDUP111	-	Coarse	700	1000	3500	10000

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TABLE S4
SOIL LABORATORY RESULTS COMPARED T0 DIRECT CONTACT CRITERIA
All data in mg/kg unless stated otherwise

Analyte		C_6-C_{10}	>C_{10}-C_{16}	>C_{16}-C_{34}	>C_{34}-C_{40}	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	PID
PQL - Envirolab Services		25	50	100	100	0.2	0.5	1	1	1	
CRC 2011 -Direct contact Criteria		26,000	20,000	27,000	38,000	430	99,000	27,000	81,000	11,000	
Site Use		COMMERCIAL/INDUSTRIAL - DIRECT SOIL CONTACT									
Sample Reference	**Sample Depth**										
TP101	0-0.3	<25	**130**	**290**	<100	<0.2	<0.5	<1	<3	<1	0
TP102	0-0.25	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP102 - [LAB_DUP]	0-0.25	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP102	0.3-0.5	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH103	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH103	0.4-0.8	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	**0.1**
TP104	0-0.1	<25	**<50**	**340**	**180**	<0.2	<0.5	<1	<3	<1	0
TP104	0.2-0.4	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH105	0.03-0.3	<25	**<50**	**160**	**240**	<0.2	<0.5	<1	<3	<1	0
BH106	0.19-0.4	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH106	0.8-0.95	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH107	0.22-0.5	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH108	0.03-0.2	<25	**<50**	**210**	**330**	<0.2	<0.5	<1	<3	<1	0
BH108 - [LAB_DUP]	0.03-0.2	<25	**<50**	**120**	**190**	<0.2	<0.5	<1	<3	<1	0
BH109	0-0.2	<25	**<50**	**140**	<100	<0.2	<0.5	<1	<3	<1	0
BH110	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH111	0.2-0.5	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH111	0.5-0.95	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH112	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH112	0.4-0.5	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH113	0-0.2	<25	**<50**	**140**	**110**	<0.2	<0.5	<1	<3	<1	0
TP114	0-0.2	<25	**<50**	**460**	**520**	<0.2	<0.5	<1	<3	<1	0
TP115	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH116	0.03-0.3	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH116 - [LAB_DUP]	0.03-0.3	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH116	0.3-0.5	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP117	0-0.2	<25	**<50**	**290**	**540**	<0.2	<0.5	<1	<3	<1	0
BH118	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH119	0.16-0.3	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP120	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP121	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP122	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP122	0.6-0.8	<25	**<50**	**160**	**220**	<0.2	<0.5	<1	<3	<1	0
BH123	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP124	0-0.2	<25	**<50**	**200**	<100	<0.2	<0.5	<1	<3	<1	0
TP125	0-0.2	<25	**<50**	**340**	**320**	<0.2	<0.5	<1	<3	<1	0
TP125 - [LAB_DUP]	0-0.2	<25	**<50**	**330**	**360**	<0.2	<0.5	<1	<3	<1	0
TP126	0-0.2	<25	**<50**	**200**	**300**	<0.2	<0.5	<1	<3	<1	0
BH127	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH128	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH128	1.3-1.5	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH129	0.5-0.7	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP130	0-0.2	<25	**<50**	**270**	**280**	<0.2	<0.5	<1	<3	<1	0
BH131	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP132	0-0.15	<25	**<50**	**320**	**300**	<0.2	<0.5	<1	<3	<1	0
TP132 - [LAB_DUP]	0-0.15	<25	**<50**	**330**	**330**	<0.2	<0.5	<1	<3	<1	0
TP133	0-0.2	<25	**<50**	**400**	**360**	<0.2	<0.5	<1	<3	<1	0
BH134	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP135	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP136	0-0.2	<25	**<50**	**220**	**270**	<0.2	<0.5	<1	<3	<1	0
BH137	0-0.3	<25	**<50**	**180**	**220**	<0.2	<0.5	<1	<3	<1	0
BH138	0.05-0.3	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH139	0.05-0.3	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH140	0.05-0.3	<25	**<50**	**190**	**270**	<0.2	<0.5	<1	<3	<1	0
BH140 - [LAB_DUP]	0.05-0.3	<25	**<50**	**190**	**290**	<0.2	<0.5	<1	<3	<1	0
BH140	0.3-0.5	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH141	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH142	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH143	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
TP144	0-0.2	<25	**<50**	**420**	**390**	<0.2	<0.5	<1	<3	<1	0
BH145	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH145	0.5-0.95	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH146	0-0.2	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
BH146	1.3-1.5	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
SDUP1	-	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	-
SDUP4	-	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
SDUP7	-	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
SDUP7 - [LAB_DUP]	-	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
SDUP10	-	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
SDUP101	-	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
SDUP101 - [LAB_DUP]	-	<25	**NA**	**NA**	NA	<0.2	<0.5	<1	<3	<1	0
SDUP102	-	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
SDUP102 - [LAB_DUP]	-	NA	**<50**	**<100**	<100	NA	NA	NA	NA	NA	0
SDUP103	-	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
SDUP111	-	<25	**<50**	**<100**	<100	<0.2	<0.5	<1	<3	<1	0
Total Number of Samples		74	74	74	74	74	74	74	74	74	74
Maximum Value		<PQL	130	460	540	<PQL	<PQL	<PQL	<PQL	<PQL	0.1

Concentration above the SAC **VALUE**
Concentration above the PQL **Bold**

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TABLE S5
ASBESTOS QUANTIFICATION - FIELD OBSERVATIONS AND LABORATORY RESULTS
HIL-D:Commercial/Industrial

FIELD DATA														LABORATORY DATA										
Date Sampled	Sample reference	Sample Depth	Visible ACM in top 100mm	Soil Mass (g)	Mass ACM (g)	Mass Asbestos in ACM (g)	[Asbestos from ACM in soil] (%w/w)	Mass ACM <7mm (g)	Mass Asbestos in ACM <7mm (g)	[Asbestos from ACM <7mm in soil] (%w/w)	Mass FA (g)	Mass Asbestos in FA (g)	[Asbestos from FA in soil] (%w/w)	Lab Report Number	Sample rereference	Sample Depth	Sample Mass (g)	Asbestos ID in soil (AS4964) >0.1g/kg	Trace Analysis	Total Asbestos (g/kg)	Asbestos ID in soil <0.1g/kg	ACM >7mm Estimation (g)	FA and AF Estimation (g)	ACM >7mm Estimation %(w/w)	FA and AF Estimation %(w/w)
SAC			**No**				**0.05**			**0.001**			**0.001**											**0.05**	**0.001**
3.2.21	TP101	0-0.3	No	10,700	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP101	0-0.3	538.32	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	TP102	0-0.25	No	15,600	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	TP102	0.25-0.75	NA	12,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP102	0.3-0.5	545.62	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
2.2.21	BH103	0-0.4	No	1,800	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2.2.21	BH103	0.4-1.4	NA	9,800	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH103	0.4-0.8	720.98	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
2.2.21	BH103	1.8-2.5	NA	4,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	BH104	0-0.1	No	8,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	BH104	0.1-0.5	NA	16,700	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2.21	BH105	0.03-0.8	No	12,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4.2.21	BH106	0.19-0.8	NA	8,600	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH106	0.19-0.4	710.64	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
--	--	--	--	--	--	--	--	--	--	--	--	--	--	261320	BH107	0.22-0.5	482.11	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
4.2.21	BH108	0.03-0.2	No	3,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH108	0.03-0.2	751.21	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
2.2.21	BH109	0-0.4	No	7,800	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH109	0-0.2	303.44	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
5.2.21	BH110	0-0.4	No	10,200	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH110	0-0.2	392.04	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
2.2.21	BH111	0.5-1.5	NA	9,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH111	0.5-0.95	531.35	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
2.2.21	BH112	0-0.4	No	9,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH112	0-0.2	556.22	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
2.2.21	BH112	0.4-1.4	NA	8,700	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2.21	BH113	0-0.2	No	11,200	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4.2.21	TP114	0-0.3	No	16,600	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP114	0-0.2	889.05	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected: Synthetic mineral fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
4.2.21	TP115	0-0.2	No	13,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4.2.21	BH116	0.03-0.3	No	4,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH116	0.03-0.3	876.24	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
4.2.21	TP117	0-0.2	No	15,200	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	BH118	0-0.3	No	3,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH118	0-0.2	868.87	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	BH118	0.3-1.3	NA	11,600	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH118	0.2-0.4	643.21	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
2.2.21	BH119	0.16-0.4	No	3,000	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH119	0.16-0.3	935.55	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	TP120	0-0.2	No	13,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP120	0-0.2	671.59	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	TP120	0.2-0.5	NA	12,700	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	TP121	0-0.5	No	14,600	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP121	0-0.2	459.34	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	TP121	0.5-1.1	NA	13,800	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	TP121	1.1-1.7	NA	12,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	TP122	0-0.6	No	14,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	TP122	0.6-1.4	NA	13,600	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP122	0.6-0.8	613.32	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	TP122	1.4-1.9	NA	1,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	BH123	0-0.3	No	5,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH123	0-0.2	745.88	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	BH123	0.3-1.0	NA	10,600	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4.2.21	TP124	0-0.2	No	15,200	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP124	0-0.2	955.5	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
4.2.21	TP125	0-0.2	No	14,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP125	0-0.2	917.15	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
4.2.21	TP126	0-0.3	No	14,800	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP126	0-0.2	973.16	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	BH127	0-0.2	No	10,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	261320	BH128	0-0.2	638.2	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
1.2.21	BH128	0.2-0.4	No	4,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.2.21	BH128	0.4-1.3	NA	10,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.2.21	BH128	1.3-2.1	NA	4,800	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH128	1.3-1.5	691.5	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
1.2.21	BH129	0.5-1.0	No	2,100	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH129	0.5-0.7	714.71	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
1.2.21	BH129	1.0-2.0	NA	12,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.2.21	BH129	2.0-2.8	NA	11,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	TP130	0-0.3	No	12,700	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	BH131	0-0.3	No	5,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH131	0-0.2	766.3	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	BH131	0.3-0.5	NA	2,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4.2.21	TP132	0-0.15	No	12,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2.21	TP133	0-0.2	No	13,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP133	0-0.2	689.43	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
5.2.21	BH134	0-0.3	No	5,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4.2.21	TP135	0-0.3	No	15,200	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP135	0-0.2	867.61	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
5.2.21	TP136	0-0.2	No	13,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP136	0-0.2	954.8	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	BH137	0-0.3	No	4,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH137	0-0.3	816.67	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	BH137	0.3-1.0	NA	8,600	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.2.21	BH138	0.05-0.3	No	4,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH138	0.05-0.3	712.52	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
1.2.21	BH139	0.05-0.3	No	1,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH139	0.05-0.3	661.6	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
1.2.21	BH140	0.05-0.3	No	2,800	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH140	0.05-0.3	838.67	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
1.2.21	BH140	0.3-0.5	NA	3,100	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2.21	BH141	0-0.3	No	9,800	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH141	0-0.2	916.01	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
2.2.21	BH142	0-0.5	No	5,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2.2.21	BH142	0.5-1.2	NA	8,100	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH142	0.5-0.95	529.75	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
5.2.21	BH143	0-0.2	No	4,000	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH143	0-0.2	841.94	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
5.2.21	BH143	0.2-0.4	NA	2,100	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5.2.21	TP144	0-0.2	No	17,900	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	TP144	0-0.2	1110.99	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	BH145	0-0.5	No	8,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH145	0-0.2	506.59	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
3.2.21	BH145	0.5-1.5	NA	7,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3.2.21	BH145	1.5-2.5	NA	7,500	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.2.21	BH146	0-0.3	No	9,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.2.21	BH146	0.3-1.3	NA	10,400	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1.2.21	BH146	1.3-2.3	NA	9,100	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	261320	BH146	1.3-1.5	479.83	No asbestos detected at reporting limit of 0.1g/kg: Organic fibres detected	No asbestos detected	<0.1	No visible asbestos detected	–	–	<0.01	<0.001
1.2.21	BH146	2.3-3.3	NA	10,300	No ACM observed	--	--	No ACM <7mm observed	--	--	No FA observed	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Concentration above the SAC **VALUE**

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TABLE S6
SOIL LABORATORY RESULTS COMPARED TO NEPM 2013 EILs AND ESLs
All data in mg/kg unless stated otherwise

Land Use Category				COMMERCIAL/INDUSTRIAL																			
							AGED HEAVY METALS-EILs						EILs		ESLs								
				pH	CEC (cmolc/kg)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2) plus napthalene	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P
PQL - Envirolab Services				-	1	-	4	1	1	1	1	1	1	0.1	25	50	100	100	0.2	0.5	1	1	0.05
Ambient Background Concentration (ABC)				-	-	-	NSL	13	28	163	5	122	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	**Sample Depth**	**Sample Description**	**Soil Texture**																				
TP101	0-0.3	Fill: Silty Clay	Coarse	NA	NA	NA	18	19	20	20	11	45	<1	NA	<25	130	290	<100	<0.2	<0.5	<1	<3	0.08
TP102	0-0.25	Fill: Silty Clay	Coarse	NA	NA	NA	14	22	14	22	7	39	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
TP102 - [LAB_DUP]	0-0.25	Fill: Silty Clay	Coarse	NA	NA	NA	13	23	16	26	7	47	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
TP102	0.3-0.5	Fill: Silty Clay	Coarse	NA	NA	NA	8	15	14	12	5	18	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH103	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	6	14	17	24	7	74	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH103	0.4-0.8	Fill: Silty Clay	Coarse	NA	NA	NA	9	12	20	14	7	34	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
TP104	0-0.1	Fill: Silty Sand	Coarse	NA	NA	NA	<4	95	23	17	11	74	<1	<0.1	<25	<50	340	180	<0.2	<0.5	<1	<3	<0.05
TP104	0.2-0.4	Fill: Silty Clayey Sand	Coarse	NA	NA	NA	<4	13	24	3	56	26	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH105	0.03-0.3	Fill: Silty Sandy Gravel	Coarse	NA	20	NA	<4	10	41	<1	130	35	<1	NA	<25	<50	160	240	<0.2	<0.5	<1	<3	<0.05
BH106	0.19-0.4	Fill: Silty Sand	Coarse	NA	NA	NA	<4	2	3	2	3	10	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH106	0.8-0.95	Silty Clay	Fine	NA	NA	NA	6	3	12	4	1	15	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH107	0.22-0.5	Fill: Silty Clay	Coarse	NA	NA	NA	4	8	22	11	12	46	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH108	0.03-0.2	Fill: Silty Gravelly Sand	Coarse	NA	28	NA	<4	7	37	1	84	26	<1	<0.1	<25	<50	210	330	<0.2	<0.5	<1	<3	<0.05
BH108 - [LAB_DUP]	0.03-0.2	Fill: Silty Gravelly Sand	Coarse	NA	28	NA	<4	10	45	2	95	31	<1	<0.1	<25	<50	120	190	<0.2	<0.5	<1	<3	<0.05
BH109	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	7	14	10	8	69	<1	NA	<25	<50	140	<100	<0.2	<0.5	<1	<3	<0.05
BH110	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	<4	21	26	16	38	79	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH111	0.2-0.5	Fill: Silty Clay	Coarse	NA	16	NA	<4	29	33	3	130	42	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH111	0.5-0.95	Fill: Silty Clay	Coarse	NA	NA	NA	9	19	18	16	9	29	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH112	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	24	20	19	27	12	65	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH112	0.4-0.5	Fill: Silty Clay	Coarse	NA	NA	NA	6	14	13	11	10	33	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH113	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	6	12	15	14	11	64	<1	NA	<25	<50	140	110	<0.2	<0.5	<1	<3	<0.05
TP114	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	18	25	7	23	150	<1	NA	<25	<50	460	520	<0.2	<0.5	<1	<3	<0.05
TP115	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	21	15	2	31	22	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH116	0.03-0.3	Fill: Silty Clay	Coarse	NA	NA	NA	<4	26	19	4	38	33	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH116 - [LAB_DUP]	0.03-0.3	Fill: Silty Clay	Coarse	NA	NA	NA	<4	25	23	4	39	34	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH116	0.3-0.5	Silty Clay	Fine	NA	NA	NA	6	15	12	11	5	11	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
TP117	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	3	55	3	5	15	<1	NA	<25	<50	290	540	<0.2	<0.5	<1	<3	<0.05
BH118	0-0.2	Fill: Silty Gravelly Clay	Coarse	NA	NA	NA	<4	4	4	6	3	11	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.1
BH119	0.16-0.3	Fill: Silty Gravelly Clay	Coarse	NA	35	NA	<4	6	19	2	65	25	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
TP120	0-0.2	Fill: Sandy Clay	Coarse	NA	NA	NA	<4	5	13	12	22	24	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
TP121	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	6	6	10	7	5	22	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
TP122	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	<4	6	13	6	12	31	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.1
TP122	0.6-0.8	Fill: Silty Clay	Coarse	NA	NA	NA	<4	6	19	6	23	40	<1	NA	<25	<50	160	220	<0.2	<0.5	<1	<3	0.2
BH123	0-0.2	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	20	5	2	3	10	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.08
TP124	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	11	8	5	10	16	<1	NA	<25	<50	200	<100	<0.2	<0.5	<1	<3	<0.05
TP125	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	22	20	5	24	26	<1	<0.1	<25	<50	340	320	<0.2	<0.5	<1	<3	0.07
TP125 - [LAB_DUP]	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	20	19	4	23	29	<1	<0.1	<25	<50	330	360	<0.2	<0.5	<1	<3	<0.05
TP126	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	17	12	5	19	19	<1	NA	<25	<50	200	300	<0.2	<0.5	<1	<3	<0.05
BH127	0-0.2	Fill: Silty Sandy Gravel	Coarse	NA	NA	NA	<4	5	7	6	2	7	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH128	0-0.2	Fill: Silty Sandy Gravel	Coarse	NA	NA	NA	<4	5	7	7	4	12	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH128	1.3-1.5	Fill: Silty Clay	Coarse	NA	NA	NA	<4	10	11	7	15	22	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.07
BH129	0.5-0.7	Fill: Silty Sandy Gravel	Coarse	NA	NA	NA	<4	2	7	4	3	14	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.05
TP130	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	4	10	61	39	21	130	<1	NA	<25	<50	270	280	<0.2	<0.5	<1	<3	0.2
BH131	0-0.2	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	3	5	3	2	10	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.09
TP132	0-0.15	Fill: Silty Sand	Coarse	NA	NA	NA	<4	10	11	7	6	31	<1	<0.1	<25	<50	320	300	<0.2	<0.5	<1	<3	<0.05
TP132 - [LAB_DUP]	0-0.15	Fill: Silty Sand	Coarse	NA	NA	NA	<4	7	8	6	3	16	<1	<0.1	<25	<50	330	330	<0.2	<0.5	<1	<3	<0.05
TP132 - [TRIPLICATE]	0-0.15	Fill: Silty Sand	Coarse	NA	NA	NA	<4	9	9	5	7	27	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TP133	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	23	23	4	27	38	<1	NA	<25	<50	400	360	<0.2	<0.5	<1	<3	<0.05
BH134	0-0.2	Fill: Silty Sandy Gravel	Coarse	NA	34	NA	<4	8	52	2	130	37	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
TP135	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	20	10	4	19	27	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
TP136	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	21	11	5	24	28	<1	NA	<25	<50	220	270	<0.2	<0.5	<1	<3	<0.05
BH137	0-0.3	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	2	2	1	1	5	<1	NA	<25	<50	180	220	<0.2	<0.5	<1	<3	0.09
BH138	0.05-0.3	Fill: Silty Clay	Coarse	NA	NA	NA	<4	17	12	5	17	19	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH139	0.05-0.3	Fill: Silty Sand	Coarse	NA	NA	NA	<4	22	15	6	22	26	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.07
BH140	0.05-0.3	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	4	4	2	4	8	<1	<0.1	<25	<50	190	270	<0.2	<0.5	<1	<3	0.08
BH140 - [LAB_DUP]	0.05-0.3	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	12	15	11	11	24	<1	<0.1	<25	<50	190	290	<0.2	<0.5	<1	<3	0.09
BH140 - [TRIPLICATE]	0.05-0.3	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	10	12	7	8	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BH140	0.3-0.5	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	<4	2	5	3	<1	3	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH141	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	8	11	6	11	23	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.09
BH142	0-0.2	Fill: Silty Gravelly Clay	Coarse	NA	NA	NA	<4	3	4	9	2	12	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH143	0-0.2	Fill: Silty Sandy Gravel	Coarse	NA	NA	NA	<4	12	27	4	13	22	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
TP144	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	<4	14	20	5	30	29	<1	<0.1	<25	<50	420	390	<0.2	<0.5	<1	<3	<0.05
BH145	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	6	20	7	9	6	8	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH145	0.5-0.95	Fill: Silty Clay	Coarse	NA	NA	NA	<4	9	6	6	<1	3	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
BH146	0-0.2	Fill: Silty Sandy Clay	Coarse	NA	NA	NA	<4	6	15	30	6	59	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.1
BH146	1.3-1.5	Fill: Silty Clay	Coarse	NA	NA	NA	<4	10	7	7	1	5	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SDUP1	-	Fill: Silty Sandy Clay	Coarse	NA	NA	NA	<4	8	22	43	7	83	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.1
SDUP4	-	Fill: Silty Clay	Coarse	NA	NA	NA	7	12	13	19	5	40	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SDUP7	-	Fill: Silty Clay	Coarse	NA	NA	NA	6	20	9	10	6	10	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SDUP7 - [LAB_DUP]	-	Fill: Silty Clay	Coarse	NA	NA	NA	6	21	10	11	6	11	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SDUP10	-	Fill: Silty Sand	Coarse	NA	NA	NA	<4	2	2	2	2	7	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
SDUP101	-	Fill: Silty Clay	Coarse	NA	NA	NA	16	23	23	26	9	50	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.06
SDUP101 - [LAB_DUP]	-	Fill: Silty Clay	Coarse	NA	NA	NA	13	20	22	20	8	45	<1	NA	<25	NA	NA	NA	<0.2	<0.5	<1	<3	NA
SDUP102	-	Fill: Silty Clay	Coarse	NA	NA	NA	7	11	20	9	20	41	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.15
SDUP102 - [LAB_DUP]	-	Fill: Silty Clay	Coarse	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1	NA	<50	<100	<100	NA	NA	NA	NA	0.17
SDUP103	-	Fill: Silty Clay	Coarse	8.4	4.65	NA	10	31	76	64	18	260	<1	NA	<25	<50	<100	<100	<0.2	<0.5	<1	<3	0.19
SDUP111	-	Fill: Silty Clay	Coarse	NA	NA	NA	5	26	30	16	37	92	<1	<0.1	<25	<50	<100	<100	<0.2	<0.5	<1	<3	<0.05
Total Number of Samples				1	7	0	76	76	76	76	76	76	74	33	74	74	74	74	74	74	74	74	74
Maximum Value				8.4	35	NA	24	95	76	64	130	260	<PQL	<PQL	<PQL	130	460	540	<PQL	<PQL	<PQL	<PQL	0.2

Concentration above the SAC — VALUE
Concentration above the PQL — **Bold**
The guideline corresponding to the elevated value is highlighted in grey in the EIL and ESL Assessment Criteria Table below

EIL AND ESL ASSESSMENT CRITERIA

Sample Reference	Sample Depth	Sample Description	Soil Texture	pH	CEC (cmolc/kg)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2) plus napthalene	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P
TP101	0-0.3	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP102	0-0.25	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP102 - [LAB_DUP]	0-0.25	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP102	0.3-0.5	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH103	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH103	0.4-0.8	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP104	0-0.1	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP104	0.2-0.4	Fill: Silty Clayey Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH105	0.03-0.3	Fill: Silty Sandy Gravel	Coarse	NA	20	NA	160	320	110	2000	460	230	370	--	215	170	1700	3300	75	135	165	180	72
BH106	0.19-0.4	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH106	0.8-0.95	Silty Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	2500	6600	95	135	185	95	72
BH107	0.22-0.5	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH108	0.03-0.2	Fill: Silty Gravelly Sand	Coarse	NA	28	NA	160	320	110	2000	600	230	370	640	215	170	1700	3300	75	135	165	180	72
BH108 - [LAB_DUP]	0.03-0.2	Fill: Silty Gravelly Sand	Coarse	NA	28	NA	160	320	110	2000	600	230	370	640	215	170	1700	3300	75	135	165	180	72
BH109	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH110	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH111	0.2-0.5	Fill: Silty Clay	Coarse	NA	16	NA	160	320	110	2000	460	230	370	--	215	170	1700	3300	75	135	165	180	72
BH111	0.5-0.95	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH112	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH112	0.4-0.5	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH113	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP114	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP115	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH116	0.03-0.3	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH116 - [LAB_DUP]	0.03-0.3	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH116	0.3-0.5	Silty Clay	Fine	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	2500	6600	95	135	185	95	72
TP117	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH118	0-0.2	Fill: Silty Gravelly Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH119	0.16-0.3	Fill: Silty Gravelly Clay	Coarse	NA	35	NA	160	320	110	2000	740	230	370	640	215	170	1700	3300	75	135	165	180	72
TP120	0-0.2	Fill: Sandy Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP121	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP122	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP122	0.6-0.8	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH123	0-0.2	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP124	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP125	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP125 - [LAB_DUP]	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP126	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH127	0-0.2	Fill: Silty Sandy Gravel	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH128	0-0.2	Fill: Silty Sandy Gravel	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH128	1.3-1.5	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH129	0.5-0.7	Fill: Silty Sandy Gravel	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP130	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH131	0-0.2	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP132	0-0.15	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP132 - [LAB_DUP]	0-0.15	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP132 - [TRIPLICATE]	0-0.15	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	--	--	--	--	--	--	--	--	--	--	--
TP133	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH134	0-0.2	Fill: Silty Sandy Gravel	Coarse	NA	34	NA	160	320	110	2000	740	230	370	640	215	170	1700	3300	75	135	165	180	72
TP135	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
TP136	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH137	0-0.3	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH138	0.05-0.3	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH139	0.05-0.3	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH140	0.05-0.3	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH140 - [LAB_DUP]	0.05-0.3	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH140 - [TRIPLICATE]	0.05-0.3	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	--	--	--	--	--	--	--	--	--	--	--
BH140	0.3-0.5	Fill: Silty Gravelly Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH141	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH142	0-0.2	Fill: Silty Gravelly Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH143	0-0.2	Fill: Silty Sandy Gravel	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
TP144	0-0.2	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH145	0-0.2	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
BH145	0.5-0.95	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH146	0-0.2	Fill: Silty Sandy Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
BH146	1.3-1.5	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
SDUP1	-	Fill: Silty Sandy Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
SDUP4	-	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
SDUP7	-	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
SDUP7 - [LAB_DUP]	-	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
SDUP10	-	Fill: Silty Sand	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
SDUP101	-	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	170	1700	3300	75	135	165	180	72
SDUP101 - [LAB_DUP]	-	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	--	215	--	--	--	75	135	165	180	--
SDUP102	-	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72
SDUP102 - [LAB_DUP]	-	Fill: Silty Clay	Coarse	NA	NA	NA	--	--	--	--	--	--	--	640	--	170	1700	3300	--	--	--	--	72
SDUP103	-	Fill: Silty Clay	Coarse	8.4	4.65	NA	160	320	170	2000	60	480	370	--	215	170	1700	3300	75	135	165	180	72
SDUP111	-	Fill: Silty Clay	Coarse	NA	NA	NA	160	320	110	2000	60	230	370	640	215	170	1700	3300	75	135	165	180	72

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TABLE S7
SOIL LABORATORY RESULTS COMPARED TO WASTE CLASSIFICATION GUIDELINES
All data in mg/kg unless stated otherwise

			HEAVY METALS								PAHs		OC/OP PESTICIDES				Total	TRH					BTEX COMPOUNDS					ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P	Total Endosulfans	Chloropyrifos	Total Moderately Harmful	Total Scheduled	PCBs	C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}	Total C_{10}-C_{36}	Benzene	Toluene	Ethyl benzene	Total Xylenes	
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.05	0.1	0.1	0.1	0.1	0.1	25	50	100	100	50	0.2	0.5	1	1	100
General Solid Waste CT1			100	20	100	NSL	100	4	40	NSL	200	0.8	60	4	250	50	50	650		NSL		10,000	10	288	600	1,000	-
General Solid Waste SCC1			500	100	1900	NSL	1500	50	1050	NSL	200	10	108	7.5	250	50	50	650		NSL		10,000	18	518	1,080	1,800	-
Restricted Solid Waste CT2			400	80	400	NSL	400	16	160	NSL	800	3.2	240	16	1000	50	50	2600		NSL		40,000	40	1,152	2,400	4,000	-
Restricted Solid Waste SCC2			2000	400	7600	NSL	6000	200	4200	NSL	800	23	432	30	1000	50	50	2600		NSL		40,000	72	2,073	4,320	7,200	-
Sample Reference	**Sample Depth**	**Sample Description**																										
TP101	0-0.3	Fill: Silty Clay	**18**	<0.4	**19**	**20**	**20**	<0.1	**11**	**45**	**0.2**	**0.08**	NA	NA	NA	NA	NA	<25	**120**	**200**	**150**	**470**	<0.2	<0.5	<1	<3	Not Detected
TP102	0-0.25	Fill: Silty Clay	**14**	<0.4	**22**	**14**	**22**	<0.1	**7**	**39**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
TP102 - [LAB_DUP]	0-0.25	Fill: Silty Clay	**13**	<0.4	**23**	**16**	**26**	<0.1	**7**	**47**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
TP102	0.3-0.5	Fill: Silty Clay	**8**	<0.4	**15**	**14**	**12**	<0.1	**5**	**18**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH103	0-0.2	Fill: Silty Clay	**6**	<0.4	**14**	**17**	**24**	<0.1	**7**	**74**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH103	0.4-0.8	Fill: Silty Clay	**9**	<0.4	**12**	**20**	**14**	<0.1	**7**	**34**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
TP104	0-0.1	Fill: Silty Sand	**<4**	<0.4	**95**	**23**	**17**	<0.1	**11**	**74**	**0.2**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**180**	**230**	**410**	<0.2	<0.5	<1	<3	NA
TP104	0.2-0.4	Fill: Silty Clayey Sand	**<4**	<0.4	**13**	**24**	**3**	<0.1	**56**	**26**	**0.1**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH105	0.03-0.3	Fill: Silty Sandy Gravel	**<4**	<0.4	**10**	**41**	**<1**	<0.1	**130**	**35**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**180**	**180**	<0.2	<0.5	<1	<3	NA
BH106	0.19-0.4	Fill: Silty Sand	**<4**	<0.4	**2**	**3**	**2**	<0.1	**3**	**10**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH106	0.8-0.95	Silty Clay	**6**	<0.4	**3**	**12**	**4**	<0.1	**1**	**15**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH107	0.22-0.5	Fill: Silty Clay	**4**	<0.4	**8**	**22**	**11**	<0.1	**12**	**46**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH108	0.03-0.2	Fill: Silty Gravelly Sand	**<4**	<0.4	**7**	**37**	**1**	<0.1	**84**	**26**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**240**	**240**	<0.2	<0.5	<1	<3	Not Detected
BH108 - [LAB_DUP]	0.03-0.2	Fill: Silty Gravelly Sand	**<4**	<0.4	**10**	**45**	**2**	<0.1	**95**	**31**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**140**	**140**	<0.2	<0.5	<1	<3	NA
BH109	0-0.2	Fill: Silty Sand	**<4**	<0.4	**7**	**14**	**10**	<0.1	**8**	**69**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**140**	**140**	<0.2	<0.5	<1	<3	Not Detected
BH110	0-0.2	Fill: Silty Clay	**<4**	<0.4	**21**	**26**	**16**	<0.1	**38**	**79**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH111	0.2-0.5	Fill: Silty Clay	**<4**	<0.4	**29**	**33**	**3**	<0.1	**130**	**42**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH111	0.5-0.95	Fill: Silty Clay	**9**	<0.4	**19**	**18**	**16**	<0.1	**9**	**29**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH112	0-0.2	Fill: Silty Clay	**24**	<0.4	**20**	**19**	**27**	<0.1	**12**	**65**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH112	0.4-0.5	Fill: Silty Clay	**6**	<0.4	**14**	**13**	**11**	<0.1	**10**	**33**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH113	0-0.2	Fill: Silty Clay	**6**	<0.4	**12**	**15**	**14**	<0.1	**11**	**64**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**170**	**170**	<0.2	<0.5	<1	<3	NA
TP114	0-0.2	Fill: Silty Sand	**<4**	<0.4	**18**	**25**	**7**	<0.1	**23**	**150**	**0.57**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**210**	**410**	**620**	<0.2	<0.5	<1	<3	Not Detected
TP115	0-0.2	Fill: Silty Sand	**<4**	<0.4	**21**	**15**	**2**	<0.1	**31**	**22**	**0.3**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH116	0.03-0.3	Fill: Silty Clay	**<4**	<0.4	**26**	**19**	**4**	<0.1	**38**	**33**	**0.58**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH116 - [LAB_DUP]	0.03-0.3	Fill: Silty Clay	**<4**	<0.4	**25**	**23**	**4**	<0.1	**39**	**34**	**1.2**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH116	0.3-0.5	Silty Clay	**6**	<0.4	**15**	**12**	**11**	<0.1	**5**	**11**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
TP117	0-0.2	Fill: Silty Sand	**<4**	<0.4	**3**	**55**	**3**	<0.1	**5**	**15**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**110**	**350**	**460**	<0.2	<0.5	<1	<3	NA
BH118	0-0.2	Fill: Silty Gravelly Clay	**<4**	<0.4	**4**	**4**	**6**	<0.1	**3**	**11**	**0.94**	**0.1**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH118	0.2-0.4	Fill: Silty Clay	**NA**	NA	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	**NA**	NA	NA	NA	NA	NA	NA	**NA**	**NA**	**NA**	**NA**	NA	NA	NA	NA	Not Detected
BH119	0.16-0.3	Fill: Silty Gravelly Clay	**<4**	<0.4	**6**	**19**	**2**	<0.1	**65**	**25**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
TP120	0-0.2	Fill: Sandy Clay	**<4**	<0.4	**5**	**13**	**12**	<0.1	**22**	**24**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
TP121	0-0.2	Fill: Silty Clay	**6**	<0.4	**6**	**10**	**7**	<0.1	**5**	**22**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
TP122	0-0.2	Fill: Silty Clay	**<4**	<0.4	**6**	**13**	**6**	<0.1	**12**	**31**	**0.54**	**0.1**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
TP122	0.6-0.8	Fill: Silty Clay	**<4**	<0.4	**6**	**19**	**6**	<0.1	**23**	**40**	**1.9**	**0.2**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**180**	**180**	<0.2	<0.5	<1	<3	Not Detected
BH123	0-0.2	Fill: Silty Gravelly Sand	**<4**	<0.4	**20**	**5**	**2**	<0.1	**3**	**10**	**0.74**	**0.08**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
TP124	0-0.2	Fill: Silty Sand	**<4**	<0.4	**11**	**8**	**5**	<0.1	**10**	**16**	**0.1**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**150**	**150**	<0.2	<0.5	<1	<3	Not Detected
TP125	0-0.2	Fill: Silty Sand	**<4**	<0.4	**22**	**20**	**5**	<0.1	**24**	**26**	**0.4**	**0.07**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**160**	**280**	**440**	<0.2	<0.5	<1	<3	Not Detected
TP125 - [LAB_DUP]	0-0.2	Fill: Silty Sand	**<4**	<0.4	**20**	**19**	**4**	<0.1	**23**	**29**	**0.2**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**140**	**310**	**450**	<0.2	<0.5	<1	<3	NA
TP126	0-0.2	Fill: Silty Sand	**<4**	<0.4	**17**	**12**	**5**	<0.1	**19**	**19**	**0.2**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**210**	**210**	<0.2	<0.5	<1	<3	Not Detected
BH127	0-0.2	Fill: Silty Sandy Gravel	**<4**	<0.4	**5**	**7**	**6**	<0.1	**2**	**7**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH128	0-0.2	Fill: Silty Sandy Gravel	**<4**	<0.4	**5**	**7**	**7**	<0.1	**4**	**12**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH128	1.3-1.5	Fill: Silty Clay	**<4**	<0.4	**10**	**11**	**7**	<0.1	**15**	**22**	**0.4**	**0.07**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH129	0.5-0.7	Fill: Silty Sandy Gravel	**<4**	<0.4	**2**	**7**	**4**	<0.1	**3**	**14**	**0.4**	**0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
TP130	0-0.2	Fill: Silty Clay	**4**	<0.4	**10**	**61**	**39**	<0.1	**21**	**130**	**2.9**	**0.2**	NA	NA	NA	NA	NA	<25	**<50**	**120**	**240**	**360**	<0.2	<0.5	<1	<3	NA
BH131	0-0.2	Fill: Silty Gravelly Sand	**<4**	<0.4	**3**	**5**	**3**	<0.1	**2**	**10**	**0.4**	**0.09**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
TP132	0-0.15	Fill: Silty Sand	**<4**	<0.4	**10**	**11**	**7**	<0.1	**6**	**31**	**0.3**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**170**	**270**	**440**	<0.2	<0.5	<1	<3	NA
TP132 - [LAB_DUP]	0-0.15	Fill: Silty Sand	**<4**	<0.4	**7**	**8**	**6**	<0.1	**3**	**16**	**0.1**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**150**	**290**	**440**	<0.2	<0.5	<1	<3	NA
TP132 - [TRIPLICATE]	0-0.15	Fill: Silty Sand	**<4**	<0.4	**9**	**9**	**5**	<0.1	**7**	**27**	**NA**	**NA**	NA	NA	NA	NA	NA	NA	**NA**	**NA**	**NA**	**NA**	NA	NA	NA	NA	NA
TP133	0-0.2	Fill: Silty Sand	**<4**	<0.4	**23**	**23**	**4**	<0.1	**27**	**38**	**0.2**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**210**	**300**	**510**	<0.2	<0.5	<1	<3	Not Detected
BH134	0-0.2	Fill: Silty Sandy Gravel	**<4**	<0.4	**8**	**52**	**2**	<0.1	**130**	**37**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
TP135	0-0.2	Fill: Silty Sand	**<4**	<0.4	**20**	**10**	**4**	<0.1	**19**	**27**	**0.3**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
TP136	0-0.2	Fill: Silty Sand	**<4**	<0.4	**21**	**11**	**5**	<0.1	**24**	**28**	**0.2**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**130**	**180**	**310**	<0.2	<0.5	<1	<3	Not Detected
BH137	0-0.3	Fill: Silty Gravelly Sand	**<4**	<0.4	**2**	**2**	**1**	<0.1	**1**	**5**	**0.79**	**0.09**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**180**	**180**	<0.2	<0.5	<1	<3	Not Detected
BH138	0.05-0.3	Fill: Silty Clay	**<4**	<0.4	**17**	**12**	**5**	<0.1	**17**	**19**	**0.1**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH139	0.05-0.3	Fill: Silty Sand	**<4**	<0.4	**22**	**15**	**6**	<0.1	**22**	**26**	**0.9**	**0.07**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH140	0.05-0.3	Fill: Silty Gravelly Sand	**<4**	<0.4	**4**	**4**	**2**	<0.1	**4**	**8**	**0.59**	**0.08**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**210**	**210**	<0.2	<0.5	<1	<3	Not Detected
BH140 - [LAB_DUP]	0.05-0.3	Fill: Silty Gravelly Sand	**<4**	<0.4	**12**	**15**	**11**	<0.1	**11**	**24**	**0.52**	**0.09**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**220**	**220**	<0.2	<0.5	<1	<3	NA
BH140 - [TRIPLICATE]	0.05-0.3	Fill: Silty Gravelly Sand	**<4**	<0.4	**10**	**12**	**7**	<0.1	**8**	**19**	**NA**	**NA**	NA	NA	NA	NA	NA	NA	**NA**	**NA**	**NA**	**NA**	NA	NA	NA	NA	NA
BH140	0.3-0.5	Fill: Silty Gravelly Sand	**<4**	<0.4	**2**	**5**	**3**	<0.1	**<1**	**3**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH141	0-0.2	Fill: Silty Sand	**<4**	<0.4	**8**	**11**	**6**	<0.1	**11**	**23**	**0.52**	**0.09**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH142	0-0.2	Fill: Silty Gravelly Clay	**<4**	<0.4	**3**	**4**	**9**	<0.1	**2**	**12**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH142	0.5-0.95	Fill: Silty Clay	**NA**	NA	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	**NA**	NA	NA	NA	NA	NA	NA	**NA**	**NA**	**NA**	**NA**	NA	NA	NA	NA	Not Detected
BH143	0-0.2	Fill: Silty Sandy Gravel	**<4**	<0.4	**12**	**27**	**4**	<0.1	**13**	**22**	**0.1**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
TP144	0-0.2	Fill: Silty Sand	**<4**	<0.4	**14**	**20**	**5**	<0.1	**30**	**29**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**230**	**290**	**520**	<0.2	<0.5	<1	<3	Not Detected
BH145	0-0.2	Fill: Silty Clay	**6**	<0.4	**20**	**7**	**9**	<0.1	**6**	**8**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
BH145	0.5-0.95	Fill: Silty Clay	**<4**	<0.4	**9**	**6**	**6**	<0.1	**<1**	**3**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH146	0-0.2	Fill: Silty Sandy Clay	**<4**	<0.4	**6**	**15**	**30**	<0.1	**6**	**59**	**1.3**	**0.1**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
BH146	1.3-1.5	Fill: Silty Clay	**<4**	<0.4	**10**	**7**	**7**	<0.1	**1**	**5**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	Not Detected
SDUP1	-	Fill: Silty Sandy Clay	**<4**	<0.4	**8**	**22**	**43**	<0.1	**7**	**83**	**1.4**	**0.1**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
SDUP4	-	Fill: Silty Clay	**7**	<0.4	**12**	**13**	**19**	<0.1	**5**	**40**	**<0.05**	**<0.05**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
SDUP7	-	Fill: Silty Clay	**6**	<0.4	**20**	**9**	**10**	<0.1	**6**	**10**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
SDUP7 - [LAB_DUP]	-	Fill: Silty Clay	**6**	<0.4	**21**	**10**	**11**	<0.1	**6**	**11**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
SDUP10	-	Fill: Silty Sand	**<4**	<0.4	**2**	**2**	**2**	<0.1	**2**	**7**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
SDUP101	-	Fill: Silty Clay	**16**	<0.4	**23**	**23**	**26**	<0.1	**9**	**50**	**0.06**	**0.06**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
SDUP101 - [LAB_DUP]	-	Fill: Silty Clay	**13**	<0.4	**20**	**22**	**20**	<0.1	**8**	**45**	**NA**	**NA**	NA	NA	NA	NA	<0.1	<25	**NA**	**NA**	**NA**	**NA**	<0.2	<0.5	<1	<3	NA
SDUP102	-	Fill: Silty Clay	**7**	<0.4	**11**	**20**	**9**	<0.1	**20**	**41**	**1.6**	**0.15**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
SDUP102 - [LAB_DUP]	-	Fill: Silty Clay	**NA**	NA	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**1.1**	**0.17**	<0.1	NA	NA	NA	NA	NA	**<50**	**<100**	**<100**	**<50**	NA	NA	NA	NA	NA
SDUP103	-	Fill: Silty Clay	**10**	**0.4**	**31**	**76**	**64**	<0.1	**18**	**260**	**2**	**0.19**	NA	NA	NA	NA	NA	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
SDUP111	-	Fill: Silty Clay	**5**	<0.4	**26**	**30**	**16**	<0.1	**37**	**92**	**<0.05**	**<0.05**	<0.1	NA	NA	NA	<0.1	<25	**<50**	**<100**	**<100**	**<50**	<0.2	<0.5	<1	<3	NA
FCF1	Surface	Fragment	**NA**	NA	**NA**	**NA**	**NA**	NA	**NA**	**NA**	**NA**	**NA**	NA	NA	NA	NA	NA	NA	**NA**	**NA**	**NA**	**NA**	NA	NA	NA	NA	Detected
Total Number of Samples			76	76	76	76	76	76	76	76	74	74	33	0	0	0	33	74	74	74	74	74	74	74	74	74	40
Maximum Value			24	0.4	95	76	64	<PQL	130	260	2.9	0.2	<PQL	<PQL	<PQL	<PQL	<PQL	<PQL	120	230	410	620	<PQL	<PQL	<PQL	<PQL	Detected

Concentration above the CT1 — **VALUE**
Concentration above SCC1 — **VALUE**
Concentration above the SCC2 — **VALUE**
Concentration above PQL — **Bold**

Standard deviation exceeds data assessment criteria — **VALUE**

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TABLE S8
SOIL LABORATORY TCLP RESULTS
All data in mg/L unless stated otherwise

			Nickel
PQL - Envirolab Services			0.02
TCLP1 - General Solid Waste			2
TCLP2 - Restricted Solid Waste			8
TCLP3 - Hazardous Waste			>8
Sample Reference	**Sample Depth**	**Sample Description**	
TP104	0.2-0.4	Fill: Silty Clayey Sand	**0.03**
BH105	0.03-0.3	Fill: Silty Sandy Gravel	**0.3**
BH108	0.03-0.2	Fill: Silty Gravelly Sand	**0.2**
BH111	0.2-0.5	Fill: Silty Clay	**0.2**
BH119	0.16-0.3	Fill: Silty Gravelly Clay	**0.03**
BH134	0-0.2	Fill: Silty Sandy Gravel	**0.1**
Total Number of samples			6
Maximum Value			0.3

General Solid Waste	**VALUE**
Restricted Solid Waste	**VALUE**
Hazardous Waste	**VALUE**
Concentration above PQL	**Bold**

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Additional Site Investigation
250 Victoria Street Wetherill Park
E31888BR

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TABLE S9
SOIL QA/QC SUMMARY

			TRH C6 - C10	TRH >C10-C16	TRH >C16-C34	TRH >C34-C40	Benzene	Toluene	Ethylbenzene	m+p-xylene	o-Xylene
	PQL Envirolab SYD		25	50	100	100	0.2	0.5	1	2	1
	PQL Envirolab VIC		25	50	100	100	0.2	0.5	1.0	2.0	1.0
Intra	BH146	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP1	-	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH103	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP4	-	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH145	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP7	-	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH106	0.19-0.4	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP10	-	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	TP122	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP102	-	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP101	0-0.3	<25	130	290	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP101	-	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	77.5	170	nc	nc	nc	nc	nc	nc
	RPD %		nc	135%	141%	nc	nc	nc	nc	nc	nc
Inter	TP130	0-0.2	<25	<50	270	280	<0.2	<0.5	<1	<2	<1
laboratory	SDUP103	-	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	160	165	nc	nc	nc	nc	nc
	RPD %		nc	nc	138%	139%	nc	nc	nc	nc	nc
Inter	BH110	0-0.2	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
laboratory	SDUP111	-	<25	<50	<100	<100	<0.2	<0.5	<1	<2	<1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc
Field	TB-S1	-	<25	NA	NA	NA	<0.2	<0.5	<1	<2	<1
Blank	1/02/21										
Field	TB-S2	-	<25	NA	NA	NA	<0.2	<0.5	<1	<2	<1
Blank	3/02/21										
Field	FR1-SPT	µg/L	NA	NA	NA	NA	<1	<1	<1	<2	<1
Rinsate	3/02/21										
Field	FR2-SPT	µg/L	NA	NA	NA	NA	<1	<1	<1	<2	<1
Rinsate	5/02/21										
Trip	TS-S1		-	-	-	-	100%	98%	104%	105%	104%
Spike	1/02/21										
Trip	TS-S2		-	-	-	-	96%	95%	97%	95%	97%
Spike	1/02/21										

			Naphthalene	Acenaphthylene	Acenaph-thene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b,j+k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthra-cene	Benzo(g,h,i)perylene
	PQL Envirolab SYD		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.05	0.1	0.1	0.1
	PQL Envirolab VIC		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1
Intra	BH146	0-0.2	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.2	0.2	0.1	0.1	0.2	0.1	<0.1	<0.1	0.1
laboratory	SDUP1	-	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.3	0.2	0.1	0.1	0.2	0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	0.2	nc	0.25	0.2	0.1	0.1	0.2	0.1	nc	nc	0.075
	RPD %		nc	nc	nc	nc	0%	nc	40%	0%	0%	0%	0%	0%	nc	nc	67%
Intra	BH103	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
laboratory	SDUP4	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH145	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
laboratory	SDUP7	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH106	0.19-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
laboratory	SDUP10	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	TP122	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.2	<0.1	<0.1	<0.2	0.1	<0.1	<0.1	0.1
laboratory	SDUP102	-	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.3	0.3	0.1	0.1	0.2	0.15	0.1	<0.1	0.1
duplicate	MEAN		nc	nc	nc	nc	0.075	nc	0.25	0.25	0.075	0.075	0.15	0.125	0.075	nc	0.1
	RPD %		nc	nc	nc	nc	67%	nc	40%	40%	67%	67%	67%	40%	67%	nc	0%
Inter	TP101	0-0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.2	0.08	<0.1	<0.1	<0.1
laboratory	SDUP101	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	0.06	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	0.075	nc	nc	nc	0.07	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	67%	nc	nc	nc	29%	nc	nc	nc
Inter	TP130	0-0.2	<0.1	<0.1	<0.1	<0.1	0.4	0.1	0.5	0.5	0.2	0.2	0.4	0.2	0.1	<0.1	0.2
laboratory	SDUP103	-	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	0.3	0.3	0.2	0.1	0.3	0.19	0.1	<0.1	0.2
duplicate	MEAN		nc	nc	nc	nc	0.3	0.075	0.4	0.4	0.2	0.15	0.35	0.195	0.1	nc	0.2
	RPD %		nc	nc	nc	nc	67%	67%	50%	50%	0%	67%	29%	5%	0%	nc	0%
Inter	BH110	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
laboratory	SDUP111	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.05	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Field	TB-S1	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Blank	1/02/21																
Field	TB-S2	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Blank	3/02/21																
Field	FR1-SPT	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rinsate	3/02/21																
Field	FR2-SPT	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rinsate	5/02/21																
Trip	TS-S1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	1/02/21																
Trip	TS-S2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	1/02/21																

			HCB	alpha- BHC	gamma- BHC	beta- BHC	Heptachlor	delta- BHC	Aldrin	Heptachlor Epoxide	Gamma- Chlordane	alpha- chlordane	Endosulfan I	pp- DDE	Dieldrin	Endrin	pp- DDD	Endosulfan II	pp- DDT	Endrin Aldehyde	Endosulfan Sulphate	Methoxychlor
	PQL Envirolab SYD		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	PQL Envirolab VIC		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Intra	BH146	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
laboratory	SDUP1	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH103	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
laboratory	SDUP4	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH145	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
laboratory	SDUP7	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH106	0.19-0.4	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
laboratory	SDUP10	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	TP122	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
laboratory	SDUP102	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP101	0-0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
laboratory	SDUP101	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP130	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
laboratory	SDUP103	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	BH110	0-0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
laboratory	SDUP111	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Field	TB-S1	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Blank	1/02/21																					
Field	TB-S2	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Blank	3/02/21																					
Field	FR1-SPT	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rinsate	3/02/21																					
Field	FR2-SPT	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rinsate	5/02/21																					
Trip	TS-S1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	1/02/21																					
Trip	TS-S2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	1/02/21																					

			Azinphos-methyl (Guthion)	Bromophos-ethyl	Chlorpyriphos	Chlorpyriphos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel	Total PCBS
	PQL Envirolab SYD		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	PQL Envirolab VIC		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Intra	BH146	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
laboratory	SDUP1	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH103	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
laboratory	SDUP4	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH145	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
laboratory	SDUP7	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	BH106	0.19-0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
laboratory	SDUP10	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Intra	TP122	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
laboratory	SDUP102	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP101	0-0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
laboratory	SDUP101	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	TP130	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
laboratory	SDUP103	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Inter	BH110	0-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
laboratory	SDUP111	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.1
duplicate	MEAN		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
	RPD %		nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc	nc
Field	TB-S1	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Blank	1/02/21														
Field	TB-S2	-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Blank	3/02/21														
Field	FR1-SPT	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rinsate	3/02/21														
Field	FR2-SPT	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Rinsate	5/02/21														
Trip	TS-S1		-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	1/02/21														
Trip	TS-S2		-	-	-	-	-	-	-	-	-	-	-	-	-
Spike	1/02/21														

			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
	PQL Envirolab SYD		4	0.4	1	1	1	0.1	1	1
	PQL Envirolab VIC		4.0	0.4	1.0	1.0	1.0	0.1	1.0	1.0
Intra	BH146	0-0.2	<4	<0.4	6	15	30	<0.1	6	59
laboratory	SDUP1	-	<4	<0.4	8	22	43	<0.1	7	83
duplicate	MEAN		nc	nc	7	18.5	36.5	nc	6.5	71
	RPD %		nc	nc	29%	38%	36%	nc	15%	34%
Intra	BH103	0-0.2	6	<0.4	14	17	24	<0.1	7	74
laboratory	SDUP4	-	7	<0.4	12	13	19	<0.1	5	40
duplicate	MEAN		6.5	nc	13	15	21.5	nc	6	57
	RPD %		15%	nc	15%	27%	23%	nc	33%	60%
Intra	BH145	0-0.2	6	<0.4	20	7	9	<0.1	6	8
laboratory	SDUP7	-	6	<0.4	20	9	10	<0.1	6	10
duplicate	MEAN		6	nc	20	8	9.5	nc	6	9
	RPD %		0%	nc	0%	25%	11%	nc	0%	22%
Intra	BH106	0.19-0.4	<4	<0.4	2	3	2	<0.1	3	10
laboratory	SDUP10	-	<4	<0.4	2	2	2	<0.1	2	7
duplicate	MEAN		nc	nc	2	2.5	2	nc	2.5	8.5
	RPD %		nc	nc	0%	40%	0%	nc	40%	35%
Intra	TP122	0-0.2	<4	<0.4	6	13	6	<0.1	12	31
laboratory	SDUP102	-	7	<0.4	11	20	9	<0.1	20	41
duplicate	MEAN		4.5	nc	8.5	16.5	7.5	nc	16	36
	RPD %		111%	nc	59%	42%	40%	nc	50%	28%
Inter	TP101	0-0.3	18	<0.4	19	20	20	<0.1	11	45
laboratory	SDUP101	-	16	<0.4	23	23	26	<0.1	9	50
duplicate	MEAN		17	nc	21	21.5	23	nc	10	47.5
	RPD %		12%	nc	19%	14%	26%	nc	20%	11%
Inter	TP130	0-0.2	4	<0.4	10	61	39	<0.1	21	130
laboratory	SDUP103	-	10	0.4	31	76	64	<0.1	18	260
duplicate	MEAN		7	0.3	20.5	68.5	51.5	nc	19.5	195
	RPD %		86%	67%	102%	22%	49%	nc	15%	67%
Inter	BH110	0-0.2	<4	<0.4	21	26	16	<0.1	38	79
laboratory	SDUP111	-	5	<0.4	26	30	16	<0.1	37	92
duplicate	MEAN		3.5	nc	23.5	28	16	nc	37.5	85.5
	RPD %		86%	nc	21%	14%	0%	nc	3%	15%
Field	TB-S1	-	NA	NA	NA	NA	NA	NA	NA	NA
Blank	1/02/21									
Field	TB-S2	-	NA	NA	NA	NA	NA	NA	NA	NA
Blank	3/02/21									
Field	FR1-SPT	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Rinsate	3/02/21									
Field	FR2-SPT	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Rinsate	5/02/21									
Trip	TS-S1		-	-	-	-	-	-	-	-
Spike	1/02/21									
Trip	TS-S2		-	-	-	-	-	-	-	-
Spike	1/02/21									

Result outside of QA/QC acceptance criteria

ABBREVIATIONS AND EXPLANATIONS

Abbreviations used in the Tables:

CT: Contaminant Threshold
FTS: Fluorotelomer sulfonic acid
NA: Not Analysed
NC: Not Calculated
NEMP National Environmental Management Plan
NSL: No Set Limit
PFAS Per- and polyfluoroalkyl substances
PFHxS Perfluorohexanesulfonic acid
PFOA Perfluorooctanoic acid
PFOS Perfluorooctanesulfonic acid
PQL: Practical Quantitation Limit
RS: Rinsate Sample
SAC: Site Assessment Criteria
SCC: Specific Contaminant Concentration
TB: Trip Blank
TCLP: Toxicity Characteristics Leaching Procedure
TS: Trip Spike
UCL: Upper Level Confidence Limit on Mean Value

Table Specific Explanations:

Groundwater Ecology Tables:

- 95% refers to a concentration that has been derived to protect 95% of aquatic species
- Statistical calculations are undertaken using ProUCL (USEPA). Statistical calculation is usually undertaken using data from fill samples.

Waste Classification and TCLP Table:

- Data assessed using the Addendum to the NSW EPA Waste Classification Guidelines, Part 1: Classifying Waste (2014) -October 201

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TABLE G1
SUMMARY OF GROUNDWATER LABORATORY RESULTS COMPARED TO ECOLOGICAL GILs SAC
All results in µg/L unless stated otherwise.

	PQL Envirolab Services	ANZG 2018 Fresh Waters	SAMPLES													
			MW103	MW103 - [LAB_DUP]	MW106	MW111	MW123	MW123 - [LAB_DUP]	MW128	MW134	MW139	MW143	PMW1	PMW2	WDUP3	WDUP3 - [LAB_DUP]
Inorganic Compounds and Parameters																
pH		6.5 - 8.5	6.7	6.8	8.3	6.6	6.4	NA	6.9	6.8	6.2	7	NA	NA	NA	NA
Electrical Conductivity (µS/cm)	1	NSL	**13000**	**13000**	**1500**	**19000**	**18000**	NA	**5500**	**17000**	**22000**	**25000**	NA	NA	NA	NA
Turbidity (NTU)		NSL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals and Metalloids																
Arsenic (As III)	1	24	**4**	**4**	**1**	<1	**5**	NA	**2**	**25**	**1**	**9**	NA	NA	**1**	NA
Cadmium	0.1	0.2	**0.1**	**0.1**	<0.1	<0.1	**0.5**	NA	**0.2**	<0.1	<0.1	**0.7**	NA	NA	<0.1	NA
Chromium (SAC for Cr III adopted)	1	3.3	<1	<1	**1**	**1**	<1	NA	**16**	<1	<1	**2**	NA	NA	**1**	NA
Copper	1	1.4	<1	<1	**2**	<1	**1**	NA	**2**	<1	<1	<1	NA	NA	**3**	NA
Lead	1	3.4	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	NA	NA	<1	NA
Total Mercury (inorganic)	0.05	0.06	**0.07**	**0.07**	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	NA
Nickel	1	11	**11**	**10**	**1**	**3**	**39**	NA	**22**	**30**	**54**	**76**	NA	NA	**1**	NA
Zinc	1	8	**9**	**8**	**7**	**9**	**66**	NA	**48**	**10**	**58**	**45**	NA	NA	**9**	NA
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)																
Benzene	1	950	<1	NA	<1	<1	**66**	**61**	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	1	180	<1	NA	<1	<1	**4**	**3**	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	80	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m+p-xylene	2	75	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-xylene	1	350	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total xylenes	2	NSL	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Volatile Organic Compounds (VOCs), including chlorinated VOCs																
Dichlorodifluoromethane	10	NSL	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	<10	<10
Chloromethane	10	NSL	<10	NA	<10	<10	**11**	**17**	<10	<10	<10	<10	NA	NA	<10	<10
Vinyl Chloride	10	100	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	<10	<10
Bromomethane	10	NSL	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	<10	<10
Chloroethane	10	NSL	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	<10	<10
Trichlorofluoromethane	10	NSL	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	<10	<10
1,1-Dichloroethene	1	700	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Trans-1,2-dichloroethene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1-dichloroethane	1	90	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Cis-1,2-dichloroethene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Bromochloromethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Chloroform	1	370	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
2,2-dichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2-dichloroethane	1	1900	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1,1-trichloroethane	1	270	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1-dichloropropene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Cyclohexane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Carbon tetrachloride	1	240	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Benzene	1	950	<1	NA	<1	<1	**66**	**61**	<1	<1	<1	<1	NA	NA	<1	<1
Dibromomethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2-dichloropropane	1	900	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Trichloroethene	1	330	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Bromodichloromethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
trans-1,3-dichloropropene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
cis-1,3-dichloropropene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1,2-trichloroethane	1	6500	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Toluene	1	180	<1	NA	<1	<1	**4**	**3**	<1	<1	<1	<1	NA	NA	<1	<1
1,3-dichloropropane	1	1100	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Dibromochloromethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2-dibromoethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Tetrachloroethene	1	70	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1,1,2-tetrachloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Chlorobenzene	1	55	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Ethylbenzene	1	80	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Bromoform	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
m+p-xylene	2	75	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	NA	NA	<2	<2
Styrene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1,2,2-tetrachloroethane	1	400	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
o-xylene	1	350	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2,3-trichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Isopropylbenzene	1	30	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Bromobenzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
n-propyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
2-chlorotoluene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
4-chlorotoluene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,3,5-trimethyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Tert-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2,4-trimethyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,3-dichlorobenzene	1	260	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Sec-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,4-dichlorobenzene	1	60	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
4-isopropyl toluene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2-dichlorobenzene	1	160	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
n-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2-dibromo-3-chloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2,4-trichlorobenzene	1	85	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Hexachlorobutadiene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2,3-trichlorobenzene	1	3	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Polycyclic Aromatic Hydrocarbons (PAHs)																
Naphthalene	0.2	16	<0.2	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	<0.2	<0.2	NA	NA	<0.2	<0.2
Acenaphthylene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Acenaphthene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Fluorene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Phenanthrene	0.1	0.6	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Anthracene	0.1	0.01	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Fluoranthene	0.1	1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Pyrene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Benzo(a)anthracene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Chrysene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Benzo(b,j+k)fluoranthene	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	<0.2	<0.2	NA	NA	<0.2	<0.2
Benzo(a)pyrene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Dibenzo(a,h)anthracene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Benzo(g,h,i)perylene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1

Concentration above the SAC	**VALUE**
Concentration above the PQL	**Bold**
GIL >PQL	Red

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TABLE G2
SUMMARY OF GROUNDWATER LABORATORY RESULTS COMPARED TO HUMAN CONTACT GILs
All results in µg/L unless stated otherwise.

	PQL Envirolab Services	Recreational (10 x NHMRC ADWG)	SAMPLES													
			MW103	MW103 - [LAB_DUP]	MW106	MW111	MW123	MW123 - [LAB_DUP]	MW128	MW134	MW139	MW143	PMW1	PMW2	WDUP3	WDUP3 - [LAB_DUP]
Inorganic Compounds and Parameters																
pH		6.5 - 8.5	6.7	6.8	8.3	6.6	6.4	NA	6.9	6.8	6.2	7	NA	NA	NA	NA
Electrical Conductivity (µS/cm)	1	NSL	**13000**	**13000**	**1500**	**19000**	**18000**	NA	**5500**	**17000**	**22000**	**25000**	NA	NA	NA	NA
Turbidity (NTU)		NSL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals and Metalloids																
Arsenic (As III)	1	100	**4**	**4**	**1**	<1	**5**	NA	**2**	**25**	**1**	**9**	NA	NA	**1**	NA
Cadmium	0.1	20	**0.1**	**0.1**	<0.1	<0.1	**0.5**	NA	**0.2**	<0.1	<0.1	**0.7**	NA	NA	<0.1	NA
Chromium (total)	1	500	<1	<1	**1**	**1**	<1	NA	**16**	<1	<1	**2**	NA	NA	**1**	NA
Copper	1	20000	<1	<1	**2**	<1	**1**	NA	**2**	<1	<1	<1	NA	NA	**3**	NA
Lead	1	100	<1	<1	<1	<1	<1	NA	<1	<1	<1	<1	NA	NA	<1	NA
Total Mercury (inorganic)	0.05	10	**0.07**	**0.07**	<0.05	<0.05	<0.05	NA	<0.05	<0.05	<0.05	<0.05	NA	NA	<0.05	NA
Nickel	1	200	**11**	**10**	**1**	**3**	**39**	NA	**22**	**30**	**54**	**76**	NA	NA	**1**	NA
Zinc	1	30000	**9**	**8**	**7**	**9**	**66**	NA	**48**	**10**	**58**	**45**	NA	NA	**9**	NA
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)																
Benzene	1	10	<1	NA	<1	<1	**66**	**61**	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	1	8000	<1	NA	<1	<1	**4**	**3**	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	3000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
m+p-xylene	2	NSL	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-xylene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total xylenes	2	6000	<2	NA												
Volatile Organic Compounds (VOCs), including chlorinated VOCs																
Dichlorodifluoromethane	10	NSL	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	<10	<10
Chloromethane	10	NSL	<10	NA	<10	<10	**11**	**17**	<10	<10	<10	<10	NA	NA	<10	<10
Vinyl Chloride	10	3	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	<10	<10
Bromomethane	10	NSL	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	<10	<10
Chloroethane	10	NSL	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	<10	<10
Trichlorofluoromethane	10	NSL	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	NA	NA	<10	<10
1,1-Dichloroethene	1	300	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Trans-1,2-dichloroethene	1	600	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1-dichloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Cis-1,2-dichloroethene	1	600	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Bromochloromethane	1	2500	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Chloroform	1		<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
2,2-dichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2-dichloroethane	1	30	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1,1-trichloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1-dichloropropene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Cyclohexane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Carbon tetrachloride	1	30	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Benzene	1	10	<1	NA	<1	<1	**66**	**61**	<1	<1	<1	<1	NA	NA	<1	<1
Dibromomethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2-dichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Trichloroethene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Bromodichloromethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
trans-1,3-dichloropropene	1	1000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
cis-1,3-dichloropropene	1	1000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1,2-trichloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Toluene	1	8000	<1	NA	<1	<1	**4**	**3**	<1	<1	<1	<1	NA	NA	<1	<1
1,3-dichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Dibromochloromethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2-dibromoethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Tetrachloroethene	1	500	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1,1,2-tetrachloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Chlorobenzene	1	3000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Ethylbenzene	1	3000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Bromoform	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
m+p-xylene	2	NSL	<2	NA	<2	<2	<2	<2	<2	<2	<2	<2	NA	NA	<2	<2
Styrene	1	300	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,1,2,2-tetrachloroethane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
o-xylene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2,3-trichloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Isopropylbenzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Bromobenzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
n-propyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
2-chlorotoluene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
4-chlorotoluene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,3,5-trimethyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Tert-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2,4-trimethyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,3-dichlorobenzene	1	200	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Sec-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,4-dichlorobenzene	1	400	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
4-isopropyl toluene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2-dichlorobenzene	1	15000	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
n-butyl benzene	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2-dibromo-3-chloropropane	1	NSL	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2,4-trichlorobenzene	1	300	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
1,2,3-trichlorobenzene	1		<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Hexachlorobutadiene	1	7	<1	NA	<1	<1	<1	<1	<1	<1	<1	<1	NA	NA	<1	<1
Polycyclic Aromatic Hydrocarbons (PAHs)																
Naphthalene	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	<0.2	<0.2	NA	NA	<0.2	<0.2
Acenaphthylene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Acenaphthene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Fluorene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Phenanthrene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Anthracene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Fluoranthene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Pyrene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Benzo(a)anthracene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Chrysene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Benzo(b,j+k)fluoranthene	0.2	NSL	<0.2	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	<0.2	<0.2	NA	NA	<0.2	<0.2
Benzo(a)pyrene	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Dibenzo(a,h)anthracene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1
Benzo(g,h,i)perylene	0.1	NSL	<0.1	<0.1	<0.1	<0.1	<0.1	NA	<0.1	<0.1	<0.1	<0.1	NA	NA	<0.1	<0.1

Concentration above the SAC — **VALUE**
Concentration above the PQL — **Bold**
GIL >PQL — Red

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TABLE G3
GROUNDWATER LABORATORY RESULTS COMPARED TO HSLs
All data in µg/L unless stated otherwise

				C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	PID
PQL - Envirolab Services				10	50	1	1	1	2	1	
NEPM 2013 - Land Use Category				HSL-D: COMMERCIAL/INDUSTRIAL							
Sample Reference	**Water Depth**	**Depth Category**	**Soil Category**								
MW103	4.78	4m to <8m	Sand	<10	<50	<1	<1	<1	<2	<1	0.5
MW106	1.5	0m to <2m	Sand	<10	<50	<1	<1	<1	<2	<1	0.2
MW111	5.13	4m to <8m	Sand	<10	<50	<1	<1	<1	<2	<1	3.2
MW123	4.77	4m to <8m	Sand	**41**	**60**	**66**	**4**	<1	<2	<1	1.3
MW123 - [LAB_DUP]	4.77	4m to <8m	Sand	**56**	NA	**61**	**3**	<1	<2	<1	1.3
MW128	4.2	0m to <2m	Sand	<10	**85**	<1	<1	<1	<2	<1	4.2
MW134	4.25	4m to <8m	Sand	<10	<50	<1	<1	<1	<2	<1	0.3
MW139	4.71	0m to <2m	Sand	<10	<50	<1	<1	<1	<2	<1	0
MW143	3.08	2m to <4m	Sand	<10	<50	<1	<1	<1	<2	<1	0.3
PMW1	3.2	2m to <4m	Sand	<10	<50	<1	<1	<1	<2	<1	0.1
PMW2	0.32	0m to <2m	Sand	<10	<50	<1	<1	<1	<2	<1	0
WDUP3	1.5	0m to <2m	Sand	<10	<50	<1	<1	<1	<2	<1	NA
WDUP3 - [LAB_DUP]	1.5	0m to <2m	Sand	<10	**100**	<1	<1	<1	<2	<1	NA
Total Number of Samples				13	12	13	13	13	13	13	11
Maximum Value				56	85	66	4	<PQL	<PQL	<PQL	4.2

Concentration above the SAC **VALUE**
Site specific assesment (SSA) required **VALUE**
Concentration above the PQL **Bold**
The guideline corresponding to the elevated value is highlighted in grey in the Groundwater Assessment Criteria Table below

HSL GROUNDWATER ASSESSMENT CRITERIA

Sample Reference	**Water Depth**	**Depth Category**	**Soil Category**	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
MW103	4.78	4m to <8m	Sand	6000	NL	5000	NL	NL	NL	NL
MW106	1.5	0m to <2m	Sand	SSA	SSA	SSA	SSA	SSA	SSA	SSA
MW111	5.13	4m to <8m	Sand	6000	NL	5000	NL	NL	NL	NL
MW123	4.77	4m to <8m	Sand	6000	NL	5000	NL	NL	NL	NL
MW123 - [LAB_DUP]	4.77	4m to <8m	Sand	6000	NL	5000	NL	NL	NL	NL
MW128	4.2	0m to <2m	Sand	SSA	SSA	SSA	SSA	SSA	SSA	SSA
MW134	4.25	4m to <8m	Sand	6000	NL	5000	NL	NL	NL	NL
MW139	4.71	0m to <2m	Sand	SSA	SSA	SSA	SSA	SSA	SSA	SSA
MW143	3.08	2m to <4m	Sand	6000	NL	5000	NL	NL	NL	NL
PMW1	3.2	2m to <4m	Sand	6000	NL	5000	NL	NL	NL	NL
PMW2	0.32	0m to <2m	Sand	SSA	SSA	SSA	SSA	SSA	SSA	SSA
WDUP3	1.5	0m to <2m	Sand	SSA	SSA	SSA	SSA	SSA	SSA	SSA
WDUP3 - [LAB_DUP]	1.5	0m to <2m	Sand	SSA	SSA	SSA	SSA	SSA	SSA	SSA

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TABLE G4
GROUNDWATER LABORATORY RESULTS COMPARED TO SITE SPECIFIC HSLs - RISK ASSESSMENT
All results in µg/L unless stated otherwise.

	PQL Envirolab Services	NHMRC ADWG 2011 (v3.5 2018)	WHO 2008	USEPA RSL Tapwater 2017	MW106	MW128	MW139	PMW1	PMW2	WDUP3	WDUP3 - [LAB_DUP]
Total Recoverable Hydrocarbons (TRH)											
C_6-C_9 Aliphatics (assessed using F1)	10	-	15000	-	<10	<10	<10	<10	<10	<10	<10
>C_9-C_{14} Aliphatics (assessed using F2)	50	-	100	-	<50	**85**	<50	<50	<50	<50	**100**
Monocyclic Aromatic Hydrocarbons (BTEX Compounds)											
Benzene	1	1	-	-	<1	<1	<1	<1	<1	<1	<1
Toluene	1	800	-	-	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	1	300	-	-	<1	<1	<1	<1	<1	<1	<1
Total xylenes	2	600	-	-	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**	**<2**
Polycyclic Aromatic Hydrocarbons (PAHs)											
Naphthalene	1	-	-	6.1	<1	<1	<1	<1	<1	<1	<1
Volatile Organic Compounds (VOCs), including chlorinated VOCs											
Dichlorodifluoromethane	10	-	-	-	<10	<10	<10	NA	NA	<10	<10
Chloromethane	10	-	-	-	<10	<10	<10	NA	NA	<10	<10
Vinyl Chloride	10	0.3	-	-	<10	<10	<10	NA	NA	<10	<10
Bromomethane	10	-	-	-	<10	<10	<10	NA	NA	<10	<10
Chloroethane	10	-	-	-	<10	<10	<10	NA	NA	<10	<10
Trichlorofluoromethane	10	-	-	-	<10	<10	<10	NA	NA	<10	<10
1,1-Dichloroethene	1	30	-	-	<1	<1	<1	NA	NA	<1	<1
Trans-1,2-dichloroethene	1	60	-	-	<1	<1	<1	NA	NA	<1	<1
1,1-dichloroethane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Cis-1,2-dichloroethene	1	60	-	-	<1	<1	<1	NA	NA	<1	<1
Bromochloromethane	1	250	-	-	<1	<1	<1	NA	NA	<1	<1
Chloroform	1		-	-	<1	<1	<1	NA	NA	<1	<1
2,2-dichloropropane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,2-dichloroethane	1	3	-	-	<1	<1	<1	NA	NA	<1	<1
1,1,1-trichloroethane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,1-dichloropropene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Cyclohexane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Carbon tetrachloride	1	3	-	-	<1	<1	<1	NA	NA	<1	<1
Benzene	1	1	-	-	<1	<1	<1	NA	NA	<1	<1
Dibromomethane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,2-dichloropropane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Trichloroethene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Bromodichloromethane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
trans-1,3-dichloropropene	1	100	-	-	<1	<1	<1	NA	NA	<1	<1
cis-1,3-dichloropropene	1	100	-	-	<1	<1	<1	NA	NA	<1	<1
1,1,2-trichloroethane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Toluene	1	800	-	-	<1	<1	<1	NA	NA	<1	<1
1,3-dichloropropane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Dibromochloromethane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,2-dibromoethane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Tetrachloroethene	1	50	-	-	<1	<1	<1	NA	NA	<1	<1
1,1,1,2-tetrachloroethane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Chlorobenzene	1	300	-	-	<1	<1	<1	NA	NA	<1	<1
Ethylbenzene	1	300	-	-	<1	<1	<1	NA	NA	<1	<1
Bromoform	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
m+p-xylene	2	-	-	-	<2	<2	<2	NA	NA	<2	<2
Styrene	1	30	-	-	<1	<1	<1	NA	NA	<1	<1
1,1,2,2-tetrachloroethane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
o-xylene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,2,3-trichloropropane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Isopropylbenzene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Bromobenzene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
n-propyl benzene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
2-chlorotoluene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
4-chlorotoluene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,3,5-trimethyl benzene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
Tert-butyl benzene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,2,4-trimethyl benzene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,3-dichlorobenzene	1	20	-	-	<1	<1	<1	NA	NA	<1	<1
Sec-butyl benzene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,4-dichlorobenzene	1	40	-	-	<1	<1	<1	NA	NA	<1	<1
4-isopropyl toluene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,2-dichlorobenzene	1	1500	-	-	<1	<1	<1	NA	NA	<1	<1
n-butyl benzene	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,2-dibromo-3-chloropropane	1	-	-	-	<1	<1	<1	NA	NA	<1	<1
1,2,4-trichlorobenzene	1	30	-	-	<1	<1	<1	NA	NA	<1	<1
1,2,3-trichlorobenzene	1		-	-	<1	<1	<1	NA	NA	<1	<1
Hexachlorobutadiene	1	0.7	-	-	<1	<1	<1	NA	NA	<1	<1

Concentration above the SAC — **VALUE**
Concentration above the PQL — **Bold**
GIL >PQL — Red

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TABLE G5
SUMMARY OF PFAS CONCENTRATIONS IN GROUNDWATER - ECOLOGY
All results in µg/L unless stated otherwise.

	PQL Envirolab Services	NEMP 2018 95% Freshwater	SAMPLES										
			MW103	MW103 - [LAB_DUP]	MW106	MW111	MW123	MW128	MW134	MW139	MW143	WDUP3	WDUP3 - [LAB_DUP]
PFAS Compound													
Perfluorobutanesulfonic acid	0.0004	NSL	**0.001**	**0.001**	**0.046**	**0.0006**	**0.0004**	**0.005**	**0.001**	**0.001**	**0.0047**	**0.049**	**0.055**
Perfluoropentanesulfonic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	0.0002	NSL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanesulfonic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	0.0002	0.13	**0.0004**	**0.0004**	**0.002**	**0.0003**	**0.0003**	**0.0005**	<0.0002	<0.0002	<0.0002	**0.002**	**0.002**
Perfluorodecanesulfonic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorobutanoic acid	0.002	NSL	<0.01	<0.01	**0.02**	<0.01	<0.01	**0.01**	<0.01	<0.01	<0.01	**0.02**	**0.02**
Perfluoropentanoic acid	0.002	NSL	<0.01	<0.01	**0.047**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.046**	**0.046**
Perfluorohexanoic acid	0.0004	NSL	<0.0004	<0.0004	**0.027**	<0.0004	**0.004**	**0.0053**	<0.0004	**0.002**	**0.0006**	**0.022**	**0.023**
Perfluoroheptanoic acid	0.0004	NSL	<0.0004	<0.0004	**0.0084**	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	**0.008**	**0.007**
Perfluorooctanoic acid PFOA	0.0002	220	**0.0003**	**0.0003**	**0.002**	**0.0003**	**0.0002**	**0.001**	<0.0002	**0.0003**	**0.0004**	**0.002**	**0.002**
Perfluorononanoic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid	0.005	NSL	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4:2 FTS	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 FTS	0.0004	NSL	<0.0004	<0.0004	**0.084**	<0.0004	**0.003**	**0.003**	**0.0006**	**0.008**	**0.001**	**0.041**	**0.042**
8:2 FTS	0.0004	NSL	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
10:2 FTS	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	0.005	NSL	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctanesulfon amide	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
N-Me perfluorooctanesulfonamid oethanol	0.005	NSL	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
N-Et perfluorooctanesulfonamid oethanol	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MePer uorooctanesulf-amid oacetic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EtPer uorooctanesulf-amid oacetic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Positive PFHxS & PFOS	0.0002	NSL	**0.0004**	**0.0004**	**0.002**	**0.0003**	**0.0003**	**0.0006**	<0.0002	<0.0002	<0.0002	**0.002**	**0.002**
Total Positive PFOS & PFOA	0.0002	NSL	**0.0006**	**0.0007**	**0.0034**	**0.0006**	**0.0005**	**0.002**	<0.0002	**0.0003**	**0.0004**	**0.0037**	**0.0034**
Total Positive PFAS	0.0002	NSL	**0.002**	**0.002**	**0.23**	**0.001**	**0.0074**	**0.028**	**0.002**	**0.012**	**0.0068**	**0.19**	**0.19**

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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Additional Site Investigation
250 Victoria Street Wetherill Park
E31888BR

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TABLE G6
SUMMARY OF PFAS CONCENTRATIONS IN GROUNDWATER - HUMAN HEALTH
All results in µg/L unless stated otherwise.

	PQL Envirolab Services	NEMP 2020 Recreational	SAMPLES										
			MW103	MW103 - [LAB_DUP]	MW106	MW111	MW123	MW128	MW134	MW139	MW143	WDUP3	WDUP3 - [LAB_DUP]
PFAS Compound													
Perfluorobutanesulfonic acid	0.0004	NSL	**0.001**	**0.001**	**0.046**	**0.0006**	**0.0004**	**0.005**	**0.001**	**0.001**	**0.0047**	**0.049**	**0.055**
Perfluoropentanesulfonic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	0.0002	NSL	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanesulfonic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	0.0002	NSL	**0.0004**	**0.0004**	**0.002**	**0.0003**	**0.0003**	**0.0005**	<0.0002	<0.0002	<0.0002	**0.002**	**0.002**
Perfluorodecanesulfonic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorobutanoic acid	0.002	NSL	<0.01	<0.01	**0.02**	<0.01	<0.01	**0.01**	<0.01	<0.01	<0.01	**0.02**	**0.02**
Perfluoropentanoic acid	0.002	NSL	<0.01	<0.01	**0.047**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	**0.046**	**0.046**
Perfluorohexanoic acid	0.0004	NSL	<0.0004	<0.0004	**0.027**	<0.0004	**0.004**	**0.0053**	<0.0004	**0.002**	**0.0006**	**0.022**	**0.023**
Perfluoroheptanoic acid	0.0004	NSL	<0.0004	<0.0004	**0.0084**	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	**0.008**	**0.007**
Perfluorooctanoic acid PFOA	0.0002	10	**0.0003**	**0.0003**	**0.002**	**0.0003**	**0.0002**	**0.001**	<0.0002	**0.0003**	**0.0004**	**0.002**	**0.002**
Perfluorononanoic acid	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid	0.005	NSL	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
4:2 FTS	0.001	NSL	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 FTS	0.0004	NSL	<0.0004	<0.0004	**0.084**	<0.0004	**0.003**	**0.003**	**0.0006**	**0.008**	**0.001**	**0.041**	**0.042**
8:2 FTS	0.0004	NSL	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
10:2 FTS	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	0.005	NSL	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctanesulfon amide	0.01	NSL	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
N-Me perfluorooctanesulfonamid oethanol	0.005	NSL	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
N-Et perfluorooctanesulfonamid oethanol	0.05	NSL	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MePer uorooctanesulf-amid oacetic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
EtPer uorooctanesulf-amid oacetic acid	0.002	NSL	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Positive PFHxS & PFOS	0.0002	2	**0.0004**	**0.0004**	**0.002**	**0.0003**	**0.0003**	**0.0006**	<0.0002	<0.0002	<0.0002	**0.002**	**0.002**
Total Positive PFOS & PFOA	0.0002	NSL	**0.0006**	**0.0007**	**0.0034**	**0.0006**	**0.0005**	**0.002**	<0.0002	**0.0003**	**0.0004**	**0.0037**	**0.0034**
Total Positive PFAS	0.0002	NSL	**0.002**	**0.002**	**0.23**	**0.001**	**0.0074**	**0.028**	**0.002**	**0.012**	**0.0068**	**0.19**	**0.19**

Positive PFAS result **Bold**
PFAS result above the SAC **Bold**

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Appendix D: Borehole and Test Pit Logs

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ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Log No. TP101 1/1

SDUP101: 0-0.3m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, medium to high plasticity, dark brown, trace of igneous gravel and root fibres.	w<PL			GRASS COVER
									CI-CH	Silty CLAY: medium to high plasticity, brown mottled grey.	w<PL			SCREEN: 10.7kg 0-0.3m NO FCF
							1			Silty CLAY: medium to high plasticity, grey mottled brown.				RESIDUAL
							2			END OF TEST PIT AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Log No. **TP102** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, medium to high plasticity, dark brown, trace of glass, plastic and root fibres.	w<PL			GRASS COVER
										FILL: Silty clay, medium to high plasticity, brown mottled red, orange and grey, trace of ash and root fibres.				SCREEN: 15.6kg 0-0.25m NO FCF SCREEN: 12.4kg 0.25-0.75m NO FCF
									CI-CH	Silty CLAY: medium to high plasticity, brown mottled red.	w<PL			RESIDUAL
							1			END OF TEST PIT AT 0.9m				
							2							
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Environmental logs are not to be used for geotechnical purposes

Log No. BH103 1/2

SDUP4: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 2/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, low to medium plasticity, dark brown, trace of igneous gravel and ash.	w>PL			SCREEN: 1.8kg 0-0.4m NO FCF
						N = 14 5,7,7				FILL: Silty clay, low to medium plasticity, brown, trace of igneous and ironstone gravel, brick fragments and ash.	w<PL			SCREEN: 9.8kg 0.4-1.4m NO FCF
							1							
						N = 5 2,2,3								INSUFFICIENT RETURN FOR BULK SCREEN
							2			FILL: Silty clay, low to medium plasticity, dark brown, trace of ironstone gravel.	w>PL			SCREEN: 4.3kg 1.8-2.5m NO FCF
									CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel.				RESIDUAL
						N = 15 4,6,9	3			as above, but grey.				
									-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, brown.	XW			BRINGELLY SHALE
							4			SILTSTONE: grey, with iron indurated bands.	DW			LOW TO MODERATE 'TC' BIT RESISTANCE
							5							
							6							
							7							

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Log No. BH103 2/2

SDUP4: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 2/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
										SILTSTONE: grey, with iron indurated bands.	DW			
							8			END OF BOREHOLE AT 8.0m				
							9							
							10							
							11							
							12							
							13							
							14							

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Log No. **TP104** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty sand, fine to medium grained, dark brown grey, trace of timber, mulch and root fibres.	D			SCREEN: 8.9kg 0-0.1m NO FCF
									CI-CH	FILL: Silty clayey sand, fine to medium grained, dark brown, trace of asphaltic concrete fragments, igneous gravel, roots and root fibres.	w<PL			SCREEN: 16.7kg 0.1-0.5m NO FCF
							1			Silty CLAY: medium to high plasticity, brown mottled grey.				RESIDUAL
										Silty CLAY: medium to high plasticity, grey mottled red brown.				
							2			END OF TEST PIT AT 1.8m				TEST PIT TERMINATED DUE TO NEARBY SERVICE
							3							
							4							
							5							
							6							
							7							

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Log No. BH105 1/1

SDUP13: 0-0.3m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0		-	CONCRETE: 30mm.t FILL: Silty sandy gravel, fine to coarse grained, grey, igneous, sub-angular, fine to medium grained sand.	M			SCREEN: 12.5kg 0.03-0.8m NO FCF
	■				■	N > 4 3,4,4/ 100mm REFUSAL	1		CI-CH	Silty CLAY: medium to high platicity, grey, trace of ironstone gravel.	w<PL			RESIDUAL
										END OF BOREHOLE AT 1.5m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. BH106 1/2

SDUP10: 0.19-0.4m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
							0			CONCRETE: 190mm.t				
									-	FILL: Silty sand, fine to medium grained, light brown.	M			SCREEN: 8.6kg 0.19-0.8m NO FCF
						N = 7 2,1,6								ORGANIC ODOUR
▶							1		CI-CH	Silty CLAY: medium to high plasticity, grey, trace of ironstone gravel.	w<PL			RESIDUAL
									-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey.	XW			BRINGELLY SHALE
						N = SPT 20/ 100mm REFUSAL				SILTSTONE: grey brown, with iron indurated bands.	DW			LOW TO MODERATE 'TC' BIT RESISTANCE
							2							
							3							
							4							
							5							HIGH RESISTANCE
							6							
							7							

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Log No. BH106 2/2

SDUP10: 0.19-0.4m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
										SILTSTONE: grey brown, with iron indurated bands.	DW			
							8			END OF BOREHOLE AT 8.0m				GROUNDWATER MONITORING WELL INSTALLED TO 7.75m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 7.75m TO 1.75m. CASING 1.75m TO 0m. 2mm SAND FILTER PACK 7.75m TO 1.4m. BENTONITE SEAL 1.4m TO 0.9m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							9							
							10							
							11							
							12							
							13							
							14							

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Log No. **BH107** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
							0			CONCRETE: 220mm.t				
									-	FILL: Silty clay, low to medium plasticity, brown and grey, trace of igneous and ironstone gravel and ash.	w<PL			INSUFFICIENT RETURN FOR BULK SCREEN
						N = 9 3,4,5			CI-CH	Silty CLAY: medium to high plasticity, grey, trace of ironstone gravel.	w<PL			RESIDUAL
							1			Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey.	XW			BRINGELLY SHALE
									-	SILTSTONE: grey brown, with iron indurated bands.	DW			LOW 'TC' BIT RESISTANCE
▶							2							
							3							
							4							MODERATE RESISTANCE
							5							
							6			END OF BOREHOLE AT 6.0m				
							7							

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Log No. BH108 1/1

SDUP12: 0.03-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■	N = 8 3,3,5	0		-	ASPHALTIC CONCRETE: 30mm.t	D			SCREEN: 3.4kg 0.03-0.2m NO FCF
									CI-CH	FILL: Silty gravelly sand, fine to medium grained, grey, fine to coarse grained, igneous, sub-angular, trace of brick and tile fragments.	w<PL			RESIDUAL
										Silty CLAY: medium to high plasticity, grey mottled brown.				
							1			END OF BOREHOLE AT 0.95m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. BH109 1/1

SDUP5: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 2/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty sand, fine to medium grained, dark grey, trace of clay fines and igneous gravel.	M			SCREEN: 7.8kg 0-0.4m NO FCF
						N = 8 3,3,5			CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel.	w<PL			RESIDUAL
							1			as above, but grey.				
						N > 23 5,14, 9/50mm REFUSAL			-	Extremely Weathered siltstone: silty CLAy, low to medium plasticity, grey.	XW DW			BRINGELLY SHALE
							2			SILTSTONE: brown. END OF BOREHOLE AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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Log No. BH110 1/1

SDUP111: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** HAND AUGER **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: - **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, medium to high plasticity, brown, trace of igneous gravel, asphalt, brick and root fibres.	w<PL			SCREEN: 10.2kg 0-0.4m NO FCF
	■								CI-CH	Silty CLAY: medium to high plasticity, grey mottled orange brown.	w<PL			RESIDUAL
										END OF BOREHOLE AT 0.55m				HAND AUGER REFUSAL
							1							
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **BH111** **1/2**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 2/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION							0			CONCRETE: 200mm.t				
									-	FILL: Silty clay, low to medium plasticity, grey, trace of igneous gravel.	w>PL			INSUFFICIENT RETURN FOR BULK SCREEN
						N = 3 1,2,1	1			FILL: Silty clay, medium to high plasticity, red brown and brown, trace of igneous and ironstone gravel, concrete fragments and ash.				SCREEN: 9.5kg 0.5-1.5m NO FCF
						N = 6 2,3,3	2		CI-CH	Silty CLAY: medium to high plasticity, grey mottled brown, trace of ironstone gravel.	w<PL			RESIDUAL
						N = 18 4,7,11	3		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity. grey.	XW			BRINGELLY SHALE
							4			SILTSTONE: grey brown, with iron indurated bands.	DW			LOW TO MODERATE 'TC' BIT RESISTANCE
							5							
							6							
							7							

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Log No. **BH111** **2/2**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 2/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
										SILTSTONE: grey brown, with iron indurated bands.	DW			
							8			END OF BOREHOLE AT 8.0m				GROUNDWATER MONITORING WELL INSTALLED TO 8.0m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 8.0m TO 2.0m. CASING 2.0m TO 0m. 2mm SAND FILTER PACK 8.0m TO 1.9m. BENTONITE SEAL 1.9m TO 0.5m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							9							
							10							
							11							
							12							
							13							
							14							

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Log No. **BH112** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 2/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, low to medium plasticity, dark brown, trace of igneous gravel and ash.	w>PL			SCREEN: 9.3kg 0-0.4m NO FCF
						N = 6 3,3,3	1			FILL: Silty clay, medium to high plasticity, red brown, trace of igneous and ironstone gravel, glass fragments and ash.				SCREEN: 8.7kg 0.4-1.4kg NO FCF
						N = 7 1,2,5	2		CI-CH	Silty CLAY: medium to high plasticity, grey, trace of ironstone gravel.	w<PL			1.4-1.5m: INSUFFICIENT RETURN FOR BULK SCREEN
										END OF BOREHOLE AT 2.0m				RESIDUAL
							3							
							4							
							5							
							6							
							7							

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Log No. **BH113** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** HAND AUGER **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: - **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■			■	■		0			FILL: Silty clay, medium to high plasticity, brown, trace of igneous gravel and root fibres.	w<PL			SCREEN: 11.2kg 0-0.2m NO FCF
									CI-CH	Silty CLAY: medium to high plasticity, grey mottled yellow brown.	w<PL			RESIDUAL
										END OF BOREHOLE AT 0.4m				HAND AUGER REFUSAL
							1							
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. TP114 **1/1**

SDUP104: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty sand, fine to medium grained, dark brown grey, with igneous gravel, trace of plastic, concrete asphaltic concrete and timber fragments.	D			SCREEN: 16.6kg 0-0.3m NO FCF
	■								CI-CH		w<PL			RESIDUAL
										Silty CLAY: medium to high plasticity, grey mottled red brown and yellow brown.				
							1			END OF TEST PIT AT 0.8m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. TP115 1/1

SDUP105: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Gravelly sand, fine to medium grained, dark brown grey, fine to coarse grained, igneous gravel, sub-angular, trace of concrete and asphaltic concrete fragments.	D			SCREEN: 13.4kg 0-0.2m NO FCF
	■								CI-CH		w<PL			RESIDUAL
										Silty CLAY: medium to high plasticity, red brown mottled grey and brown.				
							1			END OF TEST PIT AT 0.6m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. BH116 1/2

SDUP11: 0.03-0.3m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0		-	ASPHALTIC CONCRETE: 30mm.t	w<PL			SCREN: 4.9kg 0.03-0.3m
									CI-CH	FILL: Silty clay, low to medium plasticity, grey, with igneous gravel, trace of asphalt fragments.	w<PL			NO FCF
						N = 8 3,3,5	1			Silty CLAY: medium to high plasticity, red brown mottled grey, trace of ironstone gravel.				RESIDUAL
						N = 21 4,10,11	2		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey.	XW			BRINGELLY SHALE LOW 'TC' BIT RESISTANCE
										SILTSTONE: grey brown, with iron indurated bands.	DW			
							3							
							4							MODERATE TO HIGH RESISTANCE
							5							
							6			END OF BOREHOLE AT 5.6m				'TC' BIT REFUSAL ON HIGH RESISTANCE SILTSTONE GROUNDWATER MONITORING WELL INSTALLED TO 5.5m. CLASS 18 MACHINE SLOTTED 50mm DIA.
							7							

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Log No. BH116 2/2

SDUP11: 0.03-0.3m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
							8							PVC STANDPIPE 5.5m TO 2.5m. CASING 2.5m TO 0m. 2mm SAND FILTER PACK 5.5m TO 2.4m. BENTONITE SEAL 2.4m TO 1.4m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							9							
							10							
							11							
							12							
							13							
							14							

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Log No. **TP117** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** M.M.P./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty sand, fine to medium grained, dark brown grey, with	D			SCREEN: 15.2kg
	■								CI-CH	igneous gravel, trace of concrete and asphaltic concrete fragments and timber.	w<PL			0-0.2m NO FCF
										Silty CLAY: medium to high plasticity, grey mottled red brown.				RESIDUAL
							1			END OF TEST PIT AT 0.6m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **BH118** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty gravelly clay, low to medium plasticity, grey brown, fine to coarse grained igneous gravel, sub-angular, trace of brick fragments.	w<PL			SCREEN: 3.5kg 0-0.3m NO FCF
						N = 7 3,3,4				FILL: Silty clay, low to medium plasticity, brown, trace of igneous, ironstone and siltstone gravel, brick, concrete and plastic fragments and ash.				SCREEN: 11.6kg 0.3-1.3m NO FCF
							1		CI-CH	Silty CLAY: medium to high plasticity, grey mottled red brown, trace of ironstone gravel.	w<PL			RESIDUAL
						N = 26 4,11,15			-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey brown.	XW			
							2			END OF BOREHOLE AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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Log No. BH119 1/1

SDUP6: 0.16-0.3m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 2/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■		■		0			CONCRETE: 160mm.t				
									-	FILL: Silty gravelly sand, fine to medium grained, grey, fine to coarse grained igneous sub-angular, trace of sandstone gravel.	M			SCREEN: 3.0kg 0.16-0.4m NO FCF
	■								-		DW			
										SANDSTONE: brown grey.				BRINGELLY SHALE
							1			END OF BOREHOLE AT 1.0m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **TP120** **1/1**

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Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: - **Logged/Checked by:** M.M.P./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Sandy clay, medium to high plasticity, dark brown, trace of igneous and ironstone gravel, concrete and root fibres.	w<PL			GRASS COVER
	■		■		■				CI-CH	FILL: Silty clay, medium to high plasticity, red brown mottled grey, trace of ironstone gravel and concrete fragments.	w<PL			SCREEN: 13.3kg 0-0.2m NO FCF
							1			Silty CLAY: medium to high plasticity, red brown mottled yellow brown, trace of ironstone gravel.				SCREEN: 12.7kg 0.2-0.5m NO FCF
										END OF TEST PIT AT 0.8m				RESIDUAL
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **TP121** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, medium to high plasticity, grey mottled brown and orange brown, trace of igneous gravel, ash and root fibres.	w<PL			GRASS COVER SCREEN: 14.6kg 0-0.5 NO FCF
										FILL: Silty clay, medium to high plasticity, brown mottled red brown, trace of igneous and ironstone gravel and ash.				SCREEN: 13.8kg 0.5-1.1m NO FCF
							1			FILL: Silty clay, medium to high plasticity, brown mottled red brown, trace of igneous and sandstone gravel and ash.				SCREEN: 12.9kg 1.1-1.7m NO FCF
									CI-CH	Silty CLAY: medium to high plasticity, brown, trace of ironstone gravel.	w<PL			RESIDUAL
							2			END OF TEST PIT AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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Log No. TP122 1/1

SDUP102: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty clay, medium to high plasticity, red brown mottled grey, trace of igneous and sandstone gravel, ash and root fibres.	w<PL			GRASS COVER SCREEN: 14.9kg 0-0.6m NO FCF
										FILL: Silty clay, medium to high plasticity, red brown mottled grey, trace of igneous and sandstone gravel, ash, ceramic tile and root fibres.				SCREEN: 13.6kg 0.6-1.4m NO FCF
							1			FILL: Silty gravel, fine to medium grained, dark grey brown, igneous, sub-angular, trace of clay nodules.	D			SCREEN: 19.0kg 1.4-1.9m NO FCF
							2		CI-CH	Silty CLAY: medium to high plasticity, yellow brown mottled grey.	w<PL			RESIDUAL
										END OF TEST PIT AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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Log No. BH123 1/2

SDUP9: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty gravelly sand, fine to medium grained, grey, fine to coarse grained, igneous, sub-angular, trace of brick fragments.	M			SCREEN: 5.4kg 0-0.3m NO FCF
						N = 9 7,5,4				FILL: Silty clay, medium to high plasticity, trace of igneous and ironstone gravel.	w<PL			SCREEN: 10.6kg 0.3-1.0m NO FCF
							1		CI-CH	Silty CLAY: medium to high plasticity, re brown, trace of ironstone gravel.	w<PL			RESIDUAL
						N > 20 7,13/ 100mm REFUSAL			-	as above, but grey mottled brown.	XW			BRINGELLY SHALE
							2			Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey, with ironstone bands.	DW			LOW TO MODERATE 'TC' BIT RESISTANCE
										SILTSTONE: grey brown, with iron indurated bands.				
							3							
							4							
							5							
							6							
							7							

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Log No. BH123 2/2

SDUP9: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
										SILTSTONE: grey brown, with iron indurated bands.	DW			HIGH RESISTANCE
							8			END OF BOREHOLE AT 7.9m				'TC' BIT REFUSAL ON HIGH RESISTANCE SILTSTONE GROUNDWATER MONITORING WELL INSTALLED TO 7.6m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 7.6m TO 1.6m. CASING 1.6m TO 0m. 2mm SAND FILTER PACK 7.6m TO 1.2m. BENTONITE SEAL 1.2m TO 0.5m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							9							
							10							
							11							
							12							
							13							
							14							

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Log No. **TP124** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty sand, fine to medium grained, dark brown, grey, trace of igneous gravel, concrete and asphaltic concrete.	D			SCREEN: 15.2kg 0-0.2m NO FCF
									CI-CH		w<PL			RESIDUAL
										Silty CLAY: medium to high plasticity, red brown mottled grey.				
							1			Silty CLAY: medium to high plasticity, grey brown mottled red.				
									-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, brown.	XW			BRINGELLY SHALE
							2			END OF TEST PIT AT 1.9m				
							3							
							4							
							5							
							6							
							7							

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Log No. TP125 1/1

SDUP106: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
	■	■	■	■	■		0			FILL: Silty sand, fine to medium grained, dark brown grey, with igneous gravel, trace of concrete and asphaltic concrete fragments.	D			SCREEN 14.9kg 0-0.2m NO FCF
	■		■						CI-CH		w<PL			RESIDUAL
										Silty CLAY: medium to high plasticity, red brown mottled grey, trace of siltstone gravel.				
	■		■				1			Silty CLAY: medium to high plasticity, grey mottled red and yellow brown.				
▶										END OF TEST PIT AT 1.2m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. TP126 1/1

SDUP107: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■	■	■		0			FILL: Silty sand, fine to medium grained, dark brown grey, with	D			SCREEN: 14.8kg 0-0.3m
									CI-CH	igneous gravel, trace of asphaltic concrete fragments, concrete and timber.	w<PL			NO FCF
	■			■										RESIDUAL
	■			■					-	Silty CLAY: medium to high plasticity, red brown mottled grey.	XW			
							1			Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey mottled yellow brown.				
										END OF TEST PIT AT 0.95m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **BH127** **1/1**

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Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■	N = 13 3,6,7	0		CI-CH	FILL: Silty sandy gravel, fine to coarse grained, grey, igneous, sub-angular, fine to medium grained sand.	D			SCREEN: 10.9kg 0-0.2m NO FCF
										Silty CLAY: medium to high plasticity, red brown mottled grey, trace of ironstone gravel.	w<PL			RESIDUAL
										as above, but grey mottled brown.				
							1			END OF BOREHOLE AT 0.95m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **BH128** **1/2**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 1/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION							0			CONCRETE: 200mm.t				
									-	FILL: Silty sandy gravel, fine to coarse grained, sub-angular igneous, grey, fine to medium grained sand.	M w<PL			SCREEN: 4.4kg 0.2-0.4m NO FCF
						N = 8 3,3,5	1			FILL: Silty clay, medium to high plasticity, red brown and brown, trace of igneous, ironstone and sandstone gravel and ash.				SCREEN: 10.4kg 0.4-1.3m NO FCF
						N = 20 7,9,11	2			FILL: Silty clay, medium to high plasticity, brown, trace of igneous, ironstone and sandstone gravel, concrete, brick and plastic fragments and ash.				SCREEN: 4.8kg 1.3-2.1m NO FCF
										FILL: Silty clay, low to medium plasticity, grey, with ironstone gravel.				INSUFFICIENT RETURN FOR BULK SCREEN
									CI-CH	Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel.	w<PL			
						N = 16 6,10,6	3			as above, but grey mottled brown. as above, but grey mottled red brown.				
							4		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, brown.	XW			BRINGELLY SHALE LOW 'TC' BIT RESISTANCE
										SILTSTONE: brown grey, with iron indurated bands.	DW			
							5							HIGH RESISTANCE
							6							
							7			END OF BOREHOLE AT 6.1m				'TC' BIT REFUSAL ON HIGH RESISTANCE SILTSTONE

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Log No. **BH128** **2/2**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 1/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
							8							GROUNDWATER MONITORING WELL INSTALLED TO 5.8m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 5.8m TO 2.8m. CASING 2.8m TO 0m. 2mm SAND FILTER PACK 5.8m TO 2.5m. BENTONITE SEAL 2.5m TO 1.5m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							9							
							10							
							11							
							12							
							13							
							14							

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Log No. **BH129** **1/1**

SDUP3: 0.5-0.7m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 1/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
							0			CONCRETE: 500mm.t				
	■	■			■	N = SPT 8/50mm REFUSAL			-	FILL: Silty sandy gravel, fine to coarse grained, grey, igneous, sub-angular, fine to medium grained sand, trace of ironstone gravel and ash.	M			SCREEN: 2.1kg 0.5-1.0m NO FCF
▶	■	■			■		1			FILL: Silty clay, medium to high plasticity, red brown and brown, trace of igneous and ironstone gravel, and ash.	w>PL			SCREEN: 12.3kg 1.0-2.0m NO FCF
					■	N = 8 3,4,4	2							SCREEN: 11.4kg 2.0-2.8m NO FCF
	■					N = 15 4,7,8	3		CI-CH	Silty CLAY: medium to high plasticity, grey mottled red brown.	w<PL			RESIDUAL
										END OF BOREHOLE AT 3.45m				
							4							
							5							
							6							
							7							

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Log No. TP130 1/1

SDUP103: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■	■	■		0			FILL: Silty clay, medium to high plasticity, brown, trace of ash, brick fragments, igneous gravel and root fibres.	w<PL			GRASS COVER
	■			■					CI-CH	Silty CLAY: medium to high plasticity, yellow brown mottled red brown, trace of ironstone gravel.	w<PL			SCREEN: 12.7kg 0-0.3m NO FCF
		■					1			Silty CLAY: medium to high plasticity, dark brown mottled yellow brown.				RESIDUAL
	■			■						Silty CLAY: medium to high plasticity, red brown mottled grey.				
							2			END OF TEST PIT AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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Log No. **BH131** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 3/1/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty gravelly sand, fine to medium grained, grey, fine to coarse grained igneous, sub-angular, trace of brick fragments and slag.	M			SCREEN: 5.3kg 0-0.3m NO FCF
											w>PL			
	■		■		■	N = 13 3,6,7			CI-CH	FILL: Silty clay, medium to high plasticity, brown, trace of igneous, ironstone and sandstone gravel, brick fragments and ash.	w<PL			SCREEN: 2.5kg 0.3-0.5m NO FCF
							1			Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel.				RESIDUAL
										END OF BOREHOLE AT 1.0m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **TP132** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty sand, fine to medium grained, dark brown grey.	D			SCREEN: 12.9kg
	■								CI-CH	Silty CLAY: medium to high plasticity, red brown mottled grey.	w<PL			0-0.15m NO FCF
	■									Silty CLAY: medium to high plasticity, grey mottled orange brown.				RESIDUAL
							1			END OF TEST PIT AT 0.95m				
							2							
							3							
							4							
							5							
							6							
							7							

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ENVIRONMENTAL LOG

Log No. **TP133** **1/1**

Environmental logs are not to be used for geotechnical purposes

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■		■		0			FILL: Silty sand, fine to medium grained, with igneous gravel, trace of brick, concrete and asphaltic concrete fragments.	D			SCREEN: 13.9kg
	■								CI-CH		w<PL			0-0.2m
														NO FCF
														RESIDUAL
										Silty CLAY: medium to high plasticity, red brown mottled grey.				
										END OF TEST PIT AT 0.6m				
							1							
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. BH134 1/2

SDUP14: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty sandy gravel, fine to coarse grained, grey, igneous, sub-angular,	D			SCREEN: 5.5kg 0-0.3m
									CI-CH	fine to medium grained sand, trace of ceramic fragments.	w<PL			NO FCF
						N = 8 2,3,5	1			Silty CLAY: medium to high plasticity, grey, trace of ironstone gravel.				RESIDUAL
						N = 30 6,13,17	2		-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey.	XW			BRINGELLY SHALE
										SILTSTONE: grey brown, with iron indurated bands.	DW			LOW 'TC' BIT RESISTANCE
							3							
							4							
							5							
							6							HIGH RESISTANCE
							7							

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Log No. BH134 2/2

SDUP14: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
										SILTSTONE: grey brown, with iron indurated bands.	DW			
							8			END OF BOREHOLE AT 8.0m				GROUNDWATER MONITORING WELL INSTALLED TO 7.8m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 7.8m TO 1.8m. CASING 1.8m TO 0m. 2mm SAND FILTER PACK 7.8m TO 1.3m. BENTONITE SEAL 1.3m TO 0.8m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							9							
							10							
							11							
							12							
							13							
							14							

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Log No. TP135 1/1

SDUP108: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 4/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty gravelly sand, fine to medium grained, dark brown, fine to coarse grained igneous gravel, sub-angular, trace of sandstone gravel, asphaltic concrete, brick and concrete fragments.	D			SCREEN: 15.2kg 0-0.3m NO FCF
	■								CI-CH		w<PL			RESIDUAL
										Silty CLAY: medium to high plasticity, red brown mottled grey.				
							1			END OF TEST PIT AT 0.9m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. TP136 1/1

SDUP109: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■		■		■		0		CI-CH	FILL: Silty gravelly sand, fine to medium grained, dark grey brown, fine to coarse grained igneous gravel, trace of brick, asphaltic concrete and tile fragments.	w<PL			SCREEN: 13.4kg 0-0.2m NO FCF
										Silty CLAY: medium to high plasticity, red brown mottled grey.				RESIDUAL
							1			END OF TEST PIT AT 0.7m				
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **BH137** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty gravelly sand, fine to coarse grained, brown, fine to coarse grained, igneous, sub-angular, trace of tile fragments.	M			SCREEN: 4.9kg 0-0.3m NO FCF
						N = 11 2,5,6				FILL: Silty clay, medium to high plasticity, brown, trace of igneous an ironstone gravel, brick fragments and ash.	w<PL			SCREEN: 8.6kg 0.3-1.0m NO FCF
							1		CI-CH	Silty CLAY: medium to high plasticity, grey mottled brown, trace of ironstone gravel.	w<PL			RESIDUAL
						N = 14 4,7,7								
							2			END OF BOREHOLE AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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Log No. BH138 1/1

SDUP2: 0.05-0.3m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 1/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0		-	CONCRETE: 50mm.t				
	■		■		■					FILL: Silty clay, low to medium plasticity, grey, with igneous gravel, trace of tile, ceramic and brick fragments and ash.	w<PL			SCREEN: 4.9kg 0.05-0.3m
	■		■		■				CI-CH		w<PL			NO FCF
			■		■	N > 16 3,11, 5/50mm REFUSAL								RESIDUAL
			■		■				-	Silty CLAY: medium to high plasticity, red brown, trace of ironstone gravel.	XW			BRINGELLY SHALE
							1			as above, but grey.	DW			
										Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey, with ironstone bands.				HIGH 'TC' BIT RESISTANCE
										SILTSTONE: grey, with iron indurated bands.				
										END OF BOREHOLE AT 1.7m				'TC' BIT REFUSAL ON HIGH RESISTANCE SILTSTONE
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **BH139** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 1/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0		-	CONCRETE: 50mm.t				
										FILL: Silty sand, fine to medium grained, grey, trace of igneous and ironstone gravel, and slag.	D			SCREEN: 1.9kg 0.05-0.3m
									CI-CH		w<PL			NO FCF
						N > 20 4,16/ 300mm								RESIDUAL
									-	Silty CLAY: medium to high plasticity, grey, trace of ironstone gravel.	XW			BRINGELLY SHALE
						REFUSAL	1			Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey.	DW			LOW 'TC' BIT RESISTANCE
										SILTSTONE: grey.				
							2			SILTSTONE: grey, with iron indurated bands.				
							3			SILTSTONE: brown and grey.				GROUNDWATER MONITORING WELL INSTALLED TO 7.0m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 7.0m TO 1.0m. CASING 1.0m TO 0m. 2mm SAND FILTER PACK 7.0m TO 1.0m. BENTONITE SEAL 1.0m TO 0.5m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							4							
							5							
							6			SILTSTONE: grey.	SW			HIGH RESISTANCE
							7			END OF BOREHOLE AT 7.0m				

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Log No. **BH140** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 1/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0		-	ASPHALTIC CONCRETE: 50mm.t				
										FILL: Silty gravelly sand, fine to medium grained, grey, fine to coarse grained igneous, sub-angular.	D			SCREEN: 2.8kg 0.05-0.3m NO FCF
											w<PL			
						N = 7 3,3,4			CI-CH	FILL: Silty clay, medium to high plasticity, red brown, trace of igneous and ironstone gravel.	w<PL			SCREEN: 3.1kg 0.3-0.5m NO FCF
							1			Silty CLAY: medium to high plasticity, grey, trace of ironstone gravel.				RESIDUAL
						N > 9 4,8, 1/300mm REFUSAL			-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey	XW			BRINGELLY SHALE
							2			SILTSTONE: brown.	DW			
										END OF BOREHOLE AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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Log No. **BH141** **1/1**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** HAND AUGER **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: - **Logged/Checked by:** M.M.P./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty sand, fine to medium grained, brown, with igneous gravel, trace of brick and concrete fragments and root fibres.	D			SCREEN: 9.8kg 0-0.3m NO FCF
	■										w<PL			
										FILL: Silty clay, medium to high plasticity, red brown mottled grey.				
										END OF BOREHOLE AT 0.5m				
							1							
							2							
							3							
							4							
							5							
							6							
							7							

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Log No. **BH142** 1/1

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Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 2/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty gravelly clay, low to medium plasticity, brown, fine to coarse grained, igneous, sub-angular, trace of ironstone and sandstone gravel.	w<PL			SCREEN: 5.4kg 0-0.5m NOFCF
						N = 9 3,3,6				FILL: Silty clay, medium to high plasticity, brown and grey, trace of igneous, ironstone and sandstone gravel, sand brick fragments.				SCREEN: 8.1kg 0.5-1.2m NO FCF
							1		CI-CH	Silty CLAY: medium to high plasticity, grey mottled brown, trace of ironstone gravel.	w<PL			RESIDUAL
						N = 16 3,4,12								
							2			END OF BOREHOLE AT 2.0m				
							3							
							4							
							5							
							6							
							7							

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Log No. **BH143** **1/2**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION							0			FILL: Silty sandy gravel, fine to coarse grained, brown, sandstone, sub-angular, fine to medium grained sand, trace of igneous gravel.	D w<PL			SCREEN: 4.0kg 0-0.2m NO FCF
						N = 6 2,3,3			CI-CH	FILL: Silty clay, medium to high plasticity, brown, trace of ironstone gravel and ash.	w<PL			SCREEN: 2.1kg 0.2-0.4m NO FCF
							1			Silty CLAY: medium to high plasticity, grey, trace of ironstone gravel.				RESIDUAL
									-	SILTSTONE: brown grey, with iron indurated bands.	DW			BRINGELLY SHALE LOW 'TC' BIT RESISTANCE
							2							
							3							
							4							
							5							
							6							HIGH RESISTANCE
							7							

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Log No. **BH143** **2/2**

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
				■						SILTSTONE: brown grey, with iron indurated bands.	DW			
							8			END OF BOREHLE AT 7.6m				'TC' BIT REFUSAL ON HIGH RESISTANCE SILTSTONE GROUNDWATER MONITORING WELL INSTALLED TO 7.4m. CLASS 18 MACHINE SLOTTED 50mm DIA. PVC STANDPIPE 7.4m TO 1.4m. CASING 1.4m TO 0m. 2mm SAND FILTER PACK 7.4m TO 1.1m. BENTONITE SEAL 1.1m TO 0.5m. BACKFILLED WITH SAND TO THE SURFACE. COMPLETED WITH A CONCRETED GATIC COVER.
							9							
							10							
							11							
							12							
							13							
							14							

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Log No. TP144 **1/1**

SDUP110: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** EXCAVATOR **R.L. Surface:** N/A

Date: 5/2/21 **Datum:** -

Plant Type: JKX **Logged/Checked by:** C.R./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■	■	■	■	■		0			FILL: Silty sandy gravel, fine to coarse grained, grey brown, sandstone sub-rounded, trace of concrete and asphaltic concrete fragments.	D			SCREEN: 17.9kg
									CI-CH		w<PL			0-0.2m
														NO FCF
										Silty CLAY: medium to high plasticity, red brown mottled grey.				RESIDUAL
							1			Silty CLAY: medium to high plasticity, grey mottled orange brown.				
							2							
										END OF TEST PIT AT 2.2m				
							3							
							4							
							5							
							6							
							7							

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Log No. BH145 1/1

SDUP7: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 3/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLE-TION	■		■		■		0			FILL: Silty clay, low to medium plasticity, dark brown, trace of igneous and sandstone gravel.	w<PL			SCREEN: 8.5kg 0-0.5m NO FCF
	■		■		■	N = 11 5,5,6				FILL: Silty clay, medium to high plasticity, brown, trace of igneous and ironstone gravel and ash.	w>PL			SCREEN: 7.3kg 0.5-1.5m NO FCF
	■		■		■		1							
	■		■		■	N = 6 3,3,3								SCREEN: 7.5kg 1.5-2.5m NO FCF
	■				■		2							
									-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, grey, with iron indurated bands.	XW			BRINGELLY SHALE
						N = SPT 5/50mm REFUSAL	3			END OF BOREHOLE AT 3.05m				
							4							
							5							
							6							
							7							

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Log No. **BH146** **1/1**

SDUP1: 0-0.2m

Client: WOOLWORTHS GROUP

Project: ADDITIONAL SITE INVESTIGATION

Location: 250 VICTORIA STREET, WETHERILL PARK, NSW

Job No.: E31888BR **Method:** SPIRAL AUGER **R.L. Surface:** N/A

Date: 1/2/21 **Datum:** -

Plant Type: JK205 **Logged/Checked by:** A.M./V.B.

Groundwater Record	SAMPLES ES	SAMPLES ASS	SAMPLES ASB	SAMPLES SAL	SAMPLES DB	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
							0			FILL: Silty sandy clay, low to medium plasticity, dark brown, fine to medium grained, trace of ironstone gravel, and brick fragments.	w>PL			MULCH COVER
											w<PL			SCREEN: 9.3kg 0-0.3m NO FCF
						N = 6 3,3,3				FILL: Silty clay, medium to high plasticity, brown, trace of igneous, ironstone and sandstone gravel, and ash.				SCREEN: 10.4kg 0.3-1.3m NO FCF
							1							SCREEN: 9.1kg 1.3-2.3m NO FCF
						N = 3 2,2,1								
							2							SCREEN: 10.3kg 2.3-3.3m NO FCF
						N = 0 0,0,0	3				w>PL			SPT SUNK UNDER SELF WEIGHT
▶									-	Extremely Weathered siltstone: silty CLAY, low to medium plasticity, brown grey.	XW			BRINGELLY SHALE
							4			SILTSTONE: grey, with iron indurated bands.	DW			LOW 'TC' BIT RESISTANCE
										END OF BOREHOLE AT 4.5m				
							5							
							6							
							7							

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ENVIRONMENTAL LOGS EXPLANATION NOTES

INTRODUCTION

These notes have been provided to amplify the environmental report in regard to classification methods, field procedures and certain matters relating to the logging of soil and rock. Not all notes are necessarily relevant to all reports.

Where geotechnical borehole logs are utilised for environmental purpose, reference should also be made to the explanatory notes included in the geotechnical report. Environmental logs are not suitable for geotechnical purposes.

The ground is a product of continuing natural and man-made processes and therefore exhibits a variety of characteristics and properties which vary from place to place and can change with time. Environmental studies include gathering and assimilating limited facts about these characteristics and properties in order to understand or predict the behaviour of the ground on a particular site under certain conditions. This report may contain such facts obtained by inspection, excavation, probing, sampling, testing or other means of investigation. If so, they are directly relevant only to the ground at the place where and time when the investigation was carried out.

DESCRIPTION AND CLASSIFICATION METHODS

The methods of description and classification of soils and rocks used in this report are based on Australian Standard 1726:2017 *'Geotechnical Site Investigations'*. In general, descriptions cover the following properties – soil or rock type, colour, structure, strength or density, and inclusions. Identification and classification of soil and rock involves judgement and the Company infers accuracy only to the extent that is common in current geoenvironmental practice.

Soil types are described according to the predominating particle size and behaviour as set out in the attached soil classification table qualified by the grading of other particles present (eg. sandy clay) as set out below:

Soil Classification	Particle Size
Clay	< 0.002mm
Silt	0.002 to 0.075mm
Sand	0.075 to 2.36mm
Gravel	2.36 to 63mm
Cobbles	63 to 200mm
Boulders	> 200mm

Non-cohesive soils are classified on the basis of relative density, generally from the results of Standard Penetration Test (SPT) as below:

Relative Density	SPT 'N' Value (blows/300mm)
Very loose (VL)	< 4
Loose (L)	4 to 10
Medium dense (MD)	10 to 30
Dense (D)	30 to 50
Very Dense (VD)	> 50

Cohesive soils are classified on the basis of strength (consistency) either by use of a hand penetrometer, vane shear, laboratory testing and/or tactile engineering examination. The strength terms are defined as follows.

Classification	Unconfined Compressive Strength (kPa)	Indicative Undrained Shear Strength (kPa)
Very Soft (VS)	≤ 25	≤ 12
Soft (S)	> 25 and ≤ 50	> 12 and ≤ 25
Firm (F)	> 50 and ≤ 100	> 25 and ≤ 50
Stiff (St)	> 100 and ≤ 200	> 50 and ≤ 100
Very Stiff (VSt)	> 200 and ≤ 400	> 100 and ≤ 200
Hard (Hd)	> 400	> 200
Friable (Fr)	Strength not attainable – soil crumbles	

Rock types are classified by their geological names, together with descriptive terms regarding weathering, strength, defects, etc. Where relevant, further information regarding rock classification is given in the text of the report. In the Sydney Basin, 'shale' is used to describe fissile mudstone, with a weakness parallel to bedding. Rocks with alternating inter-laminations of different grain size (eg. siltstone/claystone and siltstone/fine grained sandstone) are referred to as 'laminite'.

INVESTIGATION METHODS

The following is a brief summary of investigation methods currently adopted by the Company and some comments on their use and application. All methods except test pits, hand auger drilling and portable Dynamic Cone Penetrometers require the use of a mechanical rig which is commonly mounted on a truck chassis or track base.

Test Pits: These are normally excavated with a backhoe or a tracked excavator, allowing close examination of the insitu soils and 'weaker' bedrock if it is safe to descend into the pit. The depth of penetration is limited to about 3m for a backhoe and up to 6m for a large excavator. Limitations of test pits are the problems associated with disturbance and difficulty of reinstatement and the consequent effects on close-by structures. Care must be taken if construction is to be carried out near test pit locations to either properly recompact the backfill during construction or to design and construct the

structure so as not to be adversely affected by poorly compacted backfill at the test pit location.

Hand Auger Drilling: A borehole of 50mm to 100mm diameter is advanced by manually operated equipment. Refusal of the hand auger can occur on a variety of materials such as obstructions within any fill, tree roots, hard clay, gravel or ironstone, cobbles and boulders, and does not necessarily indicate rock level.

Continuous Spiral Flight Augers: The borehole is advanced using 75mm to 115mm diameter continuous spiral flight augers, which are withdrawn at intervals to allow sampling and insitu testing. This is a relatively economical means of drilling in clays and in sands above the water table. Samples are returned to the surface by the flights or may be collected after withdrawal of the auger flights, but they can be very disturbed and layers may become mixed. Information from the auger sampling (as distinct from specific sampling by SPTs or undisturbed samples) is of limited reliability due to mixing or softening of samples by groundwater, or uncertainties as to the original depth of the samples. Augering below the groundwater table is of even lesser reliability than augering above the water table.

Rock Augering: Use can be made of a Tungsten Carbide (TC) bit for auger drilling into rock to indicate rock quality and continuity by variation in drilling resistance and from examination of recovered rock cuttings. This method of investigation is quick and relatively inexpensive but provides only an indication of the likely rock strength and predicted values may be in error by a strength order. Where rock strengths may have a significant impact on construction feasibility or costs, then further investigation by means of cored boreholes may be warranted.

Wash Boring: The borehole is usually advanced by a rotary bit, with water being pumped down the drill rods and returned up the annulus, carrying the drill cuttings. Only major changes in stratification can be assessed from the cuttings, together with some information from "feel" and rate of penetration.

Mud Stabilised Drilling: Either Wash Boring or Continuous Core Drilling can use drilling mud as a circulating fluid to stabilise the borehole. The term 'mud' encompasses a range of products ranging from bentonite to polymers. The mud tends to mask the cuttings and reliable identification is only possible from intermittent intact sampling (eg. from SPT and U50 samples) or from rock coring, etc.

Continuous Core Drilling: A continuous core sample is obtained using a diamond tipped core barrel. Provided full core recovery is achieved (which is not always possible in very low strength rocks and granular soils), this technique provides a very reliable (but relatively expensive) method of investigation. In rocks, NMLC or HQ triple tube core barrels, which give a core of about 50mm and 61mm diameter, respectively, is usually used with water flush. The length of core recovered is compared to the length drilled and any length not recovered is shown as NO CORE. The location of NO CORE recovery is determined on site by the supervising engineer; where the location is uncertain, the loss is placed at the bottom of the drill run.

Standard Penetration Tests: Standard Penetration Tests (SPT) are used mainly in non-cohesive soils, but can also be used in cohesive soils, as a means of indicating density or strength and also of obtaining a relatively undisturbed sample. The test procedure is described in Australian Standard 1289.6.3.1–2004 (R2016) *'Methods of Testing Soils for Engineering Purposes, Soil Strength and Consolidation Tests – Determination of the Penetration Resistance of a Soil – Standard Penetration Test (SPT)'*.

The test is carried out in a borehole by driving a 50mm diameter split sample tube with a tapered shoe, under the impact of a 63.5kg hammer with a free fall of 760mm. It is normal for the tube to be driven in three successive 150mm increments and the 'N' value is taken as the number of blows for the last 300mm. In dense sands, very hard clays or weak rock, the full 450mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form:

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

  N = 13
  4, 6, 7

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

  N > 30
  15, 30/40mm

The results of the test can be related empirically to the engineering properties of the soil.

A modification to the SPT is where the same driving system is used with a solid 60° tipped steel cone of the same diameter as the SPT hollow sampler. The solid cone can be continuously driven for some distance in soft clays or loose sands, or may be used where damage would otherwise occur to the SPT. The results of this Solid Cone Penetration Test (SCPT) are shown as 'N_c' on the borehole logs, together with the number of blows per 150mm penetration.

LOGS

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

The terms and symbols used in preparation of the logs are defined in the following pages.

Interpretation of the information shown on the logs, and its application to design and construction, should therefore take into account the spacing of boreholes or test pits, the method of drilling or excavation, the frequency of sampling and testing and the possibility of other than 'straight line' variations between the boreholes or test pits. Subsurface conditions between boreholes or test pits may vary significantly from conditions encountered at the borehole or test pit locations.

GROUNDWATER

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

- Although groundwater may be present, in low permeability soils it may enter the hole slowly or perhaps not at all during the time it 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 and may not be the same at the time of construction.
- 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 be washed out of the hole or 'reverted' chemically if reliable water observations are to be made.

More reliable measurements can be made by installing standpipes which are read after the groundwater level has stabilised at intervals ranging from several days to 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 perched water tables or surface water.

FILL

The presence of fill materials can often be determined only by the inclusion of foreign objects (eg. bricks, steel, etc) or by distinctly unusual colour, texture or fabric. Identification of the extent of fill materials will also depend on investigation methods and frequency. Where natural soils similar to those at the site are used for fill, it may be difficult with limited testing and sampling to reliably assess the extent of the fill.

The presence of fill materials is usually regarded with caution as the possible variation in density and material type is much greater than with natural soil deposits. Consequently, there is an increased risk of adverse environmental characteristics or behaviour. If the volume and nature of fill is of importance to a project, then frequent test pit excavations are preferable to boreholes.

LABORATORY TESTING

Laboratory testing has not been undertaken to confirm the soil classification and rock strengths indicated on the environmental logs unless noted in the report.

SYMBOL LEGENDS

SOIL

FILL

TOPSOIL

CLAY (CL, CI, CH)

SILT (ML, MH)

SAND (SP, SW)

GRAVEL (GP, GW)

SANDY CLAY (CL, CI, CH)

SILTY CLAY (CL, CI, CH)

CLAYEY SAND (SC)

SILTY SAND (SM)

GRAVELLY CLAY (CL, CI, CH)

CLAYEY GRAVEL (GC)

SANDY SILT (ML, MH)

PEAT AND HIGHLY ORGANIC SOILS (Pt)

ROCK

CONGLOMERATE

SANDSTONE

SHALE/MUDSTONE

SILTSTONE

CLAYSTONE

COAL

LAMINITE

LIMESTONE

PHYLLITE, SCHIST

TUFF

GRANITE, GABBRO

DOLERITE, DIORITE

BASALT, ANDESITE

QUARTZITE

OTHER MATERIALS

BRICKS OR PAVERS

CONCRETE

ASPHALTIC CONCRETE

CLASSIFICATION OF COARSE AND FINE GRAINED SOILS

Major Divisions		Group Symbol	Typical Names	Field Classification of Sand and Gravel	Laboratory Classification	
Coarse grained soil (more than 65% of soil excluding oversize fraction is greater than 0.075mm)	GRAVEL (more than half of coarse fraction is larger than 2.36mm	GW	Gravel and gravel-sand mixtures, little or no fines	Wide range in grain size and substantial amounts of all intermediate sizes, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	$C_u > 4$ $1 < C_c < 3$
		GP	Gravel and gravel-sand mixtures, little or no fines, uniform gravels	Predominantly one size or range of sizes with some intermediate sizes missing, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	Fails to comply with above
		GM	Gravel-silt mixtures and gravel-sand-silt mixtures	'Dirty' materials with excess of non-plastic fines, zero to medium dry strength	≥ 12% fines, fines are silty	Fines behave as silt
		GC	Gravel-clay mixtures and gravel-sand-clay mixtures	'Dirty' materials with excess of plastic fines, medium to high dry strength	≥ 12% fines, fines are clayey	Fines behave as clay
	SAND (more than half of coarse fraction is smaller than 2.36mm)	SW	Sand and gravel-sand mixtures, little or no fines	Wide range in grain size and substantial amounts of all intermediate sizes, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	$C_u > 6$ $1 < C_c < 3$
		SP	Sand and gravel-sand mixtures, little or no fines	Predominantly one size or range of sizes with some intermediate sizes missing, not enough fines to bind coarse grains, no dry strength	≤ 5% fines	Fails to comply with above
		SM	Sand-silt mixtures	'Dirty' materials with excess of non-plastic fines, zero to medium dry strength	≥ 12% fines, fines are silty	N/A
		SC	Sand-clay mixtures	'Dirty' materials with excess of plastic fines, medium to high dry strength	≥ 12% fines, fines are clayey	

Major Divisions		Group Symbol	Typical Names	Field Classification of Silt and Clay			Laboratory Classification
				Dry Strength	Dilatancy	Toughness	% < 0.075mm
ine grained soils (more than 35% of soil excluding oversize fraction is less than 0.075mm)	SILT and CLAY (low to medium plasticity)	ML	Inorganic silt and very fine sand, rock flour, silty or clayey fine sand or silt with low plasticity	None to low	Slow to rapid	Low	Below A line
		CL, CI	Inorganic clay of low to medium plasticity, gravelly clay, sandy clay	Medium to high	None to slow	Medium	Above A line
		OL	Organic silt	Low to medium	Slow	Low	Below A line
	SILT and CLAY (high plasticity)	MH	Inorganic silt	Low to medium	None to slow	Low to medium	Below A line
		CH	Inorganic clay of high plasticity	High to very high	None	High	Above A line
		OH	Organic clay of medium to high plasticity, organic silt	Medium to high	None to very slow	Low to medium	Below A line
	Highly organic soil	Pt	Peat, highly organic soil	–	–	–	–

Laboratory Classification Criteria

A well graded coarse grained soil is one for which the coefficient of uniformity $Cu > 4$ and the coefficient of curvature $1 < C_c < 3$. Otherwise, the soil is poorly graded. These coefficients are given by:

$$C_U = \frac{D_{60}}{D_{10}} \qquad and \qquad C_C = \frac{(D_{30})^2}{D_{10}\, D_{60}}$$

Where D_{10}, D_{30} and D_{60} are those grain sizes for which 10%, 30% and 60% of the soil grains, respectively, are smaller.

NOTES:

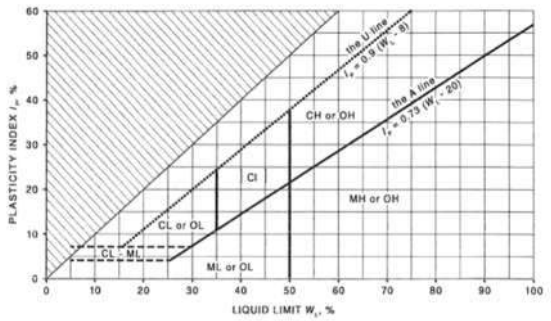
1 For a coarse grained soil with a fines content between 5% and 12%, the soil is given a dual classification comprising the two group symbols separated by a dash; for example, for a poorly graded gravel with between 5% and 12% silt fines, the classification is GP-GM.

2 Where the grading is determined from laboratory tests, it is defined by coefficients of curvature (C_c) and uniformity (C_u) derived from the particle size distribution curve.

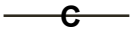
3 Clay soils with liquid limits > 35% and ≤ 50% may be classified as being of medium plasticity.

4 The U line on the Modified Casagrande Chart is an approximate upper bound for most natural soils.

Modified Casagrande Chart for Classifying Silts and Clays according to their Behaviour



LOG SYMBOLS

Log Column	Symbol	Definition
Groundwater Record		Standing water level. Time delay following completion of drilling/excavation may be shown.
		Extent of borehole/test pit collapse shortly after drilling/excavation.
		Groundwater seepage into borehole or test pit noted during drilling or excavation.
Samples	ES	Sample taken over depth indicated, for environmental analysis.
	U50	Undisturbed 50mm diameter tube sample taken over depth indicated.
	DB	Bulk disturbed sample taken over depth indicated.
	DS	Small disturbed bag sample taken over depth indicated.
	ASB	Soil sample taken over depth indicated, for asbestos analysis.
	ASS	Soil sample taken over depth indicated, for acid sulfate soil analysis.
	SAL	Soil sample taken over depth indicated, for salinity analysis.
	PFAS	Soil sample taken over depth indicated, for analysis of Per- and Polyfluoroalkyl Substances.
Field Tests	N = 17 4, 7, 10	Standard Penetration Test (SPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration. 'Refusal' refers to apparent hammer refusal within the corresponding 150mm depth increment.
	N_c = 5 7 3R	Solid Cone Penetration Test (SCPT) performed between depths indicated by lines. Individual figures show blows per 150mm penetration for 60° solid cone driven by SPT hammer. 'R' refers to apparent hammer refusal within the corresponding 150mm depth increment.
	VNS = 25 PID = 100	Vane shear reading in kPa of undrained shear strength. Photoionisation detector reading in ppm (soil sample headspace test).
Moisture Condition (Fine Grained Soils)	w > PL $w \approx$ PL w < PL $w \approx$ LL w > LL	Moisture content estimated to be greater than plastic limit. Moisture content estimated to be approximately equal to plastic limit. Moisture content estimated to be less than plastic limit. Moisture content estimated to be near liquid limit. Moisture content estimated to be wet of liquid limit.
(Coarse Grained Soils)	D M W	DRY – runs freely through fingers. MOIST – does not run freely but no free water visible on soil surface. WET – free water visible on soil surface.
Strength (Consistency) Cohesive Soils	VS S F St VSt Hd Fr ( )	VERY SOFT – unconfined compressive strength ≤ 25kPa. SOFT – unconfined compressive strength > 25kPa and ≤ 50kPa. FIRM – unconfined compressive strength > 50kPa and ≤ 100kPa. STIFF – unconfined compressive strength > 100kPa and ≤ 200kPa. VERY STIFF – unconfined compressive strength > 200kPa and ≤ 400kPa. HARD – unconfined compressive strength > 400kPa. FRIABLE – strength not attainable, soil crumbles. Bracketed symbol indicates estimated consistency based on tactile examination or other assessment.
Density Index/ Relative Density (Cohesionless Soils)	VL L MD D VD ( )	**Density Index (I_D) Range (%)** / **SPT 'N' Value Range (Blows/300mm)** VERY LOOSE ≤ 15 / 0 – 4 LOOSE > 15 and ≤ 35 / 4 – 10 MEDIUM DENSE > 35 and ≤ 65 / 10 – 30 DENSE > 65 and ≤ 85 / 30 – 50 VERY DENSE > 85 / > 50 Bracketed symbol indicates estimated density based on ease of drilling or other assessment.

Log Column	Symbol	Definition
Hand Penetrometer Readings	300 250	Measures reading in kPa of unconfined compressive strength. Numbers indicate individual test results on representative undisturbed material unless noted otherwise.
Remarks	'V' bit	Hardened steel 'V' shaped bit.
	'TC' bit	Twin pronged tungsten carbide bit.
	T_{60}	Penetration of auger string in mm under static load of rig applied by drill head hydraulics without rotation of augers.
	Soil Origin	The geological origin of the soil can generally be described as: RESIDUAL – soil formed directly from insitu weathering of the underlying rock. No visible structure or fabric of the parent rock. EXTREMELY WEATHERED – soil formed directly from insitu weathering of the underlying rock. Material is of soil strength but retains the structure and/or fabric of the parent rock. ALLUVIAL – soil deposited by creeks and rivers. ESTUARINE – soil deposited in coastal estuaries, including sediments caused by inflowing creeks and rivers, and tidal currents. MARINE – soil deposited in a marine environment. AEOLIAN – soil carried and deposited by wind. COLLUVIAL – soil and rock debris transported downslope by gravity, with or without the assistance of flowing water. Colluvium is usually a thick deposit formed from a landslide. The description 'slopewash' is used for thinner surficial deposits. LITTORAL – beach deposited soil.

Classification of Material Weathering

Term		Abbreviation		Definition
Residual Soil		RS		Material is weathered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are no longer visible, but the soil has not been significantly transported.
Extremely Weathered		XW		Material is weathered to such an extent that it has soil properties. Mass structure and material texture and fabric of original rock are still visible.
Highly Weathered	Distinctly Weathered (Note 1)	HW	DW	The whole of the rock material is discoloured, usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable. Rock strength is significantly changed by weathering. Some primary minerals have weathered to clay minerals. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores.
Moderately Weathered		MW		The whole of the rock material is discoloured, usually by iron staining or bleaching to the extent that the colour of the original rock is not recognisable, but shows little or no change of strength from fresh rock.
Slightly Weathered		SW		Rock is partially discoloured with staining or bleaching along joints but shows little or no change of strength from fresh rock.
Fresh		FR		Rock shows no sign of decomposition of individual minerals or colour changes.

NOTE 1: The term 'Distinctly Weathered' is used where it is not practicable to distinguish between 'Highly Weathered' and 'Moderately Weathered' rock. 'Distinctly Weathered' is defined as follows: *'Rock strength usually changed by weathering. The rock may be highly discoloured, usually by iron staining. Porosity may be increased by leaching, or may be decreased due to deposition of weathering products in pores'*. There is some change in rock strength.

Rock Material Strength Classification

Term	Abbreviation	Uniaxial Compressive Strength (MPa)	Guide to Strength	
			Point Load Strength Index $Is_{(50)}$ (MPa)	Field Assessment
Very Low Strength	VL	0.6 to 2	0.03 to 0.1	Material crumbles under firm blows with sharp end of pick; can be peeled with knife; too hard to cut a triaxial sample by hand. Pieces up to 30mm thick can be broken by finger pressure.
Low Strength	L	2 to 6	0.1 to 0.3	Easily scored with a knife; indentations 1mm to 3mm show in the specimen with firm blows of the pick point; has dull sound under hammer. A piece of core 150mm long by 50mm diameter may be broken by hand. Sharp edges of core may be friable and break during handling.
Medium Strength	M	6 to 20	0.3 to 1	Scored with a knife; a piece of core 150mm long by 50mm diameter can be broken by hand with difficulty.
High Strength	H	20 to 60	1 to 3	A piece of core 150mm long by 50mm diameter cannot be broken by hand but can be broken by a pick with a single firm blow; rock rings under hammer.
Very High Strength	VH	60 to 200	3 to 10	Hand specimen breaks with pick after more than one blow; rock rings under hammer.
Extremely High Strength	EH	> 200	> 10	Specimen requires many blows with geological pick to break through intact material; rock rings under hammer.

Appendix E: Laboratory Reports & COC Documents

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CERTIFICATE OF ANALYSIS 261320

Client Details

Client	JK Environments
Attention	Vittal Boggaram
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E31888BR, Wetherill Park**
Number of Samples	231 soil, 2 water, 1 material
Date samples received	04/02/2021
Date completed instructions received	04/02/2021

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	17/02/2021
Date of Issue	17/02/2021

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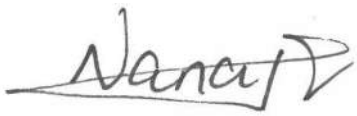

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-1	261320-6	261320-7	261320-9	261320-10
Your Reference	UNITS	TP101	TP102	TP102	BH103	BH103
Depth		0-0.3	0-0.25	0.3-0.5	0-0.2	0.4-0.8
Date Sampled		03/02/2021	3/02/2021	3/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	83	76	84	75	80

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-19	261320-20	261320-24	261320-26	261320-27
Your Reference	UNITS	TP104	TP104	BH105	BH106	BH106
Depth		0-0.1	0.2-0.4	0.03-0.3	0.19-0.4	0.8-0.95
Date Sampled		3/02/2021	3/02/2021	5/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
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	%	99	90	82	80	82

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-31	261320-38	261320-40	261320-47	261320-49
Your Reference	UNITS	BH107	BH108	BH109	BH110	BH111
Depth		0.22-0.5	0.03-0.2	0-0.2	0-0.2	0.2-0.5
Date Sampled		4/02/2021	4/02/2021	2/02/2021	5/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
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	%	82	92	96	97	98

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-50	261320-60	261320-61	261320-64	261320-66
Your Reference	UNITS	BH111	BH112	BH112	BH113	TP114
Depth		0.5-0.95	0-0.2	0.4-0.5	0-0.2	0-0.2
Date Sampled		2/02/2021	2/02/2021	2/02/2021	5/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
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	%	97	97	99	79	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-68	261320-70	261320-71	261320-78	261320-80
Your Reference	UNITS	TP115	BH116	BH116	TP117	BH118
Depth		0-0.2	0.03-0.3	0.3-0.5	0-0.2	0-0.2
Date Sampled		4/02/2021	4/02/2021	4/02/2021	4/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
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	%	75	100	78	99	80

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-83	261320-85	261320-88	261320-93	261320-94
Your Reference	UNITS	BH119	TP120	TP121	TP122	TP122
Depth		0.16-0.3	0-0.2	0-0.2	0-0.2	0.6-0.8
Date Sampled		2/02/2021	4/02/2021	4/02/2021	3/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	11/02/2021
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	%	96	98	86	88	87

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-98	261320-107	261320-112	261320-115	261320-118
Your Reference	UNITS	BH123	TP124	TP125	TP126	BH127
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		3/02/2021	4/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
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	%	82	80	99	98	97

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-120	261320-122	261320-130	261320-132	261320-137
Your Reference	UNITS	BH128	BH128	BH129	TP130	BH131
Depth		0-0.2	1.3-1.5	0.5-0.7	0-0.2	0-0.2
Date Sampled		1/02/2021	1/02/2021	1/02/2021	04/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	98	83	81	76	81

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-140	261320-143	261320-145	261320-153	261320-155
Your Reference	UNITS	TP132	TP133	BH134	TP135	TP136
Depth		0-0.15	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		4/02/2021	5/02/2021	5/02/2021	4/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
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	82	94	91	80

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-157	261320-161	261320-166	261320-169	261320-170
Your Reference	UNITS	BH137	BH138	BH139	BH140	BH140
Depth		0-0.3	0.05-0.3	0.05-0.3	0.05-0.3	0.3-0.5
Date Sampled		3/02/2021	1/02/2021	1/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	81	77	83	79	79

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-175	261320-177	261320-181	261320-189	261320-194
Your Reference	UNITS	BH141	BH142	BH143	TP144	BH145
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		5/02/2021	2/02/2021	5/02/2021	5/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
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	%	82	83	81	81	78

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-195	261320-198	261320-200	261320-204	261320-207
Your Reference	UNITS	BH145	BH146	BH146	SDUP1	SDUP4
Depth		0.5-0.95	0-0.2	1.3-1.5		
Date Sampled		3/02/2021	1/02/2021	1/02/2021	1/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
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	79	80	76	75

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		261320-210	261320-213	261320-227	261320-228	261320-229
Your Reference	UNITS	SDUP7	SDUP10	TB-S1	TB-S2	TS-S1
Depth				-	-	-
Date Sampled		3/02/2021	4/02/2021	1/02/2021	3/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	[NA]
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	[NA]
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	100%
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	98%
Ethylbenzene	mg/kg	<1	<1	<1	<1	104%
m+p-xylene	mg/kg	<2	<2	<2	<2	105%
o-Xylene	mg/kg	<1	<1	<1	<1	104%
naphthalene	mg/kg	<1	<1	<1	<1	[NA]
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	[NA]
Surrogate aaa-Trifluorotoluene	%	74	71	100	102	89

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		261320-230
Your Reference	UNITS	TS-S2
Depth		-
Date Sampled		1/02/2021
Type of sample		soil
Date extracted	-	10/02/2021
Date analysed	-	11/02/2021
Benzene	mg/kg	96%
Toluene	mg/kg	95%
Ethylbenzene	mg/kg	97%
m+p-xylene	mg/kg	95%
o-Xylene	mg/kg	97%
Surrogate aaa-Trifluorotoluene	%	90

svTRH (C10-C40) in Soil						
Our Reference		261320-1	261320-6	261320-7	261320-9	261320-10
Your Reference	UNITS	TP101	TP102	TP102	BH103	BH103
Depth		0-0.3	0-0.25	0.3-0.5	0-0.2	0.4-0.8
Date Sampled		03/02/2021	3/02/2021	3/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
TRH C_{10} - C_{14}	mg/kg	120	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	200	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	150	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	130	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	130	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	290	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	420	<50	<50	<50	<50
Surrogate o-Terphenyl	%	102	91	88	87	84

svTRH (C10-C40) in Soil						
Our Reference		261320-19	261320-20	261320-24	261320-26	261320-27
Your Reference	UNITS	TP104	TP104	BH105	BH106	BH106
Depth		0-0.1	0.2-0.4	0.03-0.3	0.19-0.4	0.8-0.95
Date Sampled		3/02/2021	3/02/2021	5/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	12/02/2021	13/02/2021	11/02/2021	11/02/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	180	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	230	<100	180	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	340	<100	160	<100	<100
TRH >C_{34} -C_{40}	mg/kg	180	<100	240	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	510	<50	400	<50	<50
Surrogate o-Terphenyl	%	82	85	106	87	82

svTRH (C10-C40) in Soil						
Our Reference		261320-31	261320-38	261320-40	261320-47	261320-49
Your Reference	UNITS	BH107	BH108	BH109	BH110	BH111
Depth		0.22-0.5	0.03-0.2	0-0.2	0-0.2	0.2-0.5
Date Sampled		4/02/2021	4/02/2021	2/02/2021	5/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	13/02/2021	13/02/2021	12/02/2021	12/02/2021
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	240	140	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	210	140	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	330	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	540	140	<50	<50
Surrogate o-Terphenyl	%	87	84	113	84	81

svTRH (C10-C40) in Soil						
Our Reference		261320-50	261320-60	261320-61	261320-64	261320-66
Your Reference	UNITS	BH111	BH112	BH112	BH113	TP114
Depth		0.5-0.95	0-0.2	0.4-0.5	0-0.2	0-0.2
Date Sampled		2/02/2021	2/02/2021	2/02/2021	5/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	13/02/2021	13/02/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	210
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	170	410
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	140	460
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	110	520
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	260	980
Surrogate o-Terphenyl	%	81	87	87	98	100

svTRH (C10-C40) in Soil						
Our Reference		261320-68	261320-70	261320-71	261320-78	261320-80
Your Reference	UNITS	TP115	BH116	BH116	TP117	BH118
Depth		0-0.2	0.03-0.3	0.3-0.5	0-0.2	0-0.2
Date Sampled		4/02/2021	4/02/2021	4/02/2021	4/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	13/02/2021	12/02/2021
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	350	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	290	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	540	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	830	<50
Surrogate o-Terphenyl	%	83	83	81	105	82

svTRH (C10-C40) in Soil						
Our Reference		261320-83	261320-85	261320-88	261320-93	261320-94
Your Reference	UNITS	BH119	TP120	TP121	TP122	TP122
Depth		0.16-0.3	0-0.2	0-0.2	0-0.2	0.6-0.8
Date Sampled		2/02/2021	4/02/2021	4/02/2021	3/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	12/02/2021	12/02/2021	13/02/2021
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	180
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	160
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	220
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	380
Surrogate o-Terphenyl	%	84	86	83	75	96

svTRH (C10-C40) in Soil						
Our Reference		261320-98	261320-107	261320-112	261320-115	261320-118
Your Reference	UNITS	BH123	TP124	TP125	TP126	BH127
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		3/02/2021	4/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	12/02/2021	13/02/2021	13/02/2021	13/02/2021	12/02/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	160	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	150	280	210	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	200	340	200	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	320	300	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	200	660	500	<50
Surrogate o-Terphenyl	%	87	91	107	87	83

svTRH (C10-C40) in Soil						
Our Reference		261320-120	261320-122	261320-130	261320-132	261320-137
Your Reference	UNITS	BH128	BH128	BH129	TP130	BH131
Depth		0-0.2	1.3-1.5	0.5-0.7	0-0.2	0-0.2
Date Sampled		1/02/2021	1/02/2021	1/02/2021	04/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	12/02/2021	11/02/2021	12/02/2021	13/02/2021	12/02/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	120	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	240	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	270	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	280	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	540	<50
Surrogate o-Terphenyl	%	76	66	89	107	84

svTRH (C10-C40) in Soil						
Our Reference		261320-140	261320-143	261320-145	261320-153	261320-155
Your Reference	UNITS	TP132	TP133	BH134	TP135	TP136
Depth		0-0.15	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		4/02/2021	5/02/2021	5/02/2021	4/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	12/02/2021	12/02/2021	13/02/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	170	210	<100	<100	130
TRH C_{29} - C_{36}	mg/kg	270	300	<100	<100	180
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	320	400	<100	<100	220
TRH >C_{34} -C_{40}	mg/kg	300	360	<100	<100	270
Total +ve TRH (>C10-C40)	mg/kg	610	760	<50	<50	490
Surrogate o-Terphenyl	%	98	93	85	82	100

svTRH (C10-C40) in Soil						
Our Reference		261320-157	261320-161	261320-166	261320-169	261320-170
Your Reference	UNITS	BH137	BH138	BH139	BH140	BH140
Depth		0-0.3	0.05-0.3	0.05-0.3	0.05-0.3	0.3-0.5
Date Sampled		3/02/2021	1/02/2021	1/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	12/02/2021	13/02/2021	11/02/2021
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	180	<100	<100	210	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	180	<100	<100	190	<100
TRH >C_{34} -C_{40}	mg/kg	220	<100	<100	270	<100
Total +ve TRH (>C10-C40)	mg/kg	400	<50	<50	460	<50
Surrogate o-Terphenyl	%	101	88	84	100	76

svTRH (C10-C40) in Soil						
Our Reference		261320-175	261320-177	261320-181	261320-189	261320-194
Your Reference	UNITS	BH141	BH142	BH143	TP144	BH145
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		5/02/2021	2/02/2021	5/02/2021	5/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	12/02/2021	11/02/2021	12/02/2021	13/02/2021	11/02/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	230	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	290	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	420	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	390	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	810	<50
Surrogate o-Terphenyl	%	84	88	85	96	86

svTRH (C10-C40) in Soil						
Our Reference		261320-195	261320-198	261320-200	261320-204	261320-207
Your Reference	UNITS	BH145	BH146	BH146	SDUP1	SDUP4
Depth		0.5-0.95	0-0.2	1.3-1.5		
Date Sampled		3/02/2021	1/02/2021	1/02/2021	1/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	12/02/2021	11/02/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	72	81	79	80	90

svTRH (C10-C40) in Soil			
Our Reference		261320-210	261320-213
Your Reference	UNITS	SDUP7	SDUP10
Depth			
Date Sampled		3/02/2021	4/02/2021
Type of sample		soil	soil
Date extracted	-	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	87	83

PAHs in Soil						
Our Reference		261320-1	261320-6	261320-7	261320-9	261320-10
Your Reference	UNITS	TP101	TP102	TP102	BH103	BH103
Depth		0-0.3	0-0.25	0.3-0.5	0-0.2	0.4-0.8
Date Sampled		03/02/2021	3/02/2021	3/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	0.08	<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	0.2	<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	%	98	98	100	97	90

PAHs in Soil						
Our Reference		261320-19	261320-20	261320-24	261320-26	261320-27
Your Reference	UNITS	TP104	TP104	BH105	BH106	BH106
Depth		0-0.1	0.2-0.4	0.03-0.3	0.19-0.4	0.8-0.95
Date Sampled		3/02/2021	3/02/2021	5/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	0.2	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	0.2	0.1	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	89	98	88	92	97

PAHs in Soil						
Our Reference		261320-31	261320-38	261320-40	261320-47	261320-49
Your Reference	UNITS	BH107	BH108	BH109	BH110	BH111
Depth		0.22-0.5	0.03-0.2	0-0.2	0-0.2	0.2-0.5
Date Sampled		4/02/2021	4/02/2021	2/02/2021	5/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	%	98	94	108	95	96

PAHs in Soil						
Our Reference		261320-50	261320-60	261320-61	261320-64	261320-66
Your Reference	UNITS	BH111	BH112	BH112	BH113	TP114
Depth		0.5-0.95	0-0.2	0.4-0.5	0-0.2	0-0.2
Date Sampled		2/02/2021	2/02/2021	2/02/2021	5/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	0.3
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	0.2
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	0.57
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	%	95	95	94	91	94

PAHs in Soil						
Our Reference		261320-68	261320-70	261320-71	261320-78	261320-80
Your Reference	UNITS	TP115	BH116	BH116	TP117	BH118
Depth		0-0.2	0.03-0.3	0.3-0.5	0-0.2	0-0.2
Date Sampled		4/02/2021	4/02/2021	4/02/2021	4/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	0.2	0.3	<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	0.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Chrysene	mg/kg	<0.1	0.2	<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	0.1
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	0.3	0.58	<0.05	<0.05	0.94
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	%	99	103	100	99	98

PAHs in Soil						
Our Reference		261320-83	261320-85	261320-88	261320-93	261320-94
Your Reference	UNITS	BH119	TP120	TP121	TP122	TP122
Depth		0.16-0.3	0-0.2	0-0.2	0-0.2	0.6-0.8
Date Sampled		2/02/2021	4/02/2021	4/02/2021	3/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	0.2	0.3
Pyrene	mg/kg	<0.1	<0.1	<0.1	0.2	0.3
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	0.4
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.1	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
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	0.2
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	0.54	1.9
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	%	93	102	101	101	103

PAHs in Soil						
Our Reference		261320-98	261320-107	261320-112	261320-115	261320-118
Your Reference	UNITS	BH123	TP124	TP125	TP126	BH127
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		3/02/2021	4/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	0.2	0.1	0.3	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.2	<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	0.08	<0.05	0.07	<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	0.74	0.1	0.4	0.2	<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	103	102	104	103

PAHs in Soil						
Our Reference		261320-120	261320-122	261320-130	261320-132	261320-137
Your Reference	UNITS	BH128	BH128	BH129	TP130	BH131
Depth		0-0.2	1.3-1.5	0.5-0.7	0-0.2	0-0.2
Date Sampled		1/02/2021	1/02/2021	1/02/2021	04/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	0.4	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	0.1	0.5	0.2
Pyrene	mg/kg	<0.1	0.1	0.1	0.5	0.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.4	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.07	0.05	0.2	0.09
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	0.2	<0.1
Total +ve PAH's	mg/kg	<0.05	0.4	0.4	2.9	0.4
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	%	102	101	101	100	99

PAHs in Soil						
Our Reference		261320-140	261320-143	261320-145	261320-153	261320-155
Your Reference	UNITS	TP132	TP133	BH134	TP135	TP136
Depth		0-0.15	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		4/02/2021	5/02/2021	5/02/2021	4/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	0.3	0.2	<0.1	0.2	0.2
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	0.3	0.2	<0.05	0.3	0.2
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	%	99	98	99	105	102

PAHs in Soil						
Our Reference		261320-157	261320-161	261320-166	261320-169	261320-170
Your Reference	UNITS	BH137	BH138	BH139	BH140	BH140
Depth		0-0.3	0.05-0.3	0.05-0.3	0.05-0.3	0.3-0.5
Date Sampled		3/02/2021	1/02/2021	1/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	0.2	<0.1	0.2	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	0.1	0.2	0.2	<0.1
Pyrene	mg/kg	0.2	<0.1	0.2	0.2	<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	0.09	<0.05	0.07	0.08	<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	0.79	0.1	0.90	0.59	<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	101	100	104	101

PAHs in Soil						
Our Reference		261320-175	261320-177	261320-181	261320-189	261320-194
Your Reference	UNITS	BH141	BH142	BH143	TP144	BH145
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		5/02/2021	2/02/2021	5/02/2021	5/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	0.2	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.2	<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	0.09	<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	0.52	<0.05	0.1	<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	100	96	102	100

PAHs in Soil						
Our Reference		261320-195	261320-198	261320-200	261320-204	261320-207
Your Reference	UNITS	BH145	BH146	BH146	SDUP1	SDUP4
Depth		0.5-0.95	0-0.2	1.3-1.5		
Date Sampled		3/02/2021	1/02/2021	1/02/2021	1/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	0.2	<0.1	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.2	<0.1	0.3	<0.1
Pyrene	mg/kg	<0.1	0.2	<0.1	0.2	<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	0.1	<0.05	0.1	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	1.3	<0.05	1.4	<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	%	99	100	98	99	98

PAHs in Soil			
Our Reference		261320-210	261320-213
Your Reference	UNITS	SDUP7	SDUP10
Depth			
Date Sampled		3/02/2021	4/02/2021
Type of sample		soil	soil
Date extracted	-	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	98	105

Organochlorine Pesticides in soil						
Our Reference		261320-6	261320-19	261320-26	261320-31	261320-38
Your Reference	UNITS	TP102	TP104	BH106	BH107	BH108
Depth		0-0.25	0-0.1	0.19-0.4	0.22-0.5	0.03-0.2
Date Sampled		3/02/2021	3/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	%	119	115	113	118	115

Organochlorine Pesticides in soil						
Our Reference		261320-47	261320-50	261320-60	261320-70	261320-83
Your Reference	UNITS	BH110	BH111	BH112	BH116	BH119
Depth		0-0.2	0.5-0.95	0-0.2	0.03-0.3	0.16-0.3
Date Sampled		5/02/2021	2/02/2021	2/02/2021	4/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	%	120	118	125	122	116

Organochlorine Pesticides in soil						
Our Reference		261320-93	261320-98	261320-112	261320-120	261320-140
Your Reference	UNITS	TP122	BH123	TP125	BH128	TP132
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.15
Date Sampled		3/02/2021	3/02/2021	4/02/2021	1/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	%	105	105	105	107	104

Organochlorine Pesticides in soil						
Our Reference		261320-145	261320-161	261320-169	261320-181	261320-189
Your Reference	UNITS	BH134	BH138	BH140	BH143	TP144
Depth		0-0.2	0.05-0.3	0.05-0.3	0-0.2	0-0.2
Date Sampled		5/02/2021	1/02/2021	1/02/2021	5/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	%	105	105	106	101	107

Organochlorine Pesticides in soil				
Our Reference		261320-194	261320-210	261320-213
Your Reference	UNITS	BH145	SDUP7	SDUP10
Depth		0-0.2		
Date Sampled		3/02/2021	3/02/2021	4/02/2021
Type of sample		soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021
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	%	104	103	113

PCBs in Soil						
Our Reference		261320-6	261320-19	261320-26	261320-31	261320-38
Your Reference	UNITS	TP102	TP104	BH106	BH107	BH108
Depth		0-0.25	0-0.1	0.19-0.4	0.22-0.5	0.03-0.2
Date Sampled		3/02/2021	3/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	%	119	115	113	118	115

PCBs in Soil						
Our Reference		261320-47	261320-50	261320-60	261320-70	261320-83
Your Reference	UNITS	BH110	BH111	BH112	BH116	BH119
Depth		0-0.2	0.5-0.95	0-0.2	0.03-0.3	0.16-0.3
Date Sampled		5/02/2021	2/02/2021	2/02/2021	4/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	%	120	118	125	122	116

PCBs in Soil						
Our Reference		261320-93	261320-98	261320-112	261320-120	261320-140
Your Reference	UNITS	TP122	BH123	TP125	BH128	TP132
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.15
Date Sampled		3/02/2021	3/02/2021	4/02/2021	1/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	%	105	105	105	107	104

PCBs in Soil						
Our Reference		261320-145	261320-161	261320-169	261320-181	261320-189
Your Reference	UNITS	BH134	BH138	BH140	BH143	TP144
Depth		0-0.2	0.05-0.3	0.05-0.3	0-0.2	0-0.2
Date Sampled		5/02/2021	1/02/2021	1/02/2021	5/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021	13/02/2021
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	%	105	105	106	101	107

PCBs in Soil				
Our Reference		261320-194	261320-210	261320-213
Your Reference	UNITS	BH145	SDUP7	SDUP10
Depth		0-0.2		
Date Sampled		3/02/2021	3/02/2021	4/02/2021
Type of sample		soil	soil	soil
Date extracted	-	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021
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	%	104	103	113

Acid Extractable metals in soil						
Our Reference		261320-1	261320-6	261320-7	261320-9	261320-10
Your Reference	UNITS	TP101	TP102	TP102	BH103	BH103
Depth		0-0.3	0-0.25	0.3-0.5	0-0.2	0.4-0.8
Date Sampled		03/02/2021	3/02/2021	3/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	18	14	8	6	9
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	22	15	14	12
Copper	mg/kg	20	14	14	17	20
Lead	mg/kg	20	22	12	24	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	7	5	7	7
Zinc	mg/kg	45	39	18	74	34

Acid Extractable metals in soil						
Our Reference		261320-19	261320-20	261320-24	261320-26	261320-27
Your Reference	UNITS	TP104	TP104	BH105	BH106	BH106
Depth		0-0.1	0.2-0.4	0.03-0.3	0.19-0.4	0.8-0.95
Date Sampled		3/02/2021	3/02/2021	5/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	<4	<4	<4	<4	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	95	13	10	2	3
Copper	mg/kg	23	24	41	3	12
Lead	mg/kg	17	3	<1	2	4
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	56	130	3	1
Zinc	mg/kg	74	26	35	10	15

Acid Extractable metals in soil						
Our Reference		261320-31	261320-38	261320-40	261320-47	261320-49
Your Reference	UNITS	BH107	BH108	BH109	BH110	BH111
Depth		0.22-0.5	0.03-0.2	0-0.2	0-0.2	0.2-0.5
Date Sampled		4/02/2021	4/02/2021	2/02/2021	5/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	7	7	21	29
Copper	mg/kg	22	37	14	26	33
Lead	mg/kg	11	1	10	16	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	12	84	8	38	130
Zinc	mg/kg	46	26	69	79	42

Acid Extractable metals in soil						
Our Reference		261320-50	261320-60	261320-61	261320-64	261320-66
Your Reference	UNITS	BH111	BH112	BH112	BH113	TP114
Depth		0.5-0.95	0-0.2	0.4-0.5	0-0.2	0-0.2
Date Sampled		2/02/2021	2/02/2021	2/02/2021	5/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	9	24	6	6	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	20	14	12	18
Copper	mg/kg	18	19	13	15	25
Lead	mg/kg	16	27	11	14	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	12	10	11	23
Zinc	mg/kg	29	65	33	64	150

Acid Extractable metals in soil						
Our Reference		261320-68	261320-70	261320-71	261320-78	261320-80
Your Reference	UNITS	TP115	BH116	BH116	TP117	BH118
Depth		0-0.2	0.03-0.3	0.3-0.5	0-0.2	0-0.2
Date Sampled		4/02/2021	4/02/2021	4/02/2021	4/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	<4	<4	6	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	21	26	15	3	4
Copper	mg/kg	15	19	12	55	4
Lead	mg/kg	2	4	11	3	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	31	38	5	5	3
Zinc	mg/kg	22	33	11	15	11

Acid Extractable metals in soil						
Our Reference		261320-83	261320-85	261320-88	261320-93	261320-94
Your Reference	UNITS	BH119	TP120	TP121	TP122	TP122
Depth		0.16-0.3	0-0.2	0-0.2	0-0.2	0.6-0.8
Date Sampled		2/02/2021	4/02/2021	4/02/2021	3/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	<4	<4	6	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	5	6	6	6
Copper	mg/kg	19	13	10	13	19
Lead	mg/kg	2	12	7	6	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	65	22	5	12	23
Zinc	mg/kg	25	24	22	31	40

Acid Extractable metals in soil						
Our Reference		261320-98	261320-107	261320-112	261320-115	261320-118
Your Reference	UNITS	BH123	TP124	TP125	TP126	BH127
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		3/02/2021	4/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	20	11	22	17	5
Copper	mg/kg	5	8	20	12	7
Lead	mg/kg	2	5	5	5	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	3	10	24	19	2
Zinc	mg/kg	10	16	26	19	7

Acid Extractable metals in soil						
Our Reference		261320-120	261320-122	261320-130	261320-132	261320-137
Your Reference	UNITS	BH128	BH128	BH129	TP130	BH131
Depth		0-0.2	1.3-1.5	0.5-0.7	0-0.2	0-0.2
Date Sampled		1/02/2021	1/02/2021	1/02/2021	04/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	<4	<4	<4	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	10	2	10	3
Copper	mg/kg	7	11	7	61	5
Lead	mg/kg	7	7	4	39	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	15	3	21	2
Zinc	mg/kg	12	22	14	130	10

Acid Extractable metals in soil						
Our Reference		261320-140	261320-143	261320-145	261320-153	261320-155
Your Reference	UNITS	TP132	TP133	BH134	TP135	TP136
Depth		0-0.15	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		4/02/2021	5/02/2021	5/02/2021	4/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	23	8	20	21
Copper	mg/kg	11	23	52	10	11
Lead	mg/kg	7	4	2	4	5
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	27	130	19	24
Zinc	mg/kg	31	38	37	27	28

Acid Extractable metals in soil						
Our Reference		261320-157	261320-161	261320-166	261320-169	261320-170
Your Reference	UNITS	BH137	BH138	BH139	BH140	BH140
Depth		0-0.3	0.05-0.3	0.05-0.3	0.05-0.3	0.3-0.5
Date Sampled		3/02/2021	1/02/2021	1/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	2	17	22	4	2
Copper	mg/kg	2	12	15	4	5
Lead	mg/kg	1	5	6	2	3
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	1	17	22	4	<1
Zinc	mg/kg	5	19	26	8	3

Acid Extractable metals in soil						
Our Reference		261320-175	261320-177	261320-181	261320-189	261320-194
Your Reference	UNITS	BH141	BH142	BH143	TP144	BH145
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		5/02/2021	2/02/2021	5/02/2021	5/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	<4	<4	<4	<4	6
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	3	12	14	20
Copper	mg/kg	11	4	27	20	7
Lead	mg/kg	6	9	4	5	9
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	11	2	13	30	6
Zinc	mg/kg	23	12	22	29	8

Acid Extractable metals in soil						
Our Reference		261320-195	261320-198	261320-200	261320-204	261320-207
Your Reference	UNITS	BH145	BH146	BH146	SDUP1	SDUP4
Depth		0.5-0.95	0-0.2	1.3-1.5		
Date Sampled		3/02/2021	1/02/2021	1/02/2021	1/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	<4	<4	<4	<4	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	6	10	8	12
Copper	mg/kg	6	15	7	22	13
Lead	mg/kg	6	30	7	43	19
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	6	1	7	5
Zinc	mg/kg	3	59	5	83	40

Acid Extractable metals in soil					
Our Reference		261320-210	261320-213	261320-235	261320-236
Your Reference	UNITS	SDUP7	SDUP10	TP132 - [TRIPLICATE]	BH140 - [TRIPLICATE]
Depth				0-0.15	0.05-0.3
Date Sampled		3/02/2021	4/02/2021	4/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Arsenic	mg/kg	6	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	20	2	9	10
Copper	mg/kg	9	2	9	12
Lead	mg/kg	10	2	5	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	6	2	7	8
Zinc	mg/kg	10	7	27	19

Moisture						
Our Reference		261320-1	261320-6	261320-7	261320-9	261320-10
Your Reference	UNITS	TP101	TP102	TP102	BH103	BH103
Depth		0-0.3	0-0.25	0.3-0.5	0-0.2	0.4-0.8
Date Sampled		03/02/2021	3/02/2021	3/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	14	18	15	17	11

Moisture						
Our Reference		261320-19	261320-20	261320-24	261320-26	261320-27
Your Reference	UNITS	TP104	TP104	BH105	BH106	BH106
Depth		0-0.1	0.2-0.4	0.03-0.3	0.19-0.4	0.8-0.95
Date Sampled		3/02/2021	3/02/2021	5/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	29	8.0	7.7	13	4.7

Moisture						
Our Reference		261320-31	261320-38	261320-40	261320-47	261320-49
Your Reference	UNITS	BH107	BH108	BH109	BH110	BH111
Depth		0.22-0.5	0.03-0.2	0-0.2	0-0.2	0.2-0.5
Date Sampled		4/02/2021	4/02/2021	2/02/2021	5/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	23	4.8	28	14	12

Moisture						
Our Reference		261320-50	261320-60	261320-61	261320-64	261320-66
Your Reference	UNITS	BH111	BH112	BH112	BH113	TP114
Depth		0.5-0.95	0-0.2	0.4-0.5	0-0.2	0-0.2
Date Sampled		2/02/2021	2/02/2021	2/02/2021	5/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	20	18	15	14	5.6

Moisture						
Our Reference		261320-68	261320-70	261320-71	261320-78	261320-80
Your Reference	UNITS	TP115	BH116	BH116	TP117	BH118
Depth		0-0.2	0.03-0.3	0.3-0.5	0-0.2	0-0.2
Date Sampled		4/02/2021	4/02/2021	4/02/2021	4/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	12	4.8	18	1.8	7.5

Moisture						
Our Reference		261320-83	261320-85	261320-88	261320-93	261320-94
Your Reference	UNITS	BH119	TP120	TP121	TP122	TP122
Depth		0.16-0.3	0-0.2	0-0.2	0-0.2	0.6-0.8
Date Sampled		2/02/2021	4/02/2021	4/02/2021	3/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	2.7	12	17	8.2	14

Moisture						
Our Reference		261320-98	261320-107	261320-112	261320-115	261320-118
Your Reference	UNITS	BH123	TP124	TP125	TP126	BH127
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		3/02/2021	4/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	4.1	8.2	3.3	16	21

Moisture						
Our Reference		261320-120	261320-122	261320-130	261320-132	261320-137
Your Reference	UNITS	BH128	BH128	BH129	TP130	BH131
Depth		0-0.2	1.3-1.5	0.5-0.7	0-0.2	0-0.2
Date Sampled		1/02/2021	1/02/2021	1/02/2021	04/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	12	8.5	21	18	9.4

Moisture						
Our Reference		261320-140	261320-143	261320-145	261320-153	261320-155
Your Reference	UNITS	TP132	TP133	BH134	TP135	TP136
Depth		0-0.15	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		4/02/2021	5/02/2021	5/02/2021	4/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	15	5.1	7.7	6.5	3.9

Moisture						
Our Reference		261320-157	261320-161	261320-166	261320-169	261320-170
Your Reference	UNITS	BH137	BH138	BH139	BH140	BH140
Depth		0-0.3	0.05-0.3	0.05-0.3	0.05-0.3	0.3-0.5
Date Sampled		3/02/2021	1/02/2021	1/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	14	12	12	12	18

Moisture						
Our Reference		261320-175	261320-177	261320-181	261320-189	261320-194
Your Reference	UNITS	BH141	BH142	BH143	TP144	BH145
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.2
Date Sampled		5/02/2021	2/02/2021	5/02/2021	5/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	12	10	4.6	4.1	15

Moisture						
Our Reference		261320-195	261320-198	261320-200	261320-204	261320-207
Your Reference	UNITS	BH145	BH146	BH146	SDUP1	SDUP4
Depth		0.5-0.95	0-0.2	1.3-1.5		
Date Sampled		3/02/2021	1/02/2021	1/02/2021	1/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Moisture	%	12	22	16	22	18

Moisture			
Our Reference		261320-210	261320-213
Your Reference	UNITS	SDUP7	SDUP10
Depth			
Date Sampled		3/02/2021	4/02/2021
Type of sample		soil	soil
Date prepared	-	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021
Moisture	%	14	15

Misc Soil - Inorg						
Our Reference		261320-6	261320-19	261320-26	261320-31	261320-38
Your Reference	UNITS	TP102	TP104	BH106	BH107	BH108
Depth		0-0.25	0-0.1	0.19-0.4	0.22-0.5	0.03-0.2
Date Sampled		3/02/2021	3/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		261320-47	261320-50	261320-60	261320-70	261320-83
Your Reference	UNITS	BH110	BH111	BH112	BH116	BH119
Depth		0-0.2	0.5-0.95	0-0.2	0.03-0.3	0.16-0.3
Date Sampled		5/02/2021	2/02/2021	2/02/2021	4/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		261320-93	261320-98	261320-112	261320-120	261320-140
Your Reference	UNITS	TP122	BH123	TP125	BH128	TP132
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.15
Date Sampled		3/02/2021	3/02/2021	4/02/2021	1/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg						
Our Reference		261320-145	261320-161	261320-169	261320-181	261320-189
Your Reference	UNITS	BH134	BH138	BH140	BH143	TP144
Depth		0-0.2	0.05-0.3	0.05-0.3	0-0.2	0-0.2
Date Sampled		5/02/2021	1/02/2021	1/02/2021	5/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg				
Our Reference		261320-194	261320-210	261320-213
Your Reference	UNITS	BH145	SDUP7	SDUP10
Depth		0-0.2		
Date Sampled		3/02/2021	3/02/2021	4/02/2021
Type of sample		soil	soil	soil
Date prepared	-	10/02/2021	10/02/2021	10/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5

Asbestos ID - soils NEPM - ASB-001						
Our Reference		261320-1	261320-7	261320-10	261320-26	261320-31
Your Reference	UNITS	TP101	TP102	BH103	BH106	BH107
Depth		0-0.3	0.3-0.5	0.4-0.8	0.19-0.4	0.22-0.5
Date Sampled		03/02/2021	3/02/2021	2/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Sample mass tested	g	538.32	545.62	720.98	710.64	482.11
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 (AS4964) >0.1g/kg	-	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
Total Asbestos[#1]	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		261320-38	261320-40	261320-47	261320-50	261320-60
Your Reference	UNITS	BH108	BH109	BH110	BH111	BH112
Depth		0.03-0.2	0-0.2	0-0.2	0.5-0.95	0-0.2
Date Sampled		4/02/2021	2/02/2021	5/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Sample mass tested	g	751.21	303.44	392.04	531.35	556.22
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 (AS4964) >0.1g/kg	-	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
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		261320-66	261320-70	261320-80	261320-81	261320-83
Your Reference	UNITS	TP114	BH116	BH118	BH118	BH119
Depth		0-0.2	0.03-0.3	0-0.2	0.2-0.4	0.16-0.3
Date Sampled		4/02/2021	4/02/2021	3/02/2021	3/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Sample mass tested	g	889.05	876.24	868.87	643.21	935.55
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 (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected Synthetic mineral 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
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		261320-85	261320-88	261320-94	261320-98	261320-107
Your Reference	UNITS	TP120	TP121	TP122	BH123	TP124
Depth		0-0.2	0-0.2	0.6-0.8	0-0.2	0-0.2
Date Sampled		4/02/2021	4/02/2021	3/02/2021	3/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Sample mass tested	g	671.59	459.34	613.32	745.88	955.5
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 (AS4964) >0.1g/kg	-	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
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		261320-112	261320-115	261320-120	261320-122	261320-130
Your Reference	UNITS	TP125	TP126	BH128	BH128	BH129
Depth		0-0.2	0-0.2	0-0.2	1.3-1.5	0.5-0.7
Date Sampled		4/02/2021	4/02/2021	1/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Sample mass tested	g	917.15	973.16	638.2	691.5	714.71
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 (AS4964) >0.1g/kg	-	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
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		261320-137	261320-143	261320-153	261320-155	261320-157
Your Reference	UNITS	BH131	TP133	TP135	TP136	BH137
Depth		0-0.2	0-0.2	0-0.2	0-0.2	0-0.3
Date Sampled		3/02/2021	5/02/2021	4/02/2021	5/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Sample mass tested	g	766.3	689.43	867.61	954.8	816.67
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 (AS4964) >0.1g/kg	-	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
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		261320-161	261320-166	261320-169	261320-175	261320-178
Your Reference	UNITS	BH138	BH139	BH140	BH141	BH142
Depth		0.05-0.3	0.05-0.3	0.05-0.3	0-0.2	0.5-0.95
Date Sampled		1/02/2021	1/02/2021	1/02/2021	5/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Sample mass tested	g	712.52	661.6	838.67	916.01	529.75
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 (AS4964) >0.1g/kg	-	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
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–	–
FA and AF Estimation*	g	–	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001					
Our Reference		261320-181	261320-189	261320-194	261320-200
Your Reference	UNITS	BH143	TP144	BH145	BH146
Depth		0-0.2	0-0.2	0-0.2	1.3-1.5
Date Sampled		5/02/2021	5/02/2021	3/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil
Date analysed	-	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Sample mass tested	g	841.94	1,110.99	506.59	479.83
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	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
Total Asbestos[#1]	g/kg	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	–	–	–	–
FA and AF Estimation*	g	–	–	–	–
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001

Misc Inorg - Soil						
Our Reference		261320-1	261320-2	261320-5	261320-10	261320-13
Your Reference	UNITS	TP101	TP101	TP101	BH103	BH103
Depth		0-0.3	0.4-0.6	1.9-2.0	0.4-0.8	2.5-2.7
Date Sampled		03/02/2021	3/02/2021	3/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	6.1	4.9	5.0	7.2	5.8
Electrical Conductivity 1:5 soil:water	µS/cm	76	600	880	50	120
Chloride, Cl 1:5 soil:water	mg/kg	10	450	840	10	42
Sulphate, SO4 1:5 soil:water	mg/kg	<10	380	430	32	120
Resistivity in soil*	ohm m	130	17	11	200	85

Misc Inorg - Soil						
Our Reference		261320-15	261320-18	261320-20	261320-21	261320-23
Your Reference	UNITS	BH103	BH103	TP104	TP104	TP104
Depth		3.6-3.9	7.5-8.0	0.2-0.4	0.6-0.8	1.6-1.8
Date Sampled		2/02/2021	2/02/2021	3/02/2021	3/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	7.7	5.3	7.7	5.1	5.3
Electrical Conductivity 1:5 soil:water	µS/cm	180	150	110	580	460
Chloride, Cl 1:5 soil:water	mg/kg	120	21	<10	250	300
Sulphate, SO4 1:5 soil:water	mg/kg	75	32	20	710	390
Resistivity in soil*	ohm m	55	65	93	17	22

Misc Inorg - Soil						
Our Reference		261320-27	261320-29	261320-30	261320-32	261320-34
Your Reference	UNITS	BH106	BH106	BH106	BH107	BH107
Depth		0.8-0.95	1.8-2.0	7.5-8.0	0.5-0.7	1.3-1.5
Date Sampled		4/02/2021	4/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	6.9	8.0	9.4	8.5	9.6
Electrical Conductivity 1:5 soil:water	µS/cm	310	480	680	350	320
Chloride, Cl 1:5 soil:water	mg/kg	320	490	630	200	69
Sulphate, SO4 1:5 soil:water	mg/kg	67	120	140	180	28
Resistivity in soil*	ohm m	32	21	15	29	31

Misc Inorg - Soil						
Our Reference		261320-37	261320-50	261320-52	261320-56	261320-59
Your Reference	UNITS	BH107	BH111	BH111	BH111	BH111
Depth		5.5-6.0	0.5-0.95	1.5-1.8	3.3-3.45	7.5-8.0
Date Sampled		4/02/2021	2/02/2021	2/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	9.5	5.6	5.5	7.7	9.2
Electrical Conductivity 1:5 soil:water	µS/cm	320	100	220	300	1,100
Chloride, Cl 1:5 soil:water	mg/kg	130	32	97	250	1,300
Sulphate, SO4 1:5 soil:water	mg/kg	38	110	250	64	140
Resistivity in soil*	ohm m	31	96	46	34	9.3

Misc Inorg - Soil						
Our Reference		261320-64	261320-65	261320-71	261320-73	261320-77
Your Reference	UNITS	BH113	BH113	BH116	BH116	BH116
Depth		0-0.2	0.2-0.4	0.3-0.5	1.2-1.4	5.4-5.6
Date Sampled		5/02/2021	5/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	7.1	6.3	4.9	5.0	9.3
Electrical Conductivity 1:5 soil:water	µS/cm	150	300	570	380	450
Chloride, Cl 1:5 soil:water	mg/kg	54	250	530	340	280
Sulphate, SO4 1:5 soil:water	mg/kg	31	87	340	200	110
Resistivity in soil*	ohm m	65	33	17	26	22

Misc Inorg - Soil						
Our Reference		261320-88	261320-90	261320-92	261320-93	261320-96
Your Reference	UNITS	TP121	TP121	TP121	TP122	TP122
Depth		0-0.2	1.1-1.3	1.8-1.9	0-0.2	1.4-1.6
Date Sampled		4/02/2021	4/02/2021	4/02/2021	3/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	8.3	8.4	4.7	8.5	9.0
Electrical Conductivity 1:5 soil:water	µS/cm	110	340	510	150	190
Chloride, Cl 1:5 soil:water	mg/kg	10	76	200	20	27
Sulphate, SO4 1:5 soil:water	mg/kg	10	330	720	40	110
Resistivity in soil*	ohm m	92	30	19	66	54

Misc Inorg - Soil						
Our Reference		261320-97	261320-99	261320-101	261320-103	261320-108
Your Reference	UNITS	TP122	BH123	BH123	BH123	TP124
Depth		1.9-2.0	0.3-0.8	1.5-1.65	1.8-2.0	0.2-0.4
Date Sampled		3/02/2021	3/02/2021	3/02/2021	3/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	6.8	9.1	5.4	6.3	5.0
Electrical Conductivity 1:5 soil:water	µS/cm	200	300	87	47	210
Chloride, Cl 1:5 soil:water	mg/kg	120	41	49	29	86
Sulphate, SO4 1:5 soil:water	mg/kg	130	140	53	<10	250
Resistivity in soil*	ohm m	51	34	110	210	47

Misc Inorg - Soil						
Our Reference		261320-109	261320-111	261320-113	261320-114	261320-115
Your Reference	UNITS	TP124	TP124	TP125	TP125	TP126
Depth		0.9-1.1	1.8-1.9	0.2-0.4	0.8-1.0	0-0.2
Date Sampled		4/02/2021	4/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	5.3	8.8	4.6	5.3	7.3
Electrical Conductivity 1:5 soil:water	µS/cm	130	180	370	320	220
Chloride, Cl 1:5 soil:water	mg/kg	66	38	220	240	10
Sulphate, SO4 1:5 soil:water	mg/kg	110	54	360	180	77
Resistivity in soil*	ohm m	75	56	27	32	46

Misc Inorg - Soil						
Our Reference		261320-116	261320-117	261320-121	261320-122	261320-125
Your Reference	UNITS	TP126	TP126	BH128	BH128	BH128
Depth		0.3-0.5	0.8-0.95	0.4-0.6	1.3-1.5	2.5-2.7
Date Sampled		4/02/2021	4/02/2021	1/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	4.8	5.3	10.3	8.7	5.6
Electrical Conductivity 1:5 soil:water	µS/cm	180	77	470	360	220
Chloride, Cl 1:5 soil:water	mg/kg	30	27	72	130	130
Sulphate, SO4 1:5 soil:water	mg/kg	250	50	540	240	150
Resistivity in soil*	ohm m	56	130	21	28	47

Misc Inorg - Soil						
Our Reference		261320-132	261320-133	261320-136	261320-146	261320-148
Your Reference	UNITS	TP130	TP130	TP130	BH134	BH134
Depth		0-0.2	0.3-0.5	1.8-2.0	0.3-0.5	1.5-1.95
Date Sampled		04/02/2021	4/02/2021	4/02/2021	5/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	8.4	8.6	6.9	5.2	8.0
Electrical Conductivity 1:5 soil:water	µS/cm	140	470	360	550	610
Chloride, Cl 1:5 soil:water	mg/kg	<10	170	270	400	580
Sulphate, SO4 1:5 soil:water	mg/kg	26	420	200	460	280
Resistivity in soil*	ohm m	71	21	28	18	16

Misc Inorg - Soil						
Our Reference		261320-152	261320-157	261320-159	261320-162	261320-164
Your Reference	UNITS	BH134	BH137	BH137	BH138	BH138
Depth		7.5-8.0	0-0.3	1.0-1.2	0.3-0.5	0.7-0.85
Date Sampled		5/02/2021	3/02/2021	3/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	9.3	11.0	7.5	5.2	5.8
Electrical Conductivity 1:5 soil:water	µS/cm	510	560	270	140	18
Chloride, Cl 1:5 soil:water	mg/kg	460	41	150	61	<10
Sulphate, SO4 1:5 soil:water	mg/kg	52	530	240	150	<10
Resistivity in soil*	ohm m	20	18	36	71	560

Misc Inorg - Soil						
Our Reference		261320-165	261320-167	261320-168	261320-170	261320-171
Your Reference	UNITS	BH138	BH139	BH139	BH140	BH140
Depth		1.2-1.4	0.3-0.5	0.6-0.8	0.3-0.5	0.7-0.9
Date Sampled		1/02/2021	1/02/2021	1/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	6.1	5.0	5.5	7.8	6.0
Electrical Conductivity 1:5 soil:water	µS/cm	41	66	34	370	120
Chloride, Cl 1:5 soil:water	mg/kg	10	20	<10	85	100
Sulphate, SO4 1:5 soil:water	mg/kg	33	38	20	260	35
Resistivity in soil*	ohm m	240	150	290	27	81

Misc Inorg - Soil						
Our Reference		261320-174	261320-177	261320-178	261320-179	261320-182
Your Reference	UNITS	BH140	BH142	BH142	BH142	BH143
Depth		1.8-2.0	0-0.2	0.5-0.95	1.2-1.4	0.2-0.4
Date Sampled		1/02/2021	2/02/2021	2/02/2021	2/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	8.2	10.1	8.1	5.1	5.5
Electrical Conductivity 1:5 soil:water	µS/cm	260	410	270	300	380
Chloride, Cl 1:5 soil:water	mg/kg	220	76	91	180	260
Sulphate, SO4 1:5 soil:water	mg/kg	38	520	100	250	310
Resistivity in soil*	ohm m	39	24	37	34	26

Misc Inorg - Soil						
Our Reference		261320-184	261320-188	261320-190	261320-191	261320-193
Your Reference	UNITS	BH143	BH143	TP144	TP144	TP144
Depth		1.3-1.5	7.4-7.6	0.2-0.4	0.7-0.9	2.1-2.2
Date Sampled		5/02/2021	5/02/2021	5/02/2021	5/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units	8.4	9.3	5.0	7.6	8.4
Electrical Conductivity 1:5 soil:water	µS/cm	280	410	390	250	390
Chloride, Cl 1:5 soil:water	mg/kg	210	350	220	230	320
Sulphate, SO4 1:5 soil:water	mg/kg	120	50	490	93	110
Resistivity in soil*	ohm m	36	24	26	39	26

Misc Inorg - Soil		
Our Reference		261320-234
Your Reference	UNITS	TP144
Depth		1.2-1.3
Date Sampled		05/02/2021
Type of sample		soil
Date prepared	-	12/02/2021
Date analysed	-	12/02/2021
pH 1:5 soil:water	pH Units	8.3
Electrical Conductivity 1:5 soil:water	µS/cm	350
Chloride, Cl 1:5 soil:water	mg/kg	270
Sulphate, SO4 1:5 soil:water	mg/kg	90
Resistivity in soil*	ohm m	29

CEC						
Our Reference		261320-10	261320-20	261320-27	261320-50	261320-52
Your Reference	UNITS	BH103	TP104	BH106	BH111	BH111
Depth		0.4-0.8	0.2-0.4	0.8-0.95	0.5-0.95	1.5-1.8
Date Sampled		2/02/2021	3/02/2021	4/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Date analysed	-	16/02/2021	16/02/2021	16/02/2021	16/02/2021	16/02/2021
Exchangeable Ca	meq/100g	3.8	8.2	2.2	2.8	0.9
Exchangeable K	meq/100g	0.2	0.3	0.2	0.2	0.2
Exchangeable Mg	meq/100g	4.6	3.2	4.5	5.7	8.6
Exchangeable Na	meq/100g	0.58	0.23	2.0	1.2	3.0
Cation Exchange Capacity	meq/100g	9.2	12	8.9	9.9	13

CEC				
Our Reference		261320-71	261320-121	261320-146
Your Reference	UNITS	BH116	BH128	BH134
Depth		0.3-0.5	0.4-0.6	0.3-0.5
Date Sampled		4/02/2021	1/02/2021	5/02/2021
Type of sample		soil	soil	soil
Date prepared	-	16/02/2021	16/02/2021	16/02/2021
Date analysed	-	16/02/2021	16/02/2021	16/02/2021
Exchangeable Ca	meq/100g	4.1	8.2	3.5
Exchangeable K	meq/100g	0.4	0.3	0.4
Exchangeable Mg	meq/100g	9.4	0.18	13
Exchangeable Na	meq/100g	2.1	0.51	3.0
Cation Exchange Capacity	meq/100g	16	9.2	20

Texture and Salinity*						
Our Reference		261320-2	261320-10	261320-15	261320-20	261320-30
Your Reference	UNITS	TP101	BH103	BH103	TP104	BH106
Depth		0.4-0.6	0.4-0.8	3.6-3.9	0.2-0.4	7.5-8.0
Date Sampled		3/02/2021	2/02/2021	2/02/2021	3/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	11/02/2021
Electrical Conductivity 1:5 soil:water	µS/cm	600	50	180	110	680
Texture Value	-	8.0	9.0	9.0	9.0	8.5
Texture	-	LIGHT MEDIUM CLAY	CLAY LOAM	CLAY LOAM	CLAY LOAM	LIGHT CLAY
ECe	dS/m	4.8	<2	<2	<2	5.8
Class	-	MODERATELY SALINE	NON SALINE	NON SALINE	NON SALINE	MODERATELY SALINE

Texture and Salinity*						
Our Reference		261320-50	261320-96	261320-117	261320-121	261320-157
Your Reference	UNITS	BH111	TP122	TP126	BH128	BH137
Depth		0.5-0.95	1.4-1.6	0.8-0.95	0.4-0.6	0-0.3
Date Sampled		2/02/2021	3/02/2021	4/02/2021	1/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	12/02/2021
Date analysed	-	11/02/2021	11/02/2021	11/02/2021	11/02/2021	12/02/2021
Electrical Conductivity 1:5 soil:water	µS/cm	100	190	77	470	560
Texture Value	-	8.5	9.0	8.0	9.0	9.0
Texture	-	LIGHT CLAY	CLAY LOAM	LIGHT MEDIUM CLAY	CLAY LOAM	CLAY LOAM
ECe	dS/m	<2	<2	<2	4.2	5.1
Class	-	NON SALINE	NON SALINE	NON SALINE	MODERATELY SALINE	MODERATELY SALINE

sPOCAS field test						
Our Reference		261320-2	261320-3	261320-11	261320-13	261320-14
Your Reference	UNITS	TP101	TP101	BH103	BH103	BH103
Depth		0.4-0.6	1.1-1.3	1.4-1.8	2.5-2.7	3.0-3.45
Date Sampled		3/02/2021	3/02/2021	2/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH_F (field pH test)*	pH Units	4.6	4.4	7.2	5.4	5.6
pH_{FOX} (field peroxide test)*	pH Units	3.3	3.2	5.5	3.8	3.5
Reaction Rate*	-	Low reaction	Low reaction	Medium reaction	Low reaction	Low reaction

sPOCAS field test						
Our Reference		261320-27	261320-28	261320-31	261320-32	261320-50
Your Reference	UNITS	BH106	BH106	BH107	BH107	BH111
Depth		0.8-0.95	1.3-1.5	0.22-0.5	0.5-0.7	0.5-0.95
Date Sampled		4/02/2021	4/02/2021	4/02/2021	4/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH_F (field pH test)*	pH Units	6.7	7.5	7.8	8.0	5.4
pH_{FOX} (field peroxide test)*	pH Units	6.6	5.9	7.6	6.0	3.3
Reaction Rate*	-	Medium reaction	Low reaction	Volcanic reaction	Low reaction	Low reaction

sPOCAS field test						
Our Reference		261320-53	261320-55	261320-64	261320-65	261320-71
Your Reference	UNITS	BH111	BH111	BH113	BH113	BH116
Depth		2.2-2.4	3.0-3.3	0-0.2	0.2-0.4	0.3-0.5
Date Sampled		2/02/2021	2/02/2021	5/02/2021	5/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH_F (field pH test)*	pH Units	6.6	7.5	7.2	6.4	4.9
pH_{FOX} (field peroxide test)*	pH Units	4.9	6.1	4.3	3.8	3.6
Reaction Rate*	-	Low reaction	Low reaction	High reaction	Medium reaction	Low reaction

sPOCAS field test						
Our Reference		261320-73	261320-88	261320-92	261320-93	261320-96
Your Reference	UNITS	BH116	TP121	TP121	TP122	TP122
Depth		1.2-1.4	0-0.2	1.8-1.9	0-0.2	1.4-1.6
Date Sampled		4/02/2021	4/02/2021	4/02/2021	3/02/2021	3/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH_F (field pH test)*	pH Units	4.8	7.8	4.7	8.6	8.3
pH_{FOX} (field peroxide test)*	pH Units	3.4	5.9	3.4	7.9	8.2
Reaction Rate*	-	Low reaction	High reaction	Low reaction	Volcanic reaction	Volcanic reaction

sPOCAS field test						
Our Reference		261320-99	261320-101	261320-108	261320-113	261320-114
Your Reference	UNITS	BH123	BH123	TP124	TP125	TP125
Depth		0.3-0.8	1.5-1.65	0.2-0.4	0.2-0.4	0.8-1.0
Date Sampled		3/02/2021	3/02/2021	4/02/2021	4/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH_F (field pH test)*	pH Units	8.9	5.1	4.7	5.0	4.6
pH_{FOX} (field peroxide test)*	pH Units	9.1	3.6	3.1	3.0	3.2
Reaction Rate*	-	Volcanic reaction	Low reaction	Low reaction	Low reaction	Low reaction

sPOCAS field test						
Our Reference		261320-115	261320-116	261320-121	261320-122	261320-125
Your Reference	UNITS	TP126	TP126	BH128	BH128	BH128
Depth		0-0.2	0.3-0.5	0.4-0.6	1.3-1.5	2.5-2.7
Date Sampled		4/02/2021	4/02/2021	1/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH_F (field pH test)*	pH Units	7.3	4.7	9.7	8.3	5.2
pH_{FOX} (field peroxide test)*	pH Units	4.6	3.4	9.2	7.8	3.7
Reaction Rate*	-	Medium reaction	Low reaction	Medium reaction	Volcanic reaction	Low reaction

sPOCAS field test						
Our Reference		261320-129	261320-132	261320-134	261320-146	261320-148
Your Reference	UNITS	BH128	TP130	TP130	BH134	BH134
Depth		4.7-5.0	0-0.2	0.9-1.1	0.3-0.5	1.5-1.95
Date Sampled		1/02/2021	04/02/2021	4/02/2021	5/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH_F (field pH test)*	pH Units	8.1	8.3	8.5	5.5	7.8
pH_{FOX} (field peroxide test)*	pH Units	8.2	7.2	6.3	5.1	7.3
Reaction Rate*	-	Volcanic reaction	Volcanic reaction	Medium reaction	Medium reaction	Extreme reaction

sPOCAS field test						
Our Reference		261320-158	261320-160	261320-162	261320-164	261320-167
Your Reference	UNITS	BH137	BH137	BH138	BH138	BH139
Depth		0.3-0.6	1.5-1.7	0.3-0.5	0.7-0.85	0.3-0.5
Date Sampled		3/02/2021	3/02/2021	1/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH_F (field pH test)*	pH Units	8.1	8.9	5.9	5.7	4.9
pH_{FOX} (field peroxide test)*	pH Units	7.5	8.1	3.7	4.3	3.8
Reaction Rate*	-	Volcanic reaction	Medium reaction	Medium reaction	Low reaction	Low reaction

sPOCAS field test						
Our Reference		261320-168	261320-170	261320-171	261320-178	261320-179
Your Reference	UNITS	BH139	BH140	BH140	BH142	BH142
Depth		0.6-0.8	0.3-0.5	0.7-0.9	0.5-0.95	1.2-1.4
Date Sampled		1/02/2021	1/02/2021	1/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH_F (field pH test)*	pH Units	4.6	9.7	5.7	7.1	5.0
pH_{FOX} (field peroxide test)*	pH Units	3.8	7.6	4.5	6.8	3.8
Reaction Rate*	-	Low reaction	Medium reaction	Low reaction	Low reaction	Low reaction

sPOCAS field test						
Our Reference		261320-182	261320-183	261320-190	261320-191	261320-234
Your Reference	UNITS	BH143	BH143	TP144	TP144	TP144
Depth		0.2-0.4	0.5-0.8	0.2-0.4	0.7-0.9	1.2-1.3
Date Sampled		5/02/2021	5/02/2021	5/02/2021	5/02/2021	05/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021	12/02/2021
pH_F (field pH test)*	pH Units	8.0	4.9	5.1	7.0	7.7
pH_{FOX} (field peroxide test)*	pH Units	5.2	3.7	3.7	7.1	7.7
Reaction Rate*	-	Low reaction	Low reaction	High reaction	Medium reaction	Low reaction

Asbestos ID - materials		
Our Reference		261320-231
Your Reference	UNITS	FCF1
Depth		Surface
Date Sampled		29/01/2021
Type of sample		material
Date analysed	-	12/02/2021
Mass / Dimension of Sample	-	82x46x6mm
Sample Description	-	Brown fibrous sheeting
Asbestos ID in materials	-	Chrysotile asbestos detected
Trace Analysis	-	[NT]

BTEX in Water			
Our Reference		261320-225	261320-226
Your Reference	UNITS	FR1-SPT	FR2-SPT
Depth		-	-
Date Sampled		03/02/2021	5/02/2021
Type of sample		water	water
Date extracted	-	16/02/2021	16/02/2021
Date analysed	-	17/02/2021	17/02/2021
Benzene	µg/L	<1	<1
Toluene	µg/L	<1	<1
Ethylbenzene	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
o-xylene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	108	107
Surrogate toluene-d8	%	99	98
Surrogate 4-BFB	%	95	96

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.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. **NOTE** #1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF) **NOTE** #2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
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-002	Conductivity and Salinity - measured using a conductivity cell at 25oC in accordance with APHA 22nd ED 2510 and Rayment & Lyons. Resistivity is calculated from Conductivity (non NATA). Resistivity (calculated) may not correlate with results otherwise obtained using Resistivity-Current method, depending on the nature of the soil being analysed.
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-063	pH- measured using pH meter and electrode. Soil is oxidised with Hydrogen Peroxide or extracted with water. Based on section H, Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004. To ensure accurate results these tests are recommended to be done in the field as pH may change with time thus these results may not be representative of true field conditions.

Method ID	Methodology Summary
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-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-020	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-021	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/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-6	261320-7
Date extracted	-			10/02/2021	6	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			10/02/2021	6	10/02/2021	10/02/2021		10/02/2021	10/02/2021
TRH C_6 - C_9	mg/kg	25	Org-023	<25	6	<25	<25	0	89	91
TRH C_6 - C_{10}	mg/kg	25	Org-023	<25	6	<25	<25	0	89	91
Benzene	mg/kg	0.2	Org-023	<0.2	6	<0.2	<0.2	0	90	94
Toluene	mg/kg	0.5	Org-023	<0.5	6	<0.5	<0.5	0	87	88
Ethylbenzene	mg/kg	1	Org-023	<1	6	<1	<1	0	92	91
m+p-xylene	mg/kg	2	Org-023	<2	6	<2	<2	0	89	90
o-Xylene	mg/kg	1	Org-023	<1	6	<1	<1	0	94	96
naphthalene	mg/kg	1	Org-023	<1	6	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	80	6	76	84	10	85	83

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	261320-71
Date extracted	-			[NT]	38	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	38	10/02/2021	10/02/2021		10/02/2021	10/02/2021
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	38	<25	<25	0	108	101
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	38	<25	<25	0	108	101
Benzene	mg/kg	0.2	Org-023	[NT]	38	<0.2	<0.2	0	109	101
Toluene	mg/kg	0.5	Org-023	[NT]	38	<0.5	<0.5	0	106	98
Ethylbenzene	mg/kg	1	Org-023	[NT]	38	<1	<1	0	109	104
m+p-xylene	mg/kg	2	Org-023	[NT]	38	<2	<2	0	107	102
o-Xylene	mg/kg	1	Org-023	[NT]	38	<1	<1	0	114	107
naphthalene	mg/kg	1	Org-023	[NT]	38	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	38	92	99	7	102	95

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	261320-145
Date extracted	-			[NT]	70	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	70	10/02/2021	10/02/2021		11/02/2021	11/02/2021
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	70	<25	<25	0	101	98
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	70	<25	<25	0	101	98
Benzene	mg/kg	0.2	Org-023	[NT]	70	<0.2	<0.2	0	105	102
Toluene	mg/kg	0.5	Org-023	[NT]	70	<0.5	<0.5	0	96	93
Ethylbenzene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	97	95
m+p-xylene	mg/kg	2	Org-023	[NT]	70	<2	<2	0	104	101
o-Xylene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	107	91
naphthalene	mg/kg	1	Org-023	[NT]	70	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	70	100	89	12	95	83

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	261320-213
Date extracted	-			[NT]	112	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	112	11/02/2021	11/02/2021		11/02/2021	11/02/2021
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	112	<25	<25	0	96	91
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	112	<25	<25	0	96	91
Benzene	mg/kg	0.2	Org-023	[NT]	112	<0.2	<0.2	0	103	94
Toluene	mg/kg	0.5	Org-023	[NT]	112	<0.5	<0.5	0	91	84
Ethylbenzene	mg/kg	1	Org-023	[NT]	112	<1	<1	0	90	87
m+p-xylene	mg/kg	2	Org-023	[NT]	112	<2	<2	0	97	94
o-Xylene	mg/kg	1	Org-023	[NT]	112	<1	<1	0	87	84
naphthalene	mg/kg	1	Org-023	[NT]	112	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	112	99	83	18	80	78

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]	140	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	140	11/02/2021	11/02/2021		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	140	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	140	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	140	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	140	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	140	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	140	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	140	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	140	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	140	78	82	5	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	169	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	169	11/02/2021	11/02/2021		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	169	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	169	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	169	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	169	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	169	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	169	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	169	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	169	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	169	79	73	8	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	210	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	210	11/02/2021	11/02/2021		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-023	[NT]	210	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-023	[NT]	210	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-023	[NT]	210	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-023	[NT]	210	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-023	[NT]	210	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-023	[NT]	210	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-023	[NT]	210	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-023	[NT]	210	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	[NT]	210	74	77	4	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	261320-7
Date extracted	-			10/02/2021	6	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			11/02/2021	6	11/02/2021	11/02/2021		11/02/2021	11/02/2021
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	6	<50	<50	0	130	117
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	6	<100	<100	0	81	88
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	6	<100	<100	0	86	77
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	6	<50	<50	0	130	117
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	6	<100	<100	0	81	88
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	6	<100	<100	0	86	77
Surrogate o-Terphenyl	%		Org-020	84	6	91	85	7	120	88

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	261320-71
Date extracted	-			[NT]	38	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	38	13/02/2021	13/02/2021		11/02/2021	12/02/2021
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	38	<50	<50	0	127	112
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	38	<100	<100	0	86	85
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	38	240	140	53	122	69
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	38	<50	<50	0	127	112
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	38	210	120	55	86	85
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	38	330	190	54	122	69
Surrogate o-Terphenyl	%		Org-020	[NT]	38	84	86	2	112	81

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	261320-145
Date extracted	-			[NT]	70	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	70	12/02/2021	12/02/2021		11/02/2021	12/02/2021
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	70	<50	<50	0	127	119
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	90	89
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	92	107
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	70	<50	<50	0	127	119
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	90	89
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	70	<100	<100	0	92	107
Surrogate o-Terphenyl	%		Org-020	[NT]	70	83	86	4	116	76

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	261320-213
Date extracted	-			[NT]	112	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	112	13/02/2021	13/02/2021		12/02/2021	12/02/2021
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	112	<50	<50	0	119	117
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	112	160	140	13	88	82
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	112	280	310	10	92	86
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	112	<50	<50	0	119	117
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	112	340	330	3	88	82
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	112	320	360	12	92	86
Surrogate o-Terphenyl	%		Org-020	[NT]	112	107	91	16	112	104

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	140	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	140	13/02/2021	13/02/2021		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	140	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	140	170	150	12	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	140	270	290	7	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	140	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	140	320	330	3	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	140	300	330	10	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	140	98	103	5	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	169	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	169	13/02/2021	13/02/2021		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	169	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	169	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	169	210	220	5	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	169	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	169	190	190	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	169	270	290	7	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	169	100	95	5	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	210	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	210	11/02/2021	12/02/2021		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	[NT]	210	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	[NT]	210	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	[NT]	210	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	[NT]	210	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	[NT]	210	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	[NT]	210	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	210	87	69	23	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	261320-7
Date extracted	-			10/02/2021	6	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			13/02/2021	6	13/02/2021	13/02/2021		13/02/2021	13/02/2021
Naphthalene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	101	99
Acenaphthylene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	97	94
Fluorene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	112	105
Phenanthrene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	105	105
Anthracene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	75	72
Pyrene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	107	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	124	116
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	<0.2	6	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	<0.05	6	<0.05	<0.05	0	108	103
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	96	6	98	96	2	94	95

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	261320-71
Date extracted	-			[NT]	38	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	38	13/02/2021	13/02/2021		13/02/2021	13/02/2021
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	101	105
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	99	103
Fluorene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	111	114
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	109	109
Anthracene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	77	82
Pyrene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	109	109
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	129	124
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	38	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	38	<0.05	<0.05	0	108	110
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	38	94	90	4	98	99

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	261320-145
Date extracted	-			[NT]	70	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	70	13/02/2021	13/02/2021		13/02/2021	13/02/2021
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	70	0.1	0.4	120	106	103
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	111	108
Fluorene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	109	105
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	70	0.3	0.6	67	109	105
Anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	109	102
Pyrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	104	100
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	70	0.2	0.2	0	102	98
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	70	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	70	<0.05	<0.05	0	115	115
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	70	103	101	2	101	98

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	261320-213
Date extracted	-			[NT]	112	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	112	13/02/2021	13/02/2021		13/02/2021	13/02/2021
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	105	103
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	109	108
Fluorene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	107	105
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	112	0.3	0.2	40	115	113
Anthracene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	112	111
Pyrene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	109	107
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	100	98
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	112	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	112	0.07	<0.05	33	114	115
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	112	102	102	0	106	102

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	140	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	140	13/02/2021	13/02/2021		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	140	0.3	0.1	100	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	140	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	140	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	140	99	100	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	169	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	169	13/02/2021	13/02/2021		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	169	0.2	0.1	67	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	169	0.2	0.2	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	169	0.2	0.2	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	169	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	169	0.08	0.09	12	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	169	104	101	3	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	210	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	210	13/02/2021	13/02/2021		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-022/025	[NT]	210	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022/025	[NT]	210	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	210	98	102	4	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	261320-145
Date extracted	-			10/02/2021	6	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			13/02/2021	6	13/02/2021	13/02/2021		13/02/2021	13/02/2021
alpha-BHC	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	104	97
HCB	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	104	92
gamma-BHC	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	99	75
delta-BHC	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	86	83
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	101	88
gamma-Chlordane	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	73	92
Dieldrin	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	103	105
Endrin	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	104	82
Endosulfan II	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	112	95
Endrin Aldehyde	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	97	65
Methoxychlor	mg/kg	0.1	Org-022/025	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	116	6	119	121	2	122	104

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	261320-213
Date extracted	-			[NT]	38	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	38	13/02/2021	13/02/2021		13/02/2021	13/02/2021
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	106	97
HCB	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	106	89
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	85	67
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	76	88
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	105	90
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	98	94
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	111	117
Endrin	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	100	77
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	123	101
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	91	69
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	38	115	112	3	117	101

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			[NT]	70	10/02/2021	10/02/2021		10/02/2021	[NT]
Date analysed	-			[NT]	70	13/02/2021	13/02/2021		13/02/2021	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	99	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	94	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	77	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	85	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	91	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	94	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	107	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	80	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	99	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	76	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	70	122	120	2	106	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			[NT]	112	10/02/2021	10/02/2021		10/02/2021	[NT]
Date analysed	-			[NT]	112	13/02/2021	13/02/2021		13/02/2021	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	97	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	92	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	79	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	88	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	95	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	97	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	113	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	84	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	103	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	76	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	112	105	106	1	104	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	140	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	140	13/02/2021	13/02/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	140	104	106	2	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	169	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	169	13/02/2021	13/02/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	169	106	105	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	210	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	210	13/02/2021	13/02/2021		[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
HCB	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-022/025	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-022/025	[NT]	210	103	105	2	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	261320-145
Date extracted	-			10/02/2021	6	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			13/02/2021	6	13/02/2021	13/02/2021		13/02/2021	13/02/2021
Aroclor 1016	mg/kg	0.1	Org-021	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	<0.1	6	<0.1	<0.1	0	70	70
Aroclor 1260	mg/kg	0.1	Org-021	<0.1	6	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	116	6	119	121	2	122	104

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	261320-213
Date extracted	-			[NT]	38	10/02/2021	10/02/2021		10/02/2021	10/02/2021
Date analysed	-			[NT]	38	13/02/2021	13/02/2021		13/02/2021	13/02/2021
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	38	<0.1	<0.1	0	70	70
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	38	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	38	115	112	3	117	101

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	[NT]
Date extracted	-			[NT]	70	10/02/2021	10/02/2021		10/02/2021	[NT]
Date analysed	-			[NT]	70	13/02/2021	13/02/2021		13/02/2021	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	70	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	70	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	70	122	120	2	106	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	[NT]
Date extracted	-			[NT]	112	10/02/2021	10/02/2021		10/02/2021	[NT]
Date analysed	-			[NT]	112	13/02/2021	13/02/2021		13/02/2021	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	112	<0.1	<0.1	0	70	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	112	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	112	105	106	1	104	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	140	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	140	13/02/2021	13/02/2021		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	140	104	106	2	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	169	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	169	13/02/2021	13/02/2021		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	169	106	105	1	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	210	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	210	13/02/2021	13/02/2021		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-021	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-021	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-021	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-021	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-021	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-021	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-021	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-021	[NT]	210	103	105	2	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	261320-7
Date prepared	-			11/02/2021	6	11/02/2021	11/02/2021		11/02/2021	11/02/2021
Date analysed	-			11/02/2021	6	11/02/2021	11/02/2021		11/02/2021	11/02/2021
Arsenic	mg/kg	4	Metals-020	<4	6	14	13	7	101	86
Cadmium	mg/kg	0.4	Metals-020	<0.4	6	<0.4	<0.4	0	84	85
Chromium	mg/kg	1	Metals-020	<1	6	22	23	4	88	74
Copper	mg/kg	1	Metals-020	<1	6	14	16	13	82	#
Lead	mg/kg	1	Metals-020	<1	6	22	26	17	89	72
Mercury	mg/kg	0.1	Metals-021	<0.1	6	<0.1	<0.1	0	85	119
Nickel	mg/kg	1	Metals-020	<1	6	7	7	0	90	81
Zinc	mg/kg	1	Metals-020	<1	6	39	47	19	85	#

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	261320-71
Date prepared	-			[NT]	38	11/02/2021	11/02/2021		11/02/2021	11/02/2021
Date analysed	-			[NT]	38	11/02/2021	11/02/2021		11/02/2021	11/02/2021
Arsenic	mg/kg	4	Metals-020	[NT]	38	<4	<4	0	93	88
Cadmium	mg/kg	0.4	Metals-020	[NT]	38	<0.4	<0.4	0	81	81
Chromium	mg/kg	1	Metals-020	[NT]	38	7	10	35	79	85
Copper	mg/kg	1	Metals-020	[NT]	38	37	45	20	83	108
Lead	mg/kg	1	Metals-020	[NT]	38	1	2	67	85	81
Mercury	mg/kg	0.1	Metals-021	[NT]	38	<0.1	<0.1	0	76	119
Nickel	mg/kg	1	Metals-020	[NT]	38	84	95	12	82	86
Zinc	mg/kg	1	Metals-020	[NT]	38	26	31	18	82	109

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	261320-145
Date prepared	-			[NT]	70	11/02/2021	11/02/2021		11/02/2021	11/02/2021
Date analysed	-			[NT]	70	11/02/2021	11/02/2021		11/02/2021	11/02/2021
Arsenic	mg/kg	4	Metals-020	[NT]	70	<4	<4	0	92	96
Cadmium	mg/kg	0.4	Metals-020	[NT]	70	<0.4	<0.4	0	83	84
Chromium	mg/kg	1	Metals-020	[NT]	70	26	25	4	72	91
Copper	mg/kg	1	Metals-020	[NT]	70	19	23	19	80	87
Lead	mg/kg	1	Metals-020	[NT]	70	4	4	0	92	82
Mercury	mg/kg	0.1	Metals-021	[NT]	70	<0.1	<0.1	0	82	118
Nickel	mg/kg	1	Metals-020	[NT]	70	38	39	3	71	#
Zinc	mg/kg	1	Metals-020	[NT]	70	33	34	3	79	75

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	261320-213
Date prepared	-			[NT]	112	11/02/2021	11/02/2021		11/02/2021	11/02/2021
Date analysed	-			[NT]	112	11/02/2021	11/02/2021		11/02/2021	11/02/2021
Arsenic	mg/kg	4	Metals-020	[NT]	112	<4	<4	0	93	90
Cadmium	mg/kg	0.4	Metals-020	[NT]	112	<0.4	<0.4	0	85	84
Chromium	mg/kg	1	Metals-020	[NT]	112	22	20	10	79	73
Copper	mg/kg	1	Metals-020	[NT]	112	20	19	5	87	84
Lead	mg/kg	1	Metals-020	[NT]	112	5	4	22	93	90
Mercury	mg/kg	0.1	Metals-021	[NT]	112	<0.1	<0.1	0	82	73
Nickel	mg/kg	1	Metals-020	[NT]	112	24	23	4	78	72
Zinc	mg/kg	1	Metals-020	[NT]	112	26	29	11	83	79

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	140	11/02/2021	11/02/2021		[NT]	[NT]
Date analysed	-			[NT]	140	11/02/2021	11/02/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	140	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	140	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	140	10	7	35	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	140	11	8	32	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	140	7	6	15	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	140	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	140	6	3	67	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	140	31	16	64	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	169	11/02/2021	11/02/2021		[NT]	[NT]
Date analysed	-			[NT]	169	11/02/2021	11/02/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	169	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	169	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	169	4	12	100	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	169	4	15	116	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	169	2	11	138	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	169	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	169	4	11	93	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	169	8	24	100	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	210	11/02/2021	11/02/2021		[NT]	[NT]
Date analysed	-			[NT]	210	11/02/2021	11/02/2021		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	210	6	6	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	210	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	210	20	21	5	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	210	9	10	11	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	210	10	11	10	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	210	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	210	6	6	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	210	10	11	10	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	261320-19
Date prepared	-			11/02/2021	6	10/02/2021	10/02/2021		11/02/2021	11/02/2021
Date analysed	-			11/02/2021	6	11/02/2021	11/02/2021		11/02/2021	11/02/2021
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	6	<5	<5	0	101	102

QUALITY CONTROL: Misc Soil - Inorg					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	261320-210
Date prepared	-			[NT]	93	10/02/2021	10/02/2021		11/02/2021	11/02/2021
Date analysed	-			[NT]	93	11/02/2021	11/02/2021		11/02/2021	11/02/2021
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	93	<5	<5	0	100	81

QUALITY CONTROL: Misc Soil - Inorg					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	194	10/02/2021	10/02/2021		[NT]	[NT]
Date analysed	-			[NT]	194	11/02/2021	11/02/2021		[NT]	[NT]
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	[NT]	194	<5	<5	0	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	261320-23
Date prepared	-			12/02/2021	13	12/02/2021	12/02/2021		12/02/2021	12/02/2021
Date analysed	-			12/02/2021	13	12/02/2021	12/02/2021		12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	13	5.8	5.8	0	102	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	<1	13	120	120	0	100	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	<10	13	42	34	21	88	#
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	<10	13	120	120	0	94	107
Resistivity in soil*	ohm m	1	Inorg-002	<1	13	85	86	1	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-7	261320-73
Date prepared	-			[NT]	32	12/02/2021	12/02/2021		12/02/2021	12/02/2021
Date analysed	-			[NT]	32	12/02/2021	12/02/2021		12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	32	8.5	[NT]		101	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	32	350	[NT]		98	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	32	200	240	18	87	114
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	32	180	170	6	90	#
Resistivity in soil*	ohm m	1	Inorg-002	[NT]	32	29	[NT]		[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-8	261320-125
Date prepared	-			[NT]	65	12/02/2021	12/02/2021		12/02/2021	12/02/2021
Date analysed	-			[NT]	65	12/02/2021	12/02/2021		12/02/2021	12/02/2021
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	65	6.3	6.3	0	100	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	65	300	330	10	98	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	65	250	280	11	87	124
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	65	87	110	23	90	117
Resistivity in soil*	ohm m	1	Inorg-002	[NT]	65	33	31	6	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	261320-190
Date prepared	-			[NT]	97	12/02/2021	12/02/2021		[NT]	12/02/2021
Date analysed	-			[NT]	97	12/02/2021	12/02/2021		[NT]	12/02/2021
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	97	6.8	6.7	1	[NT]	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	97	200	220	10	[NT]	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	97	120	130	8	[NT]	118
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	97	130	130	0	[NT]	72
Resistivity in soil*	ohm m	1	Inorg-002	[NT]	97	51	46	10	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	117	12/02/2021	12/02/2021		[NT]	[NT]
Date analysed	-			[NT]	117	12/02/2021	12/02/2021		[NT]	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	117	5.3	5.3	0	[NT]	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	117	77	79	3	[NT]	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	117	27	37	31	[NT]	[NT]
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	117	50	57	13	[NT]	[NT]
Resistivity in soil*	ohm m	1	Inorg-002	[NT]	117	130	130	0	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	159	12/02/2021	12/02/2021		[NT]	[NT]
Date analysed	-			[NT]	159	12/02/2021	12/02/2021		[NT]	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	159	7.5	7.4	1	[NT]	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	159	270	270	0	[NT]	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	159	150	130	14	[NT]	[NT]
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	159	240	210	13	[NT]	[NT]
Resistivity in soil*	ohm m	1	Inorg-002	[NT]	159	36	36	0	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	179	12/02/2021	12/02/2021		[NT]	[NT]
Date analysed	-			[NT]	179	12/02/2021	12/02/2021		[NT]	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	179	5.1	5.2	2	[NT]	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	179	300	300	0	[NT]	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	179	180	180	0	[NT]	[NT]
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	179	250	240	4	[NT]	[NT]
Resistivity in soil*	ohm m	1	Inorg-002	[NT]	179	34	33	3	[NT]	[NT]

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	182	12/02/2021	12/02/2021		[NT]	[NT]
Date analysed	-			[NT]	182	12/02/2021	12/02/2021		[NT]	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	182	5.5	5.6	2	[NT]	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	[NT]	182	380	360	5	[NT]	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	182	260	240	8	[NT]	[NT]
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	[NT]	182	310	270	14	[NT]	[NT]
Resistivity in soil*	ohm m	1	Inorg-002	[NT]	182	26	28	7	[NT]	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	261320-146
Date prepared	-			16/02/2021	146	16/02/2021	16/02/2021		16/02/2021	16/02/2021
Date analysed	-			16/02/2021	146	16/02/2021	16/02/2021		16/02/2021	16/02/2021
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	146	3.5	3.5	0	97	85
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	146	0.4	0.4	0	110	94
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	146	13	14	7	102	94
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	146	3.0	4.0	29	118	95

QUALITY CONTROL: Texture and Salinity*					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date prepared	-			11/02/2021	[NT]	[NT]	[NT]	[NT]	11/02/2021	[NT]
Date analysed	-			11/02/2021	[NT]	[NT]	[NT]	[NT]	11/02/2021	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]

QUALITY CONTROL: sPOCAS field test						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	[NT]
Date prepared	-			[NT]	[NT]	[NT]	[NT]	[NT]	12/02/2021	[NT]
Date analysed	-			[NT]	[NT]	[NT]	[NT]	[NT]	12/02/2021	[NT]
pH_F (field pH test)*	pH Units		Inorg-063	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]
pH_{FOX} (field peroxide test)*	pH Units		Inorg-063	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: BTEX in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	
Date extracted	-			16/02/2021	[NT]	[NT]	[NT]	[NT]	16/02/2021	[NT]
Date analysed	-			17/02/2021	[NT]	[NT]	[NT]	[NT]	17/02/2021	[NT]
Benzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Toluene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
m+p-xylene	µg/L	2	Org-023	<2	[NT]	[NT]	[NT]	[NT]	89	[NT]
o-xylene	µg/L	1	Org-023	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Surrogate Dibromofluoromethane	%		Org-023	105	[NT]	[NT]	[NT]	[NT]	106	[NT]
Surrogate toluene-d8	%		Org-023	98	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate 4-BFB	%		Org-023	97	[NT]	[NT]	[NT]	[NT]	101	[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 261320-140 for Zn. Therefore a triplicate result has been issued as laboratory sample number 261230-235.
- The laboratory RPD acceptance criteria has been exceeded for 261320-169 for Cr, Cu, Pb, Ni & Zn. Therefore a triplicate result has been issued as laboratory sample number 261230-236.
- # Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Asbestos-ID in soil: NEPM
This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Note: All samples analysed as received. However, samples 261320-31, 40, 47, 88, 194, 200 are below the minimum 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

MISC_INORG_DRY
Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

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SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Vittal Boggaram

Sample Login Details

Your reference	E31888BR, Wetherill Park
Envirolab Reference	261320
Date Sample Received	04/02/2021
Date Instructions Received	04/02/2021
Date Results Expected to be Reported	17/02/2021

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	231 soil, 2 water, 1 material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18.2
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoice accordingly.

Please direct any queries to:

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

Analysis Underway, details on the following page:

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
TP101-0-0.3	✓	✓	✓			✓		✓	✓						
TP101-0.4-0.6									✓		✓	✓			
TP101-1.1-1.3												✓			
TP101-1.5-1.6															✓
TP101-1.9-2.0									✓						
TP102-0-0.25	✓	✓	✓	✓	✓	✓	✓								
TP102-0.3-0.5	✓	✓	✓			✓		✓							
TP102-0.75-0.9															✓
BH103-0-0.2	✓	✓	✓			✓									
BH103-0.4-0.8	✓	✓	✓			✓		✓	✓	✓	✓				
BH103-1.4-1.8												✓			
BH103-1.8-2.0															✓
BH103-2.5-2.7									✓			✓			
BH103-3.0-3.45												✓			
BH103-3.6-3.9									✓		✓				
BH103-4.3-4.5															✓
BH103-5.5-6.0															✓
BH103-7.5-8.0									✓						
TP104-0-0.1	✓	✓	✓	✓	✓	✓	✓								
TP104-0.2-0.4	✓	✓	✓			✓			✓	✓	✓				

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
TP104-0.6-0.8									✓						
TP104-1.1-1.3															✓
TP104-1.6-1.8									✓						
BH105-0.03-0.3	✓	✓	✓			✓									
BH105-0.8-1.0															✓
BH106-0.19-0.4	✓	✓	✓	✓	✓	✓	✓	✓							
BH106-0.8-0.95	✓	✓	✓			✓			✓	✓		✓			
BH106-1.3-1.5												✓			
BH106-1.8-2.0									✓						
BH106-7.5-8.0									✓		✓				
BH107-0.22-0.5	✓	✓	✓	✓	✓	✓	✓	✓				✓			
BH107-0.5-0.7									✓			✓			
BH107-0.8-0.95															✓
BH107-1.3-1.5									✓						
BH107-2.5-3.0															✓
BH107-4.0-4.5															✓
BH107-5.5-6.0									✓						
BH108-0.03-0.2	✓	✓	✓	✓	✓	✓	✓	✓							
BH108-0.2-0.5															✓
BH109-0-0.2	✓	✓	✓			✓		✓							

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
BH109-0.4-0.6															✓
BH109-0.6-0.9															✓
BH109-1.4-1.5															✓
BH109-1.5-1.7															✓
BH109-1.7-1.85															✓
BH109-1.85-2.0															✓
BH110-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓							
BH110-0.4-0.5															✓
BH111-0.2-0.5	✓	✓	✓			✓									
BH111-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
BH111-1.2-1.4															✓
BH111-1.5-1.8									✓	✓					
BH111-2.2-2.4												✓			
BH111-2.6-2.8															✓
BH111-3.0-3.3												✓			
BH111-3.3-3.45									✓						
BH111-3.7-4.0															✓
BH111-5.5-6.0															✓
BH111-7.5-8.0									✓						
BH112-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓							

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
BH112-0.4-0.5	✓	✓	✓			✓									
BH112-1.4-1.5															✓
BH112-1.5-1.7															✓
BH113-0-0.2	✓	✓	✓			✓			✓			✓			
BH113-0.2-0.4									✓			✓			
TP114-0-0.2	✓	✓	✓			✓		✓							
TP114-0.4-0.5															✓
TP115-0-0.2	✓	✓	✓			✓									
TP115-0.2-0.4															✓
BH116-0.03-0.3	✓	✓	✓	✓	✓	✓	✓	✓							
BH116-0.3-0.5	✓	✓	✓			✓			✓	✓		✓			
BH116-0.7-0.9															✓
BH116-1.2-1.4									✓			✓			
BH116-1.6-1.8															✓
BH116-2.5-3.0															✓
BH116-4.0-4.2															✓
BH116-5.4-5.6									✓						
TP117-0-0.2	✓	✓	✓			✓									
TP117-0.2-0.5															✓
BH118-0-0.2	✓	✓	✓			✓		✓							

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
BH118-0.2-0.4								✓							
BH118-1.3-1.5															✓
BH119-0.16-0.3	✓	✓	✓	✓	✓	✓	✓	✓							
BH119-0.4-0.6															✓
TP120-0-0.2	✓	✓	✓			✓		✓							
TP120-0.2-0.4															✓
TP120-0.5-0.6															✓
TP121-0-0.2	✓	✓	✓			✓		✓	✓			✓			
TP121-0.5-0.7															✓
TP121-1.1-1.3									✓						
TP121-1.6-1.7															✓
TP121-1.8-1.9									✓			✓			
TP122-0-0.2	✓	✓	✓	✓	✓	✓	✓		✓			✓			
TP122-0.6-0.8	✓	✓	✓			✓		✓							
TP122-1.2-1.4															✓
TP122-1.4-1.6									✓		✓	✓			
TP122-1.9-2.0									✓						
BH123-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓							
BH123-0.3-0.8									✓			✓			
BH123-1.0-1.3															✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
BH123-1.5-1.65									✓			✓			
BH123-1.65-1.75															✓
BH123-1.8-2.0									✓						
BH123-4.0-4.5															✓
BH123-5.5-6.0															✓
BH123-7.5-7.9															✓
TP124-0-0.2	✓	✓	✓			✓		✓							
TP124-0.2-0.4									✓			✓			
TP124-0.9-1.1									✓						
TP124-1.5-1.6															✓
TP124-1.8-1.9									✓						
TP125-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓							
TP125-0.2-0.4									✓			✓			
TP125-0.8-1.0									✓			✓			
TP126-0-0.2	✓	✓	✓			✓		✓	✓			✓			
TP126-0.3-0.5									✓			✓			
TP126-0.8-0.95									✓		✓				
BH127-0-0.2	✓	✓	✓			✓									
BH127-0.2-0.4															✓
BH128-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓							

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
BH128-0.4-0.6									✓	✓	✓	✓			
BH128-1.3-1.5	✓	✓	✓			✓		✓	✓			✓			
BH128-2.1-2.3															✓
BH128-2.3-2.5															✓
BH128-2.5-2.7									✓			✓			
BH128-2.8-3.0															✓
BH128-3.0-3.3															✓
BH128-3.6-3.8															✓
BH128-4.7-5.0												✓			
BH129-0.5-0.7	✓	✓	✓			✓		✓							
BH129-1.0-1.2															✓
TP130-0-0.2	✓	✓	✓			✓			✓			✓			
TP130-0.3-0.5									✓						
TP130-0.9-1.1												✓			
TP130-1.1-1.3															✓
TP130-1.8-2.0									✓						
BH131-0-0.2	✓	✓	✓			✓		✓							
BH131-0.2-0.4															✓
BH131-0.5-0.7															✓
TP132-0-0.15	✓	✓	✓	✓	✓	✓	✓								

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
TP132-0.15-0.35															✓
TP132-0.8-0.95															✓
TP133-0-0.2	✓	✓	✓			✓		✓							
TP133-0.2-0.4															✓
BH134-0-0.2	✓	✓	✓	✓	✓	✓	✓								
BH134-0.3-0.5									✓	✓		✓			
BH134-1.2-1.4															✓
BH134-1.5-1.95									✓			✓			
BH134-2.5-3.0															✓
BH134-4.0-4.5															✓
BH134-5.5-6.0															✓
BH134-7.5-8.0									✓						
TP135-0-0.2	✓	✓	✓			✓		✓							
TP135-0.3-0.5															✓
TP136-0-0.2	✓	✓	✓			✓		✓							
TP136-0.2-0.4															✓
BH137-0-0.3	✓	✓	✓			✓		✓	✓		✓				
BH137-0.3-0.6												✓			
BH137-1.0-1.2									✓						
BH137-1.5-1.7												✓			

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
BH138-0.05-0.3	✓	✓	✓	✓	✓	✓	✓	✓							
BH138-0.3-0.5									✓			✓			
BH138-0.5-0.7															✓
BH138-0.7-0.85									✓			✓			
BH138-1.2-1.4									✓						
BH139-0.05-0.3	✓	✓	✓			✓		✓							
BH139-0.3-0.5									✓			✓			
BH139-0.6-0.8									✓			✓			
BH140-0.05-0.3	✓	✓	✓	✓	✓	✓	✓	✓							
BH140-0.3-0.5	✓	✓	✓			✓			✓			✓			
BH140-0.7-0.9									✓			✓			
BH140-1.2-1.4															✓
BH140-1.6-1.8															✓
BH140-1.8-2.0									✓						
BH141-0-0.2	✓	✓	✓			✓		✓							
BH141-0.3-0.4															✓
BH142-0-0.2	✓	✓	✓			✓			✓						
BH142-0.5-0.95								✓	✓			✓			
BH142-1.2-1.4									✓			✓			
BH142-1.6-1.9															✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
BH143-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓							
BH143-0.2-0.4									✓			✓			
BH143-0.5-0.8												✓			
BH143-1.3-1.5									✓						
BH143-2.5-3.0															✓
BH143-4.0-4.5															✓
BH143-5.5-6.0															✓
BH143-7.4-7.6									✓						
TP144-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓							
TP144-0.2-0.4									✓			✓			
TP144-0.7-0.9									✓			✓			
TP144-1.7-1.9															✓
TP144-2.1-2.2									✓						
BH145-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓							
BH145-0.5-0.95	✓	✓	✓			✓									
BH145-1.5-1.95															✓
BH145-2.5-2.7															✓
BH146-0-0.2	✓	✓	✓			✓									
BH146-0.3-0.5															✓
BH146-1.3-1.5	✓	✓	✓			✓		✓							

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
BH146-2.3-2.4															✓
BH146-3.3-3.6															✓
BH146-3.6-3.8															✓
SDUP1--	✓	✓	✓			✓									
SDUP2--															✓
SDUP3--															✓
SDUP4--	✓	✓	✓			✓									
SDUP5--															✓
SDUP6--															✓
SDUP7--	✓	✓	✓	✓	✓	✓	✓								
SDUP8--															✓
SDUP9--															✓
SDUP10--	✓	✓	✓	✓	✓	✓	✓								
SDUP11--															✓
SDUP12--															✓
SDUP13--															✓
SDUP14--															✓
SDUP104															✓
SDUP105															✓
SDUP106															✓

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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	PCBsin Soil	Acid Extractable metalsin soil	Misc Soil - Inorg	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Texture and Salinity*	sPOCAS field test	Asbestos ID - materials	BTEX in Water	On Hold
SDUP107															✓
SDUP108															✓
SDUP109															✓
SDUP110															✓
FR1-SPT														✓	
FR2-SPT														✓	
TB-S1	✓														
TB-S2	✓														
TS-S1	✓														
TS-S2	✓														
FCF1-Surface													✓		
BH129-2.0-2.2															✓
BH134-0.7-0.9															✓
TP144-1.2-1.3									✓			✓			
TP132 - [TRIPLICATE]-0-0.15						✓									
BH140 - [TRIPLICATE]-0.05-0.3						✓									

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

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Additional Info

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

SAMPLE AND CHAIN OF CUSTODY FORM

TO:
ENVIROLAB SERVICES PTY LTD
12 ASHLEY STREET
CHATSWOOD NSW 2067
P: (02) 99106200
F: (02) 99106201

Attention: Aileen

EIS Job Number: E31888BR

Date Results Required: STANDARD

Page: 1 of 1

FROM:
JKEnvironments
REAR OF 11S WICKS ROAD
MACQUARIE PARK, NSW 2113
P: 02-9888 S000 F: 02-9888 S001
Attention: Vittal Boggaram
vboggaram@jkenvironments.com.au

Location: WETHERILL PARK, NSW
Sampler: AM / CR

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 7	Combo 3	Asbestos	Asbestos W/A 500mL	BTEX	pH / EC	Sulfate / Chloride	Resistivity	ECe (texture)	CEC	ASS pH F + pH FOX	SCR
03/02/2021	1	TP101	0-0.3	G, A, P	0	F: silty clay		X		X		X	X	X				
03/02/2021	2	TP101	0.4-0.6	G, P	0	Silty clay						X	X	X	X		X	
03/02/2021	3	TP101	1.1-1.3	G, P	0	Silty clay											X	
03/02/2021	4	TP101	1.S-1.6	P	0	Silty clay												
03/02/2021	5	TP101	1.9-2.0	G, P	0	Silty clay						X	X	X				
03/02/2021	6	TP102	0-0.2S	G, A	0	F: silty clay	X											
03/02/2021	7	TP102	0.3-0.5	G, A	0	F: silty clay		X		X								
03/02/2021	8	TP102	0.7S-0.9	G	0	Silty clay												
02/02/2021	9	BH103	0-0.2	G, A, P	0	F: silty clay		X										
02/02/2021	10	BH103	0.4-0.8	G, A, P	0.1	F: silty clay		X		X		X	X	X	X	X		
02/02/2021	11	BH103	1.4-1.8	G, A, P	0	F: silty clay											X	
02/02/2021	12	BH103	1.8-2.0	G, A, P	0	F: silty clay												
02/02/2021	13	BH103	2.S-2.7	G, A, P	0.1	Silty clay						X	X	X			X	
02/02/2021	14	BH103	3.0-3.45	G, A, P	0	Silty clay											X	
02/02/2021	15	BH103	3.6-3.9	G	0.1	Siltstone						X	X	X	X			
02/02/2021	16	BH103	4.3-4.5	G	0.1	Siltstone												
02/02/2021	17	BH103	5.S-6.0	G	0.2	Siltstone												
02/02/2021	18	BH103	7.5-8.0	G	0.2	Siltstone						X	X	X				
03/02/2021	19	TP104	0-0.1	G, A, P	0	F: silty sand	X											
03/02/2021	20	TP104	0.2-0.4	G, A, P	0	F: silty clayey sand		X				X	X	X	X	X		
03/02/2021	21	TP104	0.6-0.8	G, P	0	Silty clay						X	X	X				
03/02/2021	22	TP104	1.1-1.3	P	NA	Silty clay												
03/02/2021	23	TP104	1.6-1.8	G, P	NA	Silty clay						X	X	X				
05/02/2021	24	BH105	0.03-0.3	G, A	0	F: silty sandy gravel		X										
05/02/2021	25	BH105	0.8-1.0	G	0.2	Silty clay												
04/02/2021	26	BH106	0.19-0.4	G, A, P	0	F: silty sand	X			X								
04/02/2021	27	BH106	0.8-0.9S	G, P	0	Silty clay		X				X	X	X		X	X	
04/02/2021	28	BH106	1.3-1.S	G, P	0	Siltstone											X	
04/02/2021	29	BH106	1.8-2.0	G	0	Siltstone						X	X	X				
04/02/2021	30	BH106	7.5-8.0	G	0	Siltstone						X	X	X	X			
04/02/2021	31	BH107	0.22-0.5	G, A, P	0	F: silty clay	X			X							X	
04/02/2021	32	BH107	0.S-0.7	G, P	0	Silty clay						X	X	X			X	
04/02/2021	33	BH107	0.8-0.95	G, P	0	Siltstone												
04/02/2021	34	BH107	1.3-1.S	G	0	Siltstone						X	X	X				

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

SCB0082

Job No: 261320
Date Received: 9/2/21, 4/2, 5/2
Time Received: 1500, 1355, 1415
Received By: KG
Temp: Cool/Ambient
Security: Intact

04/02/2021	35	BH107	2.5-3.0	G	0	Siltstone												
04/02/2021	36	BH107	4.0-4.5	G	0	Siltstone												
04/02/2021	37	BH107	S.S-6.0	G	0	Siltstone						X	X	X				
04/02/2021	38	BH10B	0.03-0.2	G, A	0	F: silty gravelly sand	X			X								
04/02/2021	39	BH108	0.2-0.S	G	0	Silty clay												
02/02/2021	40	BH109	0-0.2	G, A , P	0	F: silty sand		X		X								
02/02/2021	41	BH109	0.4-0.6	G, A, P	0	Silty clay												
02/02/2021	42	BH109	0.6-0.9	G, P	0	Silty clay												
02/02/2021	43	BH109	1.4-1.S	P	NA	Silty clay												
02/02/2021	44	BH109	1.5-1.7	P	NA	Silty clay												
02/02/2021	45	BH109	1.7-1.85	G	0	Siltstone												
02/02/2021	46	BH109	1.85-2.0	G	0	Siltstone												
05/02/2021	47	BH110	0-0.2	G, A	0	F: silty clay	X			X								
05/02/2021	48	BH110	0.4-0.5	G	0	Silty clay												
02/02/2021	49	BH111	0.2-0.S	G, A, P	0	F: silty clay		X										
02/02/2021	50	BH111	0.S-0.9S	G, A, P	0	F: silty clay	X			X		X	X	X	X	X	X	
02/02/2021	51	BH111	1.2-1.4	P	NA	F: silty clay												
02/02/2021	52	BH111	1.5-1.8	G, P	0	Silty clay						X	X	X		X		
02/02/2021	53	BH111	2.2-2.4	P	NA	Silty clay											X	
02/02/2021	54	BH111	2.6-2.B	G, P	0	Silty clay												
02/02/2021	55	BH111	3.0-3.3	P	NA	Silty clay											X	
02/02/2021	56	BH111	3.3-3.45	G	0	Siltstone						X	X	X				
02/02/2021	57	BH111	3.7-4.0	G	0	Siltstone												
02/02/2021	58	BH111	5.5-6.0	G	0	Siltstone												
02/02/2021	59	BH111	7.S-B.0	G	0	Siltstone						X	X	X				
02/02/2021	60	BH112	0-0.2	G, A	0	F: silty clay	X			X								
02/02/2021	61	BH112	0.4-0.5	G, A	0	F: silty clay		X										
02/02/2021	62	BH112	1.4-1.S	G, A	0	F: silty clay												
02/02/2021	63	BH112	1.S-1.7	G	0	Silty clay												
05/02/2021	64	BH113	0-0.2	G, A, P	0	F: silty clay		X				X	X	X			X	
05/02/2021	65	BH113	0.2-0.4	G, P	2	Silty clay						X	X	X			X	
04/02/2021	66	TP114	0-0.2	G, A	0	F: silty sand		X		X								
04/02/2021	67	TP114	0.4-0.S	G	0	Silty clay												
04/02/2021	68	TP11S	0-0.2	G, A	0	F: silty sand		X										
04/02/2021	69	TP115	0.2-0.4	G	0	Silty clay												
04/02/2021	70	BH116	0.03-0.3	G, A, P	0	F: silty clay	X			X								
04/02/2021	71	BH116	0.3-0.S	G, P	0	Silty clay		X				X	X	X		X	X	
04/02/2021	72	BH116	0.7-0.9	P	NA	Silty clay												
04/02/2021	73	BH116	1.2-1.4	G, P	0	Siltstone						X	X	X			X	
04/02/2021	74	BH116	1.6-1.B	G	0	Siltstone												
04/02/2021	75	BH116	2.5-3.0	G	0	Siltstone												
04/02/2021	76	BH116	4.0-4.2	G	0	Siltstone												
04/02/2021	77	BH116	5.4-S.6	G	0	Siltstone						X	X	X				
04/02/2021	78	TP117	0-0.2 KG	G, A	0	F: silty sand		X										
04/02/2021	79	TP117	0.2-0.S (0.4)	G	0	Silty clay												
03/02/2021	80	BH11B	0-0.2	G, A	0	F: silty gravelly clay		X		X								

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Security. [illegible]

(0-3-0.5) ELS Sys. 9/2/21 261320 KG (3)

03/02/2021	81	BH118	0.2-0.4 KG	G, A	0	F: silty clay				X								
03/02/2021	82	BH118	1.3-1.5	G	0	Silty clay												
02/02/2021	83	BH119	0.16-0.3	G, A	0	F: silty gravelly clay	X			X								
02/02/2021	84	BH119	0.4-0.6	G	0	Sandstone												
04/02/2021	85	TP120	0-0.2	G, A	0	F: sandy clay		X		X								
04/02/2021	86	TP120	0.2-0.4	G, A	0	F: silty clay												
04/02/2021	87	TP120	0.5-0.6	G	0	Silty clay												
04/02/2021	88	TP121	0-0.2	G, A, P	0	F: silty clay		X		X		X	X	X			X	
04/02/2021	89	TP121	0.5-0.7	G, A, P	0	F: silty clay												
04/02/2021	90	TP121	1.1-1.3	G, A, P	0	F: silty clay						X	X	X				
04/02/2021	91	TP121	1.6-1.7	P	NA	F: silty clay												
04/02/2021	92	TP121	1.8-1.9	G, P	0	Silty clay						X	X	X			X	
03/02/2021	93	TP122	0-0.2	G, A, P	0	F: silty clay	X					X	X	X			X	
03/02/2021	94	TP122	0.6-0.8	G, A, P	0	F: silty clay		X		X								
03/02/2021	95	TP122	1.2-1.4	P	NA	F: silty clay												
03/02/2021	96	TP122	1.4-1.6	G, A, P	0	F: silty gravel						X	X	X	X		X	
03/02/2021	97	TP122	1.9-2.0	G, P	0	Silty clay						X	X	X				
03/02/2021	98	BH123	0-0.2	G, A , P	0	F: silty gravelly sand	X			X								
03/02/2021	99	BH123	0.3-0.8	G, A, P	0	F: silty clay						X	X	X			X	
03/02/2021	100	BH123	1.0-1.3	G, P	0	Silty clay												
03/02/2021	101	BH123	1.S-1.6S	G, P	0	Silty clay						X	X	X			X	
03/02/2021	102	BH123	1.6S-1.75	G	0	Siltstone												
03/02/2021	103	BH123	1.8-2.0	G	0	Siltstone						X	X	X				
03/02/2021	104	BH123	4.0-4.5	G	0	Siltstone												
03/02/2021	105	BH123	5.5-6.0	G	0	Siltstone												
03/02/2021	106	BH123	7.S-7.9	G	0	Siltstone												
04/02/2021	107	TP124	0-0.2	G, A, P	0	F: silty sand		X		X								
04/02/2021	108	TP124	0.2-0.4	G, P	0	Silty clay						X	X	X			X	
04/02/2021	109	TP124	0.9-1.1	G, P	0	Silty clay						X	X	X				
04/02/2021	110	TP124	1.5-1.6	G, P	0	Siltstone												
04/02/2021	111	TP124	1.8-1.9	G, P	0	Siltstone						X	X	X				
04/02/2021	112	TP125	0-0.2	G, A, P	0	F: silty sand	X			X								
04/02/2021	113	TP12S	0.2-0.4	G, P	0	Silty clay						X	X	X			X	
04/02/2021	114	TP125	0.8-1.0	G, P	0	Silty clay						X	X	X			X	
04/02/2021	115	TP126	0-0.2	G, A, P	0	F: silty sand		X		X		X	X	X			X	
04/02/2021	116	TP126	0.3-0.5	G, P	0	Silty clay						X	X	X			X	
04/02/2021	117	TP126	0.8-0.9S	G, P	0	Siltstone						X	X	X	X			
(KG) 02 04/02/2021	118	BH127	0-0.2	G, A	0	F: silty sandy gravel		X										
03 04/02/2021	119	BH127	0.2-0.4	G	0	Silty clay												
01/02/2021	120	BH128	(0.2-0.4) KG	G, A, P	0	F: silty sandy gravel	X			X								
01/02/2021	121	BH128	0.4-0.6	G, A, P	0	F: silty clay						X	X	X	X	X	X	
01/02/2021	122	BH128	1.3-1.5	G, A, P	0	F: silty clay		X		X		X	X	X			X	
01/02/2021	123	BH128	2.1-2.3	G, A	0	F: silty clay												
01/02/2021	124	BH128	2.3-2.5	G, P	0	F: silty clay												
01/02/2021	125	BH128	2.S-2.7	G, P	0	Silty clay						X	X	X			X	
01/02/2021	126	BH128	2.8-3.0	G	0	Silty clay												

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01/02/2021	127	BH128	3.0-3.3	G, P	0	Silty clay												
01/02/2021	128	BH128	3.6-3.8	G, P	0	Siltstone												
01/02/2021	129	BH128	4.7-5.0	G, P	0	Siltstone											X	
01/02/2021	130	BH129	0.5-0.7	G, A	0	F: silty sandy gravel		X		X								
01/02/2021	131	BH129	1.0-1.2	G, A	0	F: silty clay												
01/02/2021	NR	BH129	2.8-3.0	G	0	Silty clay												
04/02/2021	132	TP130	0-0.2	G, A, P	0	F: silty clay		X				X	X	X			X	
04/02/2021	133	TP130	0.3-0.5	G, P	0	Silty clay						X	X	X				
04/02/2021	134	TP130	0.9-1.1	P	NA	Silty clay											X	
04/02/2021	135	TP130	1.1-1.3	G, P	0	Silty clay												
04/02/2021	136	TP130	1.8-2.0	G, P	0	Silty clay						X	X	X				
03/02/2021	137	BH131	0-0.2	G, A	0	F: silty gravelly sand		X		X								
03/02/2021	138	BH131	0.2-0.4	G, A	0	F: silty sand												
03/02/2021	139	BH131	0.5-0.7	G	0	Silty clay												
04/02/2021	140	TP132	0-0.15	G, A	0	F: silty sand	X											
04/02/2021	141	TP132	0.15-0.35	G	0	Silty clay												
04/02/2021	142	TP132	0.8-0.95	G	0	Silty clay												
05/02/2021	143	TP133	0-0.2	G, A	0	F: silty sand		X		X								
05/02/2021	144	TP133	0.2-0.4	G	0	Silty clay												
05/02/2021	145	BH134	0-0.2	G, A, P	0	F: silty sand gravel	X			~~X~~ cancelled.								
05/02/2021	146	BH134	0.3-0.5	G, P	0.4	Silty clay						X	X	X		X	X	
(233) 05/02/2021	~~NR~~	BH134	0.7-0.9	P	NA	Silty clay												
05/02/2021	147	BH134	1.2-1.4	G, P	0	Silty clay												
05/02/2021	148	BH134	1.5-1.95	G, P	0	Siltstone						X	X	X			X	
05/02/2021	149	BH134	2.5-3.0	G	0	Siltstone												
05/02/2021	150	BH134	4.0-4.5	G	0	Siltstone												
05/02/2021	151	BH134	5.5-6.0	G	0	Siltstone												
05/02/2021	152	BH134	7.5-8.0	G	0	Siltstone						X	X	X				
04/02/2021	153	TP135	0-0.2	G, A	0	F: silty sand		X		X								
04/02/2021	154	TP135	0.3-0.5	G	0	Silty clay												
05/02/2021	155	TP136	0-0.2	G, A	0	F: silty sand		X		X								
05/02/2021	157	TP136	0.2-0.4	G	0	Silty clay												
03/02/2021	157	BH137	0-0.3	G, A, P	0	F: silty gravelly sand		X		X		X	X	X	X			
03/02/2021	158	BH137	0.3-0.6	G, A, P	0	F: silty clay											X	
03/02/2021	159	BH137	1.0-1.2	G, P	0	Silty clay						X	X	X				
03/02/2021	166	BH137	1.5-1.7	G, P	0	Silty clay											X	
01/02/2021	161	BH138	0.05-0.3	G, A, P	0	F: silty clay	X			X								
01/02/2021	162	BH138	0.3-0.5	G, P	0	Silty clay						X	X	X			X	
01/02/2021	163	BH138	0.5-0.7	G, P	0	Silty clay												
01/02/2021	164	BH138	0.7-0.85	G, P	0	Siltstone						X	X	X			X	
01/02/2021	165	BH138	1.2-1.4	G, P	0	Siltstone						X	X	X				
01/02/2021	166	BH139	0.05-0.3	G, A, P	0	F: silty sand		X		X								
01/02/2021	167	BH139	0.3-0.5	G, P	0	Silty clay						X	X	X			X	
01/02/2021	168	BH139	0.6-0.8	G, P	0	Siltstone						X	X	X			X	
01/02/2021	169	BH140	0.05-0.3	G, A, P	0	F: silty gravelly sand	X			X								
01/02/2021	170	BH140	0.3-0.5	G, A, P	0	F: silty gravelly sand		X				X	X	X			X	

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01/02/2021	171	BH140	0.7-0.9	G, P	0	Silty clay						X	X	X			X	
01/02/2021	172	BH140	1.2-1.4	P	NA	Silty clay												
01/02/2021	173	BH140	1.6-1.8	G, P	0	Siltstone												
01/02/2021	174	BH140	1.8-2.0	G	0	Siltstone						X	X	X				
05/02/2021	175	BH141	0-0.2	G, A	0	F: silty sand		X		X								
05/02/2021	176	BH141	0.3-0.4	G	0	F: silty clay												
02/02/2021	177	BH142	0-0.2	G, A, P	0	F: silty gravelly clay		X				X	X	X				
02/02/2021	178	BH142	0.5-0.95	G, A, P	0	F: silty clay				X		X	X	X			X	
02/02/2021	179	BH142	1.2-1.4	G, P	0	Silty clay						X	X	X			X	
02/02/2021	180	BH142	1.6-1.9	G, P	0	Silty clay												
05/02/2021	181	BH143	0-0.2	G, A, P	0	F: silty sand gravel	X			X								
05/02/2021	182	BH143	0.2-0.4	G, A, P	0	F: silty clay						X	X	X			X	
05/02/2021	183	BH143	0.5-0.8	G, A, P	0	Silty clay											X	
05/02/2021	184	BH143	1.3-1.5	G, P	0.2	Siltstone						X	X	X				
05/02/2021	185	BH143	2.5-3.0	G	0	Siltstone												
05/02/2021	186	BH143	4.0-4.5	G	0	Siltstone												
05/02/2021	187	BH143	5.5-6.0	G	0	Siltstone												
05/02/2021	188	BH143	7.4-7.6	G	1.2	Siltstone						X	X	X				
05/02/2021	189	TP144	0-0.2	G, A, P	0	F: silty sand	X			X								
05/02/2021	190	TP144	0.2-0.4	G, P	0	Silty clay						X	X	X			X	
05/02/2021	191	TP144	0.7-0.9	G, P	0	Silty clay						X	X	X			X	
(234) 05/02/2021	~~NR~~	TP144	1.2-1.3	P	NA	Silty clay						X	X	X			X	
05/02/2021	192	TP144	1.7-1.9	G, P	0	Silty clay												
05/02/2021	193	TP144	2.1-2.2	G, P	0	Silty clay						X	X	X				
03/02/2021	194	BH145	0-0.2	G, A	0	F: silty clay	X			X								
03/02/2021	195	BH145	0.5-0.95	G, A	0	F: silty clay		X										
03/02/2021	196	BH145	1.5-1.95	G, A	0	F: silty clay												
03/02/2021	197	BH145	2.5-2.7	G	0	Siltstone												
01/02/2021	198	BH146	0-0.2	G	0	F: silty sandy clay		X		X	cancelled.							
01/02/2021	199	BH146	0.3-0.5	G, A	0	F: silty clay												
01/02/2021	200	BH146	1.3-1.5	G, A	0	F: silty clay		X		X								
01/02/2021	201	BH146	2.3-2.4	G, A	0	F: silty clay												
01/02/2021	202	BH146	3.3-3.6	G, A	0	F: silty clay												
01/02/2021	203	BH146	3.6-3.8	G	0	Siltstone												
01/02/2021	204	SDUP1	-	G	NA	Soil duplicate		X										
01/02/2021	205	SDUP2	-	G	NA	Soil duplicate												
01/02/2021	206	SDUP3	-	G	NA	Soil duplicate												
02/02/2021	207	SDUP4	-	G	NA	Soil duplicate		X										
02/02/2021	208	SDUP5	-	G	NA	Soil duplicate												
02/02/2021	209	SDUP6	-	G	NA	Soil duplicate												
03/02/2021	210	SDUP7	-	G	NA	Soil duplicate	X											
03/02/2021	211	SDUP8	-	G	NA	Soil duplicate												
03/02/2021	212	SDUP9	-	G	NA	Soil duplicate												
04/02/2021	213	SDUP10	-	G	NA	Soil duplicate	X											
04/02/2021	214	SDUP11	-	G	NA	Soil duplicate												
04/02/2021	215	SDUP12	-	G	NA	Soil duplicate												

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05/02/2021	216	SDUP13	-	G	NA	Soil duplicate												
05/02/2021	217	SDUP14	-	G	NA	Soil duplicate												
03/02/2021	~~218~~	SDUP101	-	G	NA	Soil duplicate		X	PLEASE SEND TO VIC									
03/02/2021	.	SDUP102	-	G	NA	Soil duplicate	X		PLEASE SEND TO VIC									
03/02/2021	.	SDUP103	-	G	NA	Soil duplicate		X	PLEASE SEND TO VIC									
04/02/2021	218	SDUP104	-	G	NA	Soil duplicate												
04/02/2021	219	SDUP105	-	G	NA	Soil duplicate												
04/02/2021	220	SDUP106	-	G	NA	Soil duplicate												
04/02/2021	221	SDUP107	-	G	NA	Soil duplicate												
04/02/2021	222	SDUP108	-	G	NA	Soil duplicate												
05/02/2021	223	SDUP109	-	G	NA	Soil duplicate												
05/02/2021	224	SDUP110	-	G	NA	Soil duplicate												
05/02/2021	-	SDUP111	-	G	NA	Soil duplicate	X		PLEASE SEND TO VIC									
03/02/2021	225	FR1-SPT	-	V	NA	Water					X							
05/02/2021	226	FR2-SPT	-	V	NA	Water					X							
01/02/2021	227	TB-S1	-	V	NA	Soil blank					X							
03/02/2021	228	TB-S2	-	V	NA	Soil blank					X							
01/02/2021	229	TS-S1	-	V	NA	Soil spike					X							
01/02/2021	230	TS-S2	-	V	NA	Soil spike					X							
29/01/2021	231	FCF1	Surface	A	NA	FCF (23.10g)			X									

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date: 09-02-2021	Time:	Received By: EZS Syd KG	Date: 9/2/21

1/2/21 232 BH128 (2.1-2.3) G
Clay
(extra) - KG.

2613320

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SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E31888BR Date Results Required: STANDARD Page: 1 of 1	JKEnvironments REAR OF 11S WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Vittal Boggaram vboggaram@jkenvironments.com.au

Location:	WETHERILL PARK, NSW	Sample Preserved in Esky on Ice
Sampler:	AM / CR	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 7	Combo 3	Asbestos	Asbestos WA 500mL	BTEX	pH / EC	Sulfate / Chloride	Resistivity	ECe (texture)	CEC	ASS pH F + pH FOX	SCR
03/02/2021		TP101	0-0.3	G, A, P	0	F: silty clay		X		X		X	X	X				
03/02/2021		TP101	0.4-0.6	G, P	0	Silty clay						X	X	X	X		X	
03/02/2021		TP101	1.1-1.3	G, P	0	Silty clay											X	
03/02/2021		TP101	1.5-1.6	G	0	Silty clay												
03/02/2021		TP101	1.9-2.0	G	0	Silty clay						X	X	X				
03/02/2021		TP102	0-0.25	G, A	0	F: silty clay	X											
03/02/2021		TP102	0.3-0.5	G, A	0	F: silty clay		X		X								
03/02/2021		TP102	0.75-0.9	G	0	Silty clay												
02/02/2021		BH103	0-0.2	G, A, P	0	F: silty clay		X										
02/02/2021		BH103	0.4-0.8	G, A, P	0.1	F: silty clay		X		X		X	X	X	X	X		
02/02/2021		BH103	1.4-1.8	G, A, P	0	F: silty clay											X	
02/02/2021		BH103	1.8-2.0	G, A, P	0	F: silty clay												
02/02/2021		BH103	2.5-2.7	G, A, P	0.1	Silty clay						X	X	X			X	
02/02/2021		BH103	3.0-3.45	G, A, P	0	Silty clay											X	
02/02/2021		BH103	3.6-3.9	G	0.1	Siltstone						X	X	X	X			
02/02/2021		BH103	4.3-4.5	G	0.1	Siltstone												
02/02/2021		BH103	5.5-6.0	G	0.2	Siltstone												
02/02/2021		BH103	7.5-8.0	G	0.2	Siltstone						X	X	X				
03/02/2021		TP104	0-0.1	G, A, P	0	F: silty sand	X											
03/02/2021		TP104	0.2-0.4	G, A, P	0	F: silty clayey sand		X				X	X	X	X	X		
03/02/2021		TP104	0.6-0.8	G, P	0	Silty clay						X	X	X				
03/02/2021		TP104	1.1-1.3	P	NA	Silty clay												
03/02/2021		TP104	1.6-1.8	P	NA	Silty clay						X	X	X				
05/02/2021		BH105	0.03-0.3	G, A	0	F: silty sandy gravel		X										
05/02/2021		BH105	0.8-1.0	G	0.2	Silty clay												
04/02/2021		BH106	0.19-0.4	G, A, P	0	F: silty sand	X			X								
04/02/2021		BH106	0.8-0.95	G, P	0	Silty clay		X				X	X	X		X	X	
04/02/2021		BH106	1.3-1.5	G, P	0	Siltstone											X	
04/02/2021		BH106	1.8-2.0	G	0	Siltstone						X	X	X				
04/02/2021		BH106	7.5-8.0	G	0	Siltstone						X	X	X	X			
04/02/2021		BH107	0.22-0.5	G, A, P	0	F: silty clay	X			X							X	
04/02/2021		BH107	0.5-0.7	G, P	0	Silty clay						X	X	X			X	
04/02/2021		BH107	0.8-0.95	G, P	0	Siltstone												
04/02/2021		BH107	1.3-1.5	G	0	Siltstone						X	X	X				

04/02/2021		BH107	2.5-3.0	G	0	Siltstone												
04/02/2021		BH107	4.0-4.5	G	0	Siltstone												
04/02/2021		BH107	5.5-6.0	G	0	Siltstone						X	X	X				
04/02/2021		BH108	0.03-0.2	G, A	0	F: silty gravelly sand	X			X								
04/02/2021		BH108	0.2-0.5	G	0	Silty clay												
02/02/2021		BH109	0-0.2	G, A , P	0	F: silty sand		X		X								
02/02/2021		BH109	0.4-0.6	G, A, P	0	Silty clay												
02/02/2021		BH109	0.6-0.9	G, P	0	Silty clay												
02/02/2021		BH109	1.4-1.5	P	NA	Silty clay												
02/02/2021		BH109	1.5-1.7	P	NA	Silty clay												
02/02/2021		BH109	1.7-1.85	G	0	Siltstone												
02/02/2021		BH109	1.85-2.0	G	0	Siltstone												
05/02/2021		BH110	0-0.2	G, A	0	F: silty clay	X			X								
05/02/2021		BH110	0.4-0.5	G	0	Silty clay												
02/02/2021		BH111	0.2-0.5	G, A, P	0	F: silty clay		X										
02/02/2021		BH111	0.5-0.95	G, A, P	0	F: silty clay	X			X		X	X	X	X	X	X	
02/02/2021		BH111	1.2-1.4	P	NA	F: silty clay												
02/02/2021		BH111	1.5-1.8	G, P	0	Silty clay						X	X	X		X		
02/02/2021		BH111	2.2-2.4	P	NA	Silty clay											X	
02/02/2021		BH111	2.6-2.8	G, P	0	Silty clay												
02/02/2021		BH111	3.0-3.3	P	NA	Silty clay											X	
02/02/2021		BH111	3.3-3.45	G	0	Siltstone						X	X	X				
02/02/2021		BH111	3.7-4.0	G	0	Siltstone												
02/02/2021		BH111	5.5-6.0	G	0	Siltstone												
02/02/2021		BH111	7.5-8.0	G	0	Siltstone						X	X	X				
02/02/2021		BH112	0-0.2	G, A	0	F: silty clay	X			X								
02/02/2021		BH112	0.4-0.5	G, A	0	F: silty clay		X										
02/02/2021		BH112	1.4-1.5	G, A	0	F: silty clay												
02/02/2021		BH112	1.5-1.7	G	0	Silty clay												
05/02/2021		BH113	0-0.2	G, A, P	0	F: silty clay		X				X	X	X			X	
05/02/2021		BH113	0.2-0.4	G, P	2	Silty clay						X	X	X			X	
04/02/2021		TP114	0-0.2	G, A	0	F: silty sand		X		X								
04/02/2021		TP114	0.4-0.5	G	0	Silty clay												
04/02/2021		TP115	0-0.2	G, A	0	F: silty sand		X										
04/02/2021		TP115	0.2-0.4	G	0	Silty clay												
04/02/2021		BH116	0.03-0.3	G, A, P	0	F: silty clay	X			X								
04/02/2021		BH116	0.3-0.5	G, P	0	Silty clay		X				X	X	X		X	X	
04/02/2021		BH116	0.7-0.9	P	NA	Silty clay												
04/02/2021		BH116	1.2-1.4	G, P	0	Siltstone						X	X	X			X	
04/02/2021		BH116	1.6-1.8	G	0	Siltstone												
04/02/2021		BH116	2.5-3.0	G	0	Siltstone												
04/02/2021		BH116	4.0-4.2	G	0	Siltstone												
04/02/2021		BH116	5.4-5.6	G	0	Siltstone						X	X	X				
04/02/2021		TP117	0-0.2	G, A	0	F: silty sand		X										
04/02/2021		TP117	0.2-0.5	G	0	Silty clay												
03/02/2021		BH118	0-0.2	G, A	0	F: silty gravelly clay		X		X								

03/02/2021		BH118	0.2-0.4	G, A	0	F: silty clay				X								
03/02/2021		BH118	1.3-1.5	G	0	Silty clay												
02/02/2021		BH119	0.16-0.3	G, A	0	F: silty gravelly clay	X			X								
02/02/2021		BH119	0.4-0.6	G	0	Sandstone												
04/02/2021		TP120	0-0.2	G, A	0	F: sandy clay		X		X								
04/02/2021		TP120	0.2-0.4	G, A	0	F: silty clay												
04/02/2021		TP120	0.5-0.6	G	0	Silty clay												
04/02/2021		TP121	0-0.2	G, A, P	0	F: silty clay		X		X		X	X	X			X	
04/02/2021		TP121	0.5-0.7	G, A, P	0	F: silty clay												
04/02/2021		TP121	1.1-1.3	G, A, P	0	F: silty clay						X	X	X				
04/02/2021		TP121	1.6-1.7	P	NA	F: silty clay												
04/02/2021		TP121	1.8-1.9	G, P	0	Silty clay						X	X	X			X	
03/02/2021		TP122	0-0.2	G, A, P	0	F: silty clay	X					X	X	X			X	
03/02/2021		TP122	0.6-0.8	G, A, P	0	F: silty clay		X		X								
03/02/2021		TP122	1.2-1.4	P	NA	F: silty clay												
03/02/2021		TP122	1.4-1.6	G, A, P	0	F: silty gravel						X	X	X	X		X	
03/02/2021		TP122	1.9-2.0	G, P	0	Silty clay						X	X	X				
03/02/2021		BH123	0-0.2	G, A , P	0	F: silty gravelly sand	X			X								
03/02/2021		BH123	0.3-0.8	G, A, P	0	F: silty clay						X	X	X			X	
03/02/2021		BH123	1.0-1.3	G, P	0	Silty clay												
03/02/2021		BH123	1.5-1.65	G, P	0	Silty clay						X	X	X			X	
03/02/2021		BH123	1.65-1.75	G	0	Siltstone												
03/02/2021		BH123	1.8-2.0	G	0	Siltstone						X	X	X				
03/02/2021		BH123	4.0-4.5	G	0	Siltstone												
03/02/2021		BH123	5.5-6.0	G	0	Siltstone												
03/02/2021		BH123	7.5-7.9	G	0	Siltstone												
04/02/2021		TP124	0-0.2	G, A, P	0	F: silty sand		X		X								
04/02/2021		TP124	0.2-0.4	G, P	0	Silty clay						X	X	X			X	
04/02/2021		TP124	0.9-1.1	G	0	Silty clay						X	X	X				
04/02/2021		TP124	1.5-1.6	G	0	Siltstone												
04/02/2021		TP124	1.8-1.9	G	0	Siltstone						X	X	X				
04/02/2021		TP125	0-0.2	G, A, P	0	F: silty sand	X			X								
04/02/2021		TP125	0.2-0.4	G, P	0	Silty clay						X	X	X			X	
04/02/2021		TP125	0.8-1.0	G, P	0	Silty clay						X	X	X			X	
04/02/2021		TP126	0-0.2	G, A, P	0	F: silty sand		X		X		X	X	X			X	
04/02/2021		TP126	0.3-0.5	G, P	0	Silty clay						X	X	X			X	
04/02/2021		TP126	0.8-0.95	G, P	0	Siltstone						X	X	X	X			
04/02/2021		BH127	0-0.2	G, A	0	F: silty sandy gravel		X										
04/02/2021		BH127	0.2-0.4	G	0	Silty clay												
01/02/2021		BH128	0-0.2	G, A, P	0	F: silty sandy gravel	X			X								
01/02/2021		BH128	0.4-0.6	G, A, P	0	F: silty clay						X	X	X	X	X	X	
01/02/2021		BH128	1.3-1.5	G, A, P	0	F: silty clay		X		X		X	X	X			X	
01/02/2021		BH128	2.1-2.3	G, A	0	F: silty clay												
01/02/2021		BH128	2.3-2.5	G, P	0	F: silty clay												
01/02/2021		BH128	2.5-2.7	G, P	0	Silty clay						X	X	X			X	
01/02/2021		BH128	2.8-3.0	G	0	Silty clay												

01/02/2021		BH128	3.0-3.3	G, P	0	Silty clay												
01/02/2021		BH128	3.6-3.8	G, P	0	Siltstone												
01/02/2021		BH128	4.7-5.0	G, P	0	Siltstone											X	
01/02/2021		BH129	0.5-0.7	G, A	0	F: silty sandy gravel		X		X								
01/02/2021		BH129	1.0-1.2	G, A	0	F: silty clay												
01/02/2021		BH129	2.8-3.0	G	0	Silty clay												
04/02/2021		TP130	0-0.2	G, A, P	0	F: silty clay		X				X	X	X			X	
04/02/2021		TP130	0.3-0.5	G, P	0	Silty clay						X	X	X				
04/02/2021		TP130	0.9-1.1	P	NA	Silty clay											X	
04/02/2021		TP130	1.1-1.3	G, P	0	Silty clay												
04/02/2021		TP130	1.8-2.0	G, P	0	Silty clay						X	X	X				
03/02/2021		BH131	0-0.2	G, A	0	F: silty gravelly sand		X		X								
03/02/2021		BH131	0.2-0.4	G, A	0	F: silty sand												
03/02/2021		BH131	0.5-0.7	G	0	Silty clay												
04/02/2021		TP132	0-0.15	G, A	0	F: silty sand	X											
04/02/2021		TP132	0.15-0.35	G	0	Silty clay												
04/02/2021		TP132	0.8-0.95	G	0	Silty clay												
05/02/2021		TP133	0-0.2	G, A	0	F: silty sand		X		X								
05/02/2021		TP133	0.2-0.4	G	0	Silty clay												
05/02/2021		BH134	0-0.2	G, A, P	0	F: silty sand gravel	X			X								
05/02/2021		BH134	0.3-0.5	G, P	0.4	Silty clay						X	X	X		X	X	
233 05/02/2021		BH134	0.7-0.9	P	NA	Silty clay												
05/02/2021		BH134	1.2-1.4	G, P	0	Silty clay												
05/02/2021		BH134	1.5-1.95	G, P	0	Siltstone						X	X	X			X	
05/02/2021		BH134	2.5-3.0	G	0	Siltstone												
05/02/2021		BH134	4.0-4.5	G	0	Siltstone												
05/02/2021		BH134	5.5-6.0	G	0	Siltstone												
05/02/2021		BH134	7.5-8.0	G	0	Siltstone						X	X	X				
04/02/2021		TP135	0-0.2	G, A	0	F: silty sand		X		X								
04/02/2021		TP135	0.3-0.5	G	0	Silty clay												
05/02/2021		TP136	0-0.2	G, A	0	F: silty sand		X		X								
05/02/2021		TP136	0.2-0.4	G	0	Silty clay												
03/02/2021		BH137	0-0.3	G, A, P	0	F: silty gravelly sand		X		X		X	X	X	X			
03/02/2021		BH137	0.3-0.6	G, A, P	0	F: silty clay											X	
03/02/2021		BH137	1.0-1.2	G, P	0	Silty clay						X	X	X				
03/02/2021		BH137	1.5-1.7	G, P	0	Silty clay											X	
01/02/2021		BH138	0.05-0.3	G, A, P	0	F: silty clay	X			X								
01/02/2021		BH138	0.3-0.5	G, P	0	Silty clay						X	X	X			X	
01/02/2021		BH138	0.5-0.7	G, P	0	Silty clay												
01/02/2021		BH138	0.7-0.85	G, P	0	Siltstone						X	X	X			X	
01/02/2021		BH138	1.2-1.4	G, P	0	Siltstone						X	X	X				
01/02/2021		BH139	0.05-0.3	G, A, P	0	F: silty sand		X		X								
01/02/2021		BH139	0.3-0.5	G, P	0	Silty clay						X	X	X			X	
01/02/2021		BH139	0.6-0.8	G, P	0	Siltstone						X	X	X			X	
01/02/2021		BH140	0.05-0.3	G, A, P	0	F: silty gravelly sand	X			X								
01/02/2021		BH140	0.3-0.5	G, A, P	0	F: silty gravelly sand		X				X	X	X			X	

01/02/2021		BH140	0.7-0.9	G, P	0	Silty clay						X	X	X			X	
01/02/2021		BH140	1.2-1.4	P	NA	Silty clay												
01/02/2021		BH140	1.6-1.8	G, P	0	Siltstone												
01/02/2021		BH140	1.8-2.0	G	0	Siltstone						X	X	X				
05/02/2021		BH141	0-0.2	G, A	0	F: silty sand		X		X								
05/02/2021		BH141	0.3-0.4	G	0	F: silty clay												
02/02/2021		BH142	0-0.2	G, A, P	0	F: silty gravelly clay		X				X	X	X				
02/02/2021		BH142	0.5-0.9S	G, A, P	0	F: silty clay				X		X	X	X			X	
02/02/2021		BH142	1.2-1.4	G, P	0	Silty clay						X	X	X			X	
02/02/2021		BH142	1.6-1.9	G, P	0	Silty clay												
05/02/2021		BH143	0-0.2	G, A, P	0	F: silty sand gravel	X			X								
05/02/2021		BH143	0.2-0.4	G, A, P	0	F: silty clay						X	X	X			X	
05/02/2021		BH143	0.5-0.8	G, A, P	0	Silty clay											X	
05/02/2021		BH143	1.3-1.5	G, P	0.2	Siltstone						X	X	X				
05/02/2021		BH143	2.5-3.0	G	0	Siltstone												
05/02/2021		BH143	4.0-4.5	G	0	Siltstone												
05/02/2021		BH143	5.5-6.0	G	0	Siltstone												
05/02/2021		BH143	7.4-7.6	G	1.2	Siltstone						X	X	X				
05/02/2021	189	TP144	0-0.2	G, A, P	0	F: silty sand	X			X								
05/02/2021	190	TP144	0.2-0.4	G, P	0	Silty clay						X	X	X			X	
05/02/2021	191	TP144	0.7-0.9	G, P	0	Silty clay												
(234). 05/02/2021	NA.	TP144	1.2-1.3	P	NA	Silty clay						X	X	X			X	
05/02/2021	192	TP144	1.7-1.9	G, P	0	Silty clay												
05/02/2021	193	TP144	2.1-2.2	G, P	0	Silty clay						X	X	X				
03/02/2021		BH14S	0-0.2	G, A	0	F: silty clay	X											
03/02/2021		BH14S	0.5-0.9S	G, A	0	F: silty clay		X										
03/02/2021		BH14S	1.5-1.9S	G, A	0	F: silty clay												
03/02/2021		BH14S	2.5-2.7	G	0	Siltstone												
01/02/2021		BH146	0-0.2	G	0	F: silty sandy clay		X		X								
01/02/2021		BH146	0.3-0.5	G, A	0	F: silty clay												
01/02/2021		BH146	1.3-1.5	G, A	0	F: silty clay		X		X								
01/02/2021		BH146	2.3-2.4	G, A	0	F: silty clay												
01/02/2021		BH146	3.3-3.6	G, A	0	F: silty clay												
01/02/2021		BH146	3.6-3.8	G	0	Siltstone												
01/02/2021		SDUP1	-	G	NA	Soil duplicate		X										
01/02/2021		SDUP2	-	G	NA	Soil duplicate												
01/02/2021		SDUP3	-	G	NA	Soil duplicate												
02/02/2021		SDUP4	-	G	NA	Soil duplicate		X										
02/02/2021		SDUP5	-	G	NA	Soil duplicate												
02/02/2021		SDUP6	-	G	NA	Soil duplicate												
03/02/2021		SDUP7	-	G	NA	Soil duplicate	X											
03/02/2021		SDUP8	-	G	NA	Soil duplicate												
03/02/2021		SDUP9	-	G	NA	Soil duplicate												
04/02/2021		SDUP10	-	G	NA	Soil duplicate	X											
04/02/2021		SDUP11	-	G	NA	Soil duplicate												
04/02/2021		SDUP12	-	G	NA	Soil duplicate												

05/02/2021		SDUP13	-	G	NA	Soil duplicate												
05/02/2021		SDUP14	-	G	NA	Soil duplicate												
03/02/2021		SDUP101	-	G	NA	Soil duplicate		X	PLEASE SEND TO VIC									
03/02/2021		SDUP102	-	G	NA	Soil duplicate	X		PLEASE SEND TO VIC									
03/02/2021		SDUP103	-	G	NA	Soil duplicate		X	PLEASE SEND TO VIC									
04/02/2021		SDUP104	-	G	NA	Soil duplicate												
04/02/2021		SDUP105	-	G	NA	Soil duplicate												
04/02/2021		SDUP106	-	G	NA	Soil duplicate												
04/02/2021		SDUP107	-	G	NA	Soil duplicate												
04/02/2021		SDUP108	-	G	NA	Soil duplicate												
05/02/2021		SDUP109	-	G	NA	Soil duplicate												
05/02/2021		SDUP110	-	G	NA	Soil duplicate												
05/02/2021		SDUP111	-	G	NA	Soil duplicate	X		PLEASE SEND TO VIC									
03/02/2021		FR1-SPT	-	V	NA	Water					X							
05/02/2021		FR2-SPT	-	V	NA	Water					X							
01/02/2021		TB-S1	-	V	NA	Soil blank					X							
03/02/2021		TB-S2	-	V	NA	Soil blank					X							
01/02/2021		TS-S1	-	V	NA	Soil spike					X							
01/02/2021		TS-S2	-	V	NA	Soil spike					X							
29/01/2021		FCF1	Surface	A	NA	FCF (23.10g)			X									

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag		
Relinquished By: VB	Date: 09-02-2021	Time:	Received By:	Date:

Rec'd : 10/02/2021 10:15 IP 15.8°C

ASS bags for:

JKE ID		ERS ID
BH113	0-0.2	64
BH113	0.2-0.4	65
BH134	0-0.2	145
	0.3-0.5	146
	07-0.9	233 ← originally NR
	1.2-1.4	147
	1.5-1.95	148
BH143	0-0.2	181
	0.2-0.4	182
	0.5-0.8	183
	1.3-1.5	184
BH144	0-0.2	189
	0.2-0.4	190
	0.7-0.9	191
	1.2-1.3	234 ← originally NR
	1.7-1.9	192
	2.1-2.2	193.

Geoff Weir

From: Alistair Mitchell <AMitchell@jkenvironments.com.au>
Sent: Wednesday, 10 February 2021 2:46 PM
To: Geoff Weir
Subject: RE: BH128/2.1-2.3 pics

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Geoff,

You are correct the dark sample belongs with the bag and is labelled correctly.

The red brown 261320-232 should be labelled BH129 (2.0-2.2).

Thanks,

Regards
Alistair Mitchell
Environmental Scientist

JK Group are now predominantly working from our office. Please contact us by mobile phone rather than landline as some staff are still working from home.

T: +612 9888 5000
D: 0421 687 953
E: AMitchell@jkenvironments.com.au
www.jkenvironments.com.au

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MACQUARIE PARK NSW 2113

JKEnvironments

This email and any attachments are confidential and may be privileged in which case neither is intended to be waived. If you have received this message in error, please notify us and remove it from your system. It is your responsibility to check any attachments for viruses and defects before opening or sending them on. At the Company's discretion we may send a paper copy for confirmation. In the event of any discrepancy between paper and electronic versions the paper version is to take precedence.

From: Geoff Weir [mailto:GWeir@envirolab.com.au]
Sent: Wednesday, 10 February 2021 2:37 PM
To: Vittal Boggaram <VBoggaram@jkenvironments.com.au>; Alistair Mitchell <AMitchell@jkenvironments.com.au>
Subject: FW: BH128/2.1-2.3 pics

Pls see photos attached

From: Login <Login@envirolab.com.au>
Sent: Wednesday, 10 February 2021 2:25 PM
To: Geoff Weir <GWeir@envirolab.com.au>
Subject: BH128/2.1-2.3 pics

Hey Geoff the bag is down at asbestos but looks the same as the dark soil sample. Let me know if you want me to go down and get it
-KG

Get Outlook for iOS

Geoff Weir

From: Alistair Mitchell <AMitchell@jkenvironments.com.au>
Sent: Wednesday, 10 February 2021 1:28 PM
To: Geoff Weir
Cc: Vittal Boggaram
Subject: RE: Wetherill PArk

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Geoff,

Please see red regarding below samples:

BH129 2.8-3.0 - NO TESTING – Remove from COC
BH134 0.7-0.9 - NO TESTING – Remove from COC
TP144 1.2-1.3 - TESTING REQD – Change the testing for pH/EC, Sulfate/Chloride, Resistivity and ASS pH F+ pH FOX to TP144 0.7-0.9 -199. — NO. Because TP144 1.2-1.3 we ended up receiving later.

Also – we got 2 samples labelled the same but that look different, - Can you send me a photos of both jars labels and soil within?

BH128 2.1-2.3 we matched one jar to the soil bag but the other jar looked quite different. We have given that jar an extra lab number 232 and BH128 (a) and placed the sample on hold.

All TP102 samples labelled as TP103 - we have assumed they should be TP102. – Yes they should be please amend.

No NEPM bag for BH134 0-0.2 – Cancel testing
And BH146 0-0.2 – Change WA 500ml testing to BH145 0-0.2 — 194.

Thanks,

Regards
Alistair Mitchell
Environmental Scientist

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MACQUARIE PARK NSW 2113

JKEnvironments

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From: Vittal Boggaram
Sent: Wednesday, 10 February 2021 12:35 PM

To: Alistair Mitchell <AMitchell@jkenvironments.com.au>
Subject: FW: Wetherill PArk

Can you please check

Regards
Vittal Boggaram
Principal Associate | Environmental Scientist

JK Group are now predominantly working from our office. Please contact us by mobile phone rather than landline as some staff are still working from home.

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From: Geoff Weir <GWeir@envirolab.com.au>
Sent: Wednesday, 10 February 2021 12:34 PM
To: Vittal Boggaram <VBoggaram@jkenvironments.com.au>
Subject: Wetherill PArk

Hi Vittal,

There a few missing samples,

BH129 2.8-3.0 - NO TESTING
BH134 0.7-0.9 - NO TESTING
TP144 1.2-1.3 - TESTING REQD

Also – we got 2 samples labelled the same but that look different,

BH128 2.1-2.3 we matched one jar to the soil bag but the other jar looked quite different. We have given that jar an extra lab number 232 and BH128 (a) and placed the sample on hold.

All TP102 samples labelled as TP103 - we have assumed they should be TP102.

No NEPM bag for BH134 0-0.2
And BH146 0-0.2

Please advise.

Kind Regards,

Geoff Weir | Senior Customer Service & Purchasing | Envirolab Services

Great Science. Great Service.

INORGS (bags)

1, 2, 5, ~~10~~, 13, 15, 18

20, 21, 23, 27, ~~29~~ 32, 50

52, ~~64~~, 71, 73, 88, 90

92, 93, 96, 97, 99, 101, 108, 109

111, 113 - 116, 117, 121, 122, 125, 132

133, 136, ~~137~~, 157, 159, 162, 164, 165

167, 168, 170, 171, 174, 177, 178

179, 182, ~~184~~, 188, ~~190~~, ~~195~~

SCB0082

(no bag)

lab dy: 30, 34, 37, 56, 59, 65

77, 103, 146, 148, 152, 184

190, 193, 15, ~~174~~.

NEPM (dried for ads)

1, 7, 10, 26

31, 38, 40, 47, 50

60, ~~64~~ 66, 70, 80

81, 83, 85, 88, 94, 98

107, 112, 115, 120, 122, 130, 137, 143

153, 155, 157, 161, 166, 169, 175

181, 189, 200.

145 No NEPM bag.

198. No NEPM bag.

lab dy:

Ph fox (prepped for Lan)

2, 3, 11, 13, 14

27, 28, 31, 32, 50, 53

55, ~~64~~, 71, 73, 88, 92, 93

96, 99, 101, 108, 113 - 116, 121,

122, 125, 129, 132, 134, ~~135~~ 158, 160.

162, 164, 167, 168, 170, 171, 178, 179

182, ~~183~~ ~~190~~

Rec'd 10102 → 64, 65, 146, 148

182, 183, 190, 234

lab prepare: 65, 146, 148, 183, 190

→ all (YES) soil left over.

TO DRY 9/2: 10, 13, 15, 18, 50, 52, ~~57~~,

121, 122, 125, 162, 164, 165, 167, 168, 170

SCB0082

9/2/21 1415 18.2°C IP

1x 500g bag

2x jr eskies → transferred to 1 esky.

05/02/2021. JKE E31888BR 13:55pm

18.2°C

icepack + ice.

received:

3x ASS eskies → transferred to 1 esky.

2x 500g bag eskies → transfered to 1 esky

4x jrs eskies. → transferred to 3 esky.

04/02/2021 JYE E31888BR 1500

18.4°C

icepack + ice

received:

4x ASS eskies → transfered to 2 eskies.

3x jr eskies → transferred to 2 eskies

2x ~~ASS~~ 500g eskies → transfered to 1 esky.

- KG

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CERTIFICATE OF ANALYSIS 24410

Client Details

Client	JK Environments
Attention	Vittal Boggaram
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E31888BR**
Number of Samples	4 Soil
Date samples received	11/02/2021
Date completed instructions received	11/02/2021

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	17/02/2021
Date of Issue	17/02/2021

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Results Approved By
Chris De Luca, Operations Manager

Authorised By

Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		24410-1	24410-2	24410-3	24410-4
Your Reference	UNITS	SDUP101	SDUP102	SDUP103	SDUP111
Date Sampled		03/02/2021	03/02/2021	03/02/2021	05/02/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	15/02/2021	15/02/2021	15/02/2021	15/02/2021
vTRH C_6 - C_9	mg/kg	<25	<25	<25	<25
vTRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25
TRH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
Naphthalene	mg/kg	<1	<1	<1	<1
Total BTEX	mg/kg	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	87	100	88	90

TRH Soil C10-C40 NEPM					
Our Reference	UNITS	24410-1	24410-2	24410-3	24410-4
Your Reference		SDUP101	SDUP102	SDUP103	SDUP111
Date Sampled		03/02/2021	03/02/2021	03/02/2021	05/02/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50	<50	<50
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50
Surrogate o-Terphenyl	%	89	76	76	77

PAHs in Soil					
Our Reference	UNITS	24410-1	24410-2	24410-3	24410-4
Your Reference		SDUP101	SDUP102	SDUP103	SDUP111
Date Sampled		03/02/2021	03/02/2021	03/02/2021	05/02/2021
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.1	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.3	0.3	<0.1
Pyrene	mg/kg	<0.1	0.3	0.3	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.1	0.2	<0.1
Chrysene	mg/kg	<0.1	0.1	0.1	<0.1
Benzo(b,j&k)fluoranthene	mg/kg	<0.2	0.2	0.3	<0.2
Benzo(a)pyrene	mg/kg	0.06	0.15	0.19	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.1	0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.1	0.2	<0.1
Total +ve PAH's	mg/kg	0.06	1.6	2.0	<0.05
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d_{14}	%	108	114	114	122

Speciated Phenols in Soil			
Our Reference		24410-2	24410-4
Your Reference	UNITS	SDUP102	SDUP111
Date Sampled		03/02/2021	05/02/2021
Type of sample		Soil	Soil
Date extracted	-	12/02/2021	12/02/2021
Date analysed	-	13/02/2021	13/02/2021
Phenol	mg/kg	<0.2	<0.2
2-Chlorophenol	mg/kg	<0.2	<0.2
2-Methylphenol	mg/kg	<0.2	<0.2
3/4-Methylphenol	mg/kg	<0.4	<0.4
2-Nitrophenol	mg/kg	<0.2	<0.2
2,4-Dimethylphenol	mg/kg	<0.2	<0.2
2,4-Dichlorophenol	mg/kg	<0.2	<0.2
2,6-Dichlorophenol	mg/kg	<0.2	<0.2
2,4,5-Trichlorophenol	mg/kg	<0.2	<0.2
2,4,6-Trichlorophenol	mg/kg	<0.2	<0.2
2,4-Dinitrophenol	mg/kg	<2	<2
4-Nitrophenol	mg/kg	<4	<4
2,3,4,6-Tetrachlorophenol	mg/kg	<0.2	<0.2
Pentachlorophenol	mg/kg	<1	<1
4-Chloro-3-Methylphenol	mg/kg	<2	<2
Total +ve Cresols	mg/kg	<0.2	<0.2
Total +ve Phenols	mg/kg	<0.2	<0.2
Surrogate Phenol-d_6	%	88	90
Surrogate 2-fluorophenol	%	80	82

OCP in Soil			
Our Reference	UNITS	24410-2	24410-4
Your Reference		SDUP102	SDUP111
Date Sampled		03/02/2021	05/02/2021
Type of sample		Soil	Soil
Date extracted	-	12/02/2021	12/02/2021
Date analysed	-	13/02/2021	13/02/2021
alpha-BHC	mg/kg	<0.1	<0.1
Hexachlorobenzene	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve reported Aldrin + Dieldrin	mg/kg	<0.1	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate 2-chlorophenol-d4	%	84	80

PCBs in Soil			
Our Reference		24410-2	24410-4
Your Reference	UNITS	SDUP102	SDUP111
Date Sampled		03/02/2021	05/02/2021
Type of sample		Soil	Soil
Date extracted	-	12/02/2021	12/02/2021
Date analysed	-	13/02/2021	13/02/2021
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate 2-fluorobiphenyl	%	88	98

Acid Extractable metals in soil					
Our Reference	UNITS	24410-1	24410-2	24410-3	24410-4
Your Reference		SDUP101	SDUP102	SDUP103	SDUP111
Date Sampled		03/02/2021	03/02/2021	03/02/2021	05/02/2021
Type of sample		Soil	Soil	Soil	Soil
Date digested	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021
Arsenic	mg/kg	16	7	10	5
Cadmium	mg/kg	<0.4	<0.4	0.4	<0.4
Chromium	mg/kg	23	11	31	26
Copper	mg/kg	23	20	76	30
Lead	mg/kg	26	9	64	16
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	9	20	18	37
Zinc	mg/kg	50	41	260	92

Moisture					
Our Reference		24410-1	24410-2	24410-3	24410-4
Your Reference	UNITS	SDUP101	SDUP102	SDUP103	SDUP111
Date Sampled		03/02/2021	03/02/2021	03/02/2021	05/02/2021
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	12/02/2021	12/02/2021	12/02/2021	12/02/2021
Date analysed	-	13/02/2021	13/02/2021	13/02/2021	13/02/2021
Moisture	%	15	13	19	13

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	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. 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-021/022	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS. 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	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Note, For OCs 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	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Note, the Total +ve Cresols or Phenols PQL is reflective of the lowest individual PQL and is therefore" Total +ve Cresols or Phenols" is simply a sum of the positive individual Cresols or Phenols.

Method ID	Methodology Summary
Org-022	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-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. 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-1	[NT]
Date extracted	-			12/02/2021	1	12/02/2021	12/02/2021		12/02/2021	[NT]
Date analysed	-			15/02/2021	1	15/02/2021	15/02/2021		15/02/2021	[NT]
vTRH C_6 - C_9	mg/kg	25	Org-023	<25	1	<25	<25	0	93	[NT]
vTRH C_6 - C_{10}	mg/kg	25	Org-023	<25	1	<25	<25	0	93	[NT]
Benzene	mg/kg	0.2	Org-023	<0.2	1	<0.2	<0.2	0	87	[NT]
Toluene	mg/kg	0.5	Org-023	<0.5	1	<0.5	<0.5	0	92	[NT]
Ethylbenzene	mg/kg	1	Org-023	<1	1	<1	<1	0	92	[NT]
m+p-xylene	mg/kg	2	Org-023	<2	1	<2	<2	0	96	[NT]
o-Xylene	mg/kg	1	Org-023	<1	1	<1	<1	0	92	[NT]
Naphthalene	mg/kg	1	Org-023	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-023	105	1	87	95	9	104	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			12/02/2021	2	12/02/2021	12/02/2021		12/02/2021	[NT]
Date analysed	-			13/02/2021	2	13/02/2021	13/02/2021		13/02/2021	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-020	<50	2	<50	<50	0	105	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-020	<100	2	<100	<100	0	95	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-020	<100	2	<100	<100	0	80	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-020	<50	2	<50	<50	0	105	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-020	<100	2	<100	<100	0	95	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-020	<100	2	<100	<100	0	80	[NT]
Surrogate o-Terphenyl	%		Org-020	92	2	76	76	0	86	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	24410-4
Date extracted	-			12/02/2021	2	12/02/2021	12/02/2021		12/02/2021	12/02/2021
Date analysed	-			13/02/2021	2	13/02/2021	13/02/2021		13/02/2021	13/02/2021
Naphthalene	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	94	106
Acenaphthylene	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	96	108
Acenaphthene	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	98	105
Phenanthrene	mg/kg	0.1	Org-022	<0.1	2	0.1	<0.1	0	102	109
Anthracene	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-022	<0.1	2	0.3	0.2	40	96	110
Pyrene	mg/kg	0.1	Org-022	<0.1	2	0.3	0.2	40	100	114
Benzo(a)anthracene	mg/kg	0.1	Org-022	<0.1	2	0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-022	<0.1	2	0.1	<0.1	0	100	110
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-022	<0.2	2	0.2	0.3	40	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-022	<0.05	2	0.15	0.17	12	96	108
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-022	<0.1	2	0.1	0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-022	<0.1	2	0.1	0.2	67	[NT]	[NT]
Surrogate p-Terphenyl-d_{14}	%		Org-022	106	2	114	110	4	92	104

QUALITY CONTROL: Speciated Phenols in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	24410-4
Date extracted	-		Org-022	12/02/2021	2	12/02/2021	12/02/2021		12/02/2021	12/02/2021
Date analysed	-		Org-022	13/02/2021	2	13/02/2021	13/02/2021		13/02/2021	13/02/2021
Phenol	mg/kg	0.2	Org-022	<0.2	2	<0.2	<0.2	0	96	108
2-Chlorophenol	mg/kg	0.2	Org-022	<0.2	2	<0.2	<0.2	0	96	108
2-Methylphenol	mg/kg	0.2	Org-022	<0.2	2	<0.2	<0.2	0	102	105
3/4-Methylphenol	mg/kg	0.4	Org-022	<0.4	2	<0.4	<0.4	0	[NT]	[NT]
2-Nitrophenol	mg/kg	0.2	Org-022	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
2,4-Dimethylphenol	mg/kg	0.2	Org-022	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
2,4-Dichlorophenol	mg/kg	0.2	Org-022	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
2,6-Dichlorophenol	mg/kg	0.2	Org-022	<0.2	2	<0.2	<0.2	0	94	102
2,4,5-Trichlorophenol	mg/kg	0.2	Org-022	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
2,4,6-Trichlorophenol	mg/kg	0.2	Org-022	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
2,4-Dinitrophenol	mg/kg	2	Org-022	<2	2	<2	<2	0	[NT]	[NT]
4-Nitrophenol	mg/kg	4	Org-022	<4	2	<4	<4	0	[NT]	[NT]
2,3,4,6-Tetrachlorophenol	mg/kg	0.2	Org-022	<0.2	2	<0.2	<0.2	0	[NT]	[NT]
Pentachlorophenol	mg/kg	1	Org-022	<1	2	<1	<1	0	76	#
4-Chloro-3-Methylphenol	mg/kg	2	Org-022	<2	2	<2	<2	0	[NT]	[NT]
Surrogate Phenol-d_6	%		Org-022	90	2	88	86	2	86	92
Surrogate 2-fluorophenol	%		Org-022	88	2	80	82	2	82	86

QUALITY CONTROL: OCP in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	24410-4
Date extracted	-			12/02/2021	2	12/02/2021	12/02/2021		12/02/2021	12/02/2021
Date analysed	-			13/02/2021	2	13/02/2021	13/02/2021		13/02/2021	13/02/2021
alpha-BHC	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	96	102
Hexachlorobenzene	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	94	105
gamma-BHC	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	104	118
delta-BHC	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	106	118
Heptachlor Epoxide	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	96	110
gamma-Chlordane	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	98	113
alpha-chlordane	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	102	116
Dieldrin	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	100	116
Endrin	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	104	111
Endrin Aldehyde	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	90	110
Methoxychlor	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-chlorophenol-d4	%		Org-022	80	2	84	84	0	78	88

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	24410-4
Date extracted	-			12/02/2021	2	12/02/2021	12/02/2021		12/02/2021	12/02/2021
Date analysed	-			13/02/2021	2	13/02/2021	13/02/2021		13/02/2021	13/02/2021
Aroclor 1016	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	90	109
Aroclor 1260	mg/kg	0.1	Org-022	<0.1	2	<0.1	<0.1	0	[NT]	[NT]
Surrogate 2-fluorobiphenyl	%		Org-022	96	2	88	88	0	88	98

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			12/02/2021	1	12/02/2021	12/02/2021		12/02/2021	[NT]
Date analysed	-			13/02/2021	1	13/02/2021	13/02/2021		13/02/2021	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	1	16	13	21	107	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	1	<0.4	<0.4	0	110	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	1	23	20	14	117	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	1	23	22	4	104	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	1	26	20	26	113	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	1	<0.1	<0.1	0	114	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	1	9	8	12	107	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	1	50	45	11	109	[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

PHENOLS: # Low spike recovery was obtained for Pentachlorophenol due to sample matrix interferences. However, an acceptable recovery was obtained for the LCS.

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Vittal Boggaram

Sample Login Details

Your reference	E31888BR
Envirolab Reference	24410
Date Sample Received	11/02/2021
Date Instructions Received	11/02/2021
Date Results Expected to be Reported	17/02/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	4 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	13.6
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams	Chris De Luca
Phone: 03 9763 2500	**Phone: 03 9763 2500**
Fax: 03 9763 2633	**Fax: 03 9763 2633**
Email: padams@envirolab.com.au	**Email: cdeluca@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

Sample ID	vTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	Speciated Phenols in Soil	OCP in Soil	PCBsin Soil	Acid Extractable metalsin soil
SDUP101	✓	✓	✓				✓
SDUP102	✓	✓	✓	✓	✓	✓	✓
SDUP103	✓	✓	✓				✓
SDUP111	✓	✓	✓	✓	✓	✓	✓

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

Additional Info

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

Relinquished by: ELS Syd

K.Core 10/02/2021 10:00

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E31888BR Date Results Required: STANDARD Page: 1 of 1	FROM: JKEnvironments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Vittal Boggaram vboggaram@jkenvironments.com.au

Location: WETHERILL PARK, NSW

Sampler: AM / CR

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 7	Combo 3	Asbestos	Asbestos WA 500mL	BTEX	pH / EC	Sulfate / Chloride	Resistivity	ECe (texture)	CEC	ASS pH F + pH FOX	SCR
03/02/2021	1	TP101	0-0.3	G, A, P	0	F: silty clay		X		X		X	X	X				
03/02/2021	2	TP101	0.4-0.6	G, P	0	Silty clay						X	X	X	X		X	
03/02/2021	3	TP101	1.1-1.3	G, P	0	Silty clay											X	
03/02/2021	4	TP101	1.5-1.6	P	0	Silty clay												
03/02/2021	5	TP101	1.9-2.0	G, P	0	Silty clay						X	X	X				
03/02/2021	6	TP102	0-0.25	G, A	0	F: silty clay	X											
03/02/2021	7	TP102	0.3-0.5	G, A	0	F: silty clay		X		X								
03/02/2021	8	TP102	0.75-0.9	G	0	Silty clay												
02/02/2021	9	BH103	0-0.2	G, A, P	0	F: silty clay		X										
02/02/2021	10	BH103	0.4-0.8	G, A, P	0.1	F: silty clay		X		X		X	X	X	X	X		
02/02/2021	11	BH103	1.4-1.8	G, A, P	0	F: silty clay											X	
02/02/2021	12	BH103	1.8-2.0	G, A, P	0	F: silty clay												
02/02/2021	13	BH103	2.5-2.7	G, A, P	0.1	Silty clay						X	X	X			X	
02/02/2021	14	BH103	3.0-3.45	G, A, P	0	Silty clay											X	
02/02/2021	15	BH103	3.6-3.9	G	0.1	Siltstone						X	X	X	X			
02/02/2021	16	BH103	4.3-4.5	G	0.1	Siltstone												
02/02/2021	17	BH103	5.5-6.0	G	0.2	Siltstone												
02/02/2021	18	BH103	7.5-8.0	G	0.2	Siltstone						X	X	X				
03/02/2021	19	TP104	0-0.1	G, A, P	0	F: silty sand	X											
03/02/2021	20	TP104	0.2-0.4	G, A, P	0	F: silty clayey sand		X				X	X	X	X	X		
03/02/2021	21	TP104	0.6-0.8	G, P	0	Silty clay						X	X	X				
03/02/2021	22	TP104	1.1-1.3	P	NA	Silty clay												
03/02/2021	23	TP104	1.6-1.8	G, P	NA	Silty clay						X	X	X				
05/02/2021	24	BH105	0.03-0.3	G, A	0	F: silty sandy gravel		X										
05/02/2021	25	BH105	0.8-1.0	G	0.2	Silty clay												
04/02/2021	26	BH106	0.19-0.4	G, A, P	0	F: silty sand	X			X								
04/02/2021	27	BH106	0.8-0.95	G, P	0	Silty clay		X				X	X	X		X	X	
04/02/2021	28	BH106	1.3-1.5	G, P	0	Siltstone											X	
04/02/2021	29	BH106	1.8-2.0	G	0	Siltstone						X	X	X				
04/02/2021	30	BH106	7.5-8.0	G	0	Siltstone						X	X	X	X			
04/02/2021	31	BH107	0.22-0.5	G, A, P	0	F: silty clay	X			X							X	
04/02/2021	32	BH107	0.5-0.7 (0.8)	G, P	0	Silty clay						X	X	X			X	
04/02/2021	33	BH107	0.8-0.95	G, P	0	Siltstone												
04/02/2021	34	BH107	1.3-1.5	G	0	Siltstone						X	X	X				

ENVIROLAB GROUP Chatswood Ph: (02) 9910 6200

SCB0082

Job No: 261320

Date Received: 9/2/21, 4/2, 5/2

Time Received: 1500, 1355, 1415

Received By: KG

Temp: Cool/Ambient

Security: Intact

05/02/2021	216	SDUP13	-	G	NA	Soil duplicate													
05/02/2021	217	SDUP14	-	G	NA	Soil duplicate													
1 03/02/2021	215	SDUP101	-	G	NA	Soil duplicate		X	PLEASE SEND TO VIC										
2 03/02/2021	.	SDUP102	-	G	NA	Soil duplicate	X		PLEASE SEND TO VIC										
3 03/02/2021	.	SDUP103	-	G	NA	Soil duplicate		X	PLEASE SEND TO VIC										
04/02/2021	218	SDUP104	-	G	NA	Soil duplicate													
04/02/2021	219	SDUP105	-	G	NA	Soil duplicate													
04/02/2021	220	SDUP106	-	G	NA	Soil duplicate													
04/02/2021	221	SDUP107	-	G	NA	Soil duplicate													
04/02/2021	222	SDUP108	-	G	NA	Soil duplicate													
05/02/2021	223	SDUP109	-	G	NA	Soil duplicate													
05/02/2021	224	SDUP110	-	G	NA	Soil duplicate													
4 05/02/2021	-	SDUP111	-	G	NA	Soil duplicate	X		PLEASE SEND TO VIC										
03/02/2021	225	FR1-SPT	-	V	NA	Water					X								
05/02/2021	226	FR2-SPT	-	V	NA	Water					X								
01/02/2021	227	TB-S1	-	V	NA	Soil blank					X								
03/02/2021	228	TB-S2	-	V	NA	Soil blank					X								
01/02/2021	229	TS-S1	-	V	NA	Soil spike					X								
01/02/2021	230	TS-S2	-	V	NA	Soil spike					X								
29/01/2021	231	FCF1	Surface	A	NA	FCF (23.10g)			X										

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag		
Relinquished By:	Date: 09-02-2021	Time:	Received By: ELS Syd KG Date: 9/2/21

1/2/21 232 BH128 (2.1-2.3) G

Clay

(extra) - KG.

25320

Relinquished by: ELS Syd

K-Gore

10-02-2021 10:00

Envirolab Services
25 Research Drive
Croydon South VIC 3136
Ph. (03) 9763 2500

Job No: 24410

Date Received: 11/2/21

Time Received: 3:10pm

Received By: KS

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

13.6°C

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
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www.envirolab.com.au

CERTIFICATE OF ANALYSIS 261320-A

Client Details

Client	JK Environments
Attention	Vittal Boggaram, Alistair Mitchell, C Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E31888BR, Wetherill Park**
Number of Samples	231 soil, 2 water, 1 material
Date samples received	04/02/2021
Date completed instructions received	18/02/2021

Analysis Details

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

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

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

Report Details

Date results requested by	25/02/2021
Date of Issue	25/02/2021

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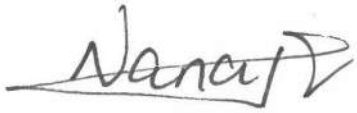
Results Approved By
Giovanni Agosti, Group Technical Manager
Ken Nguyen, Reporting Supervisor
Priya Samarawickrama, Senior Chemist

Authorised By



Nancy Zhang, Laboratory Manager

Metals in TCLP USEPA1311						
Our Reference		261320-A-20	261320-A-24	261320-A-38	261320-A-49	261320-A-83
Your Reference	UNITS	TP104	BH105	BH108	BH111	BH119
Depth		0.2-0.4	0.03-0.3	0.03-0.2	0.2-0.5	0.16-0.3
Date Sampled		3/02/2021	5/02/2021	4/02/2021	2/02/2021	2/02/2021
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	22/02/2021	22/02/2021	22/02/2021	22/02/2021	22/02/2021
Date analysed	-	22/02/2021	22/02/2021	22/02/2021	22/02/2021	22/02/2021
pH of soil for fluid# determ.	pH units	8.4	9.7	9.7	8.7	10.0
pH of soil TCLP (after HCl)	pH units	1.7	1.8	1.8	1.8	2.1
Extraction fluid used	-	1	1	1	1	1
pH of final Leachate	pH units	5.0	5.1	5.1	5.0	5.2
Nickel in TCLP	mg/L	0.03	0.3	0.2	0.2	0.03

Metals in TCLP USEPA1311		
Our Reference		261320-A-145
Your Reference	UNITS	BH134
Depth		0-0.2
Date Sampled		5/02/2021
Type of sample		soil
Date extracted	-	22/02/2021
Date analysed	-	22/02/2021
pH of soil for fluid# determ.	pH units	9.8
pH of soil TCLP (after HCl)	pH units	1.9
Extraction fluid used	-	1
pH of final Leachate	pH units	5.2
Nickel in TCLP	mg/L	0.1

CEC						
Our Reference		261320-A-24	261320-A-38	261320-A-49	261320-A-83	261320-A-145
Your Reference	UNITS	BH105	BH108	BH111	BH119	BH134
Depth		0.03-0.3	0.03-0.2	0.2-0.5	0.16-0.3	0-0.2
Date Sampled		5/02/2021	4/02/2021	2/02/2021	2/02/2021	5/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	23/02/2021	23/02/2021	23/02/2021	23/02/2021	23/02/2021
Date analysed	-	23/02/2021	23/02/2021	23/02/2021	23/02/2021	23/02/2021
Exchangeable Ca	meq/100g	15	18	10	29	23
Exchangeable K	meq/100g	0.8	0.6	0.7	2.1	0.6
Exchangeable Mg	meq/100g	1.4	7.8	5.0	1.6	8.0
Exchangeable Na	meq/100g	2.9	1.5	0.74	2.3	2.0
Cation Exchange Capacity	meq/100g	20	28	16	35	34

Chromium Suite						
Our Reference		261320-A-3	261320-A-14	261320-A-50	261320-A-65	261320-A-73
Your Reference	UNITS	TP101	BH103	BH111	BH113	BH116
Depth		1.1-1.3	3.0-3.45	0.5-0.95	0.2-0.4	1.2-1.4
Date Sampled		3/02/2021	2/02/2021	2/02/2021	5/02/2021	4/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	22/02/2021	22/02/2021	22/02/2021	22/02/2021	22/02/2021
Date analysed	-	22/02/2021	22/02/2021	22/02/2021	22/02/2021	22/02/2021
pH $_{kcl}$	pH units	4.0	4.4	4.5	5.3	4.2
s-TAA pH 6.5	%w/w S	0.04	0.02	0.01	<0.01	0.04
TAA pH 6.5	moles H^+ /t	24	10	8	<5	22
Chromium Reducible Sulfur	%w/w	<0.005	<0.005	<0.005	<0.005	<0.005
a-Chromium Reducible Sulfur	moles H^+ /t	<3	<3	<3	<3	<3
S_{HCl}	%w/w S	0.044	0.007	[NT]	[NT]	0.022
S_{KCl}	%w/w S	0.033	0.005	0.009	0.007	0.017
S_{NAS}	%w/w S	0.010	<0.005	[NT]	[NT]	0.005
ANC_{BT}	% $CaCO_3$	NT	NT	NT	NT	NT
s-ANC_{BT}	%w/w S	NT	NT	NT	NT	NT
s-Net Acidity	%w/w S	0.052	0.022	0.016	0.0060	0.040
a-Net Acidity	moles H^+ /t	32	14	10	<5	25
Liming rate	kg $CaCO_3$ /t	2	1	0.8	<0.75	2
a-Net Acidity without ANCE	moles H^+ /t	32	14	10	<5	25
Liming rate without ANCE	kg $CaCO_3$ /t	2.4	1.0	0.75	<0.75	1.9
s-Net Acidity without ANCE	%w/w S	0.052	0.022	0.016	0.0060	0.040

Chromium Suite						
Our Reference		261320-A-92	261320-A-101	261320-A-113	261320-A-125	261320-A-162
Your Reference	UNITS	TP121	BH123	TP125	BH128	BH138
Depth		1.8-1.9	1.5-1.65	0.2-0.4	2.5-2.7	0.3-0.5
Date Sampled		4/02/2021	3/02/2021	4/02/2021	1/02/2021	1/02/2021
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	22/02/2021	22/02/2021	22/02/2021	22/02/2021	22/02/2021
Date analysed	-	22/02/2021	22/02/2021	22/02/2021	22/02/2021	22/02/2021
pH $_{kcl}$	pH units	4.2	4.1	4.6	4.4	4.3
s-TAA pH 6.5	%w/w S	0.1	0.07	0.02	0.03	0.11
TAA pH 6.5	moles H^+ /t	60	41	16	20	66
Chromium Reducible Sulfur	%w/w	<0.005	<0.005	<0.005	<0.005	<0.005
a-Chromium Reducible Sulfur	moles H^+ /t	<3	<3	<3	<3	<3
S_{HCl}	%w/w S	0.051	0.006	[NT]	0.015	0.027
S_{KCl}	%w/w S	0.053	<0.005	0.023	0.010	0.026
S_{NAS}	%w/w S	<0.005	<0.005	[NT]	<0.005	<0.005
ANC_{BT}	% $CaCO_3$	NT	NT	NT	NT	NT
s-ANC_{BT}	%w/w S	NT	NT	NT	NT	NT
s-Net Acidity	%w/w S	0.099	0.068	0.029	0.040	0.11
a-Net Acidity	moles H^+ /t	62	42	18	25	70
Liming rate	kg $CaCO_3$ /t	5	3	1	2	5
a-Net Acidity without ANCE	moles H^+ /t	62	42	18	25	70
Liming rate without ANCE	kg $CaCO_3$ /t	4.6	3.2	1.4	1.9	5.3
s-Net Acidity without ANCE	%w/w S	0.099	0.068	0.029	0.040	0.11

Chromium Suite			
Our Reference		261320-A-179	261320-A-190
Your Reference	UNITS	BH142	TP144
Depth		1.2-1.4	0.2-0.4
Date Sampled		2/02/2021	5/02/2021
Type of sample		soil	soil
Date prepared	-	22/02/2021	22/02/2021
Date analysed	-	22/02/2021	22/02/2021
pH $_{kcl}$	pH units	4.0	3.8
s-TAA pH 6.5	%w/w S	0.06	0.1
TAA pH 6.5	moles H^+ /t	34	61
Chromium Reducible Sulfur	%w/w	<0.005	<0.005
a-Chromium Reducible Sulfur	moles H^+ /t	<3	<3
S_{HCl}	%w/w S	0.017	0.035
S_{KCl}	%w/w S	0.016	0.031
S_{NAS}	%w/w S	<0.005	<0.005
ANC_{BT}	% $CaCO_3$	NT	NT
s-ANC_{BT}	%w/w S	NT	NT
s-Net Acidity	%w/w S	0.057	0.10
a-Net Acidity	moles H^+ /t	36	66
Liming rate	kg $CaCO_3$ /t	3	5
a-Net Acidity without ANCE	moles H^+ /t	36	66
Liming rate without ANCE	kg $CaCO_3$ /t	2.7	4.9
s-Net Acidity without ANCE	%w/w S	0.057	0.10

Method ID	Methodology Summary
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction (zHE) using AS4439 and USEPA 1311.
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-004	Toxicity Characteristic Leaching Procedure (TCLP) using in house method INORG-004. Please note that the mass used may be scaled down from the default based on sample mass available.
Inorg-068	Chromium Reducible Sulfur - Hydrogen Sulfide is quantified by iodometric titration after distillation to determine potential acidity. Based on Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004.
Metals-020	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.

QUALITY CONTROL: Metals in TCLP USEPA1311					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			22/02/2021	[NT]	[NT]	[NT]	[NT]	22/02/2021	[NT]
Date analysed	-			22/02/2021	[NT]	[NT]	[NT]	[NT]	22/02/2021	[NT]
Nickel in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: CEC						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	261320-A-38
Date prepared	-			23/02/2021	24	23/02/2021	23/02/2021		23/02/2021	23/02/2021
Date analysed	-			23/02/2021	24	23/02/2021	23/02/2021		23/02/2021	23/02/2021
Exchangeable Ca	meq/100g	0.1	Metals-020	<0.1	24	15	15	0	104	94
Exchangeable K	meq/100g	0.1	Metals-020	<0.1	24	0.8	0.8	0	116	105
Exchangeable Mg	meq/100g	0.1	Metals-020	<0.1	24	1.4	1.4	0	108	116
Exchangeable Na	meq/100g	0.1	Metals-020	<0.1	24	2.9	3.0	3	112	96

QUALITY CONTROL: Chromium Suite						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			22/02/2021	101	22/02/2021	22/02/2021		22/02/2021	[NT]
Date analysed	-			22/02/2021	101	22/02/2021	22/02/2021		22/02/2021	[NT]
pH $_{kcl}$	pH units		Inorg-068	[NT]	101	4.1	4.1	0	97	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-068	<0.01	101	0.07	0.06	15	[NT]	[NT]
TAA pH 6.5	moles H^+ /t	5	Inorg-068	<5	101	41	40	2	97	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	<0.005	101	<0.005	<0.005	0	[NT]	[NT]
a-Chromium Reducible Sulfur	moles H^+ /t	3	Inorg-068	<3	101	<3	<3	0	109	[NT]
S_{HCl}	%w/w S	0.005	Inorg-068	<0.005	101	0.006	0.006	0	[NT]	[NT]
S_{KCl}	%w/w S	0.005	Inorg-068	<0.005	101	<0.005	0.006	18	[NT]	[NT]
S_{NAS}	%w/w S	0.005	Inorg-068	<0.005	101	<0.005	<0.005	0	[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.05	Inorg-068	<0.05	101	NT	NT		[NT]	[NT]
s-ANC_{BT}	%w/w S	0.05	Inorg-068	<0.05	101	NT	NT		[NT]	[NT]
s-Net Acidity	%w/w S	0.005	Inorg-068	<0.005	101	0.068	0.065	5	[NT]	[NT]
a-Net Acidity	moles H^+ /t	5	Inorg-068	<5	101	42	40	5	[NT]	[NT]
Liming rate	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	101	3	3	0	[NT]	[NT]
a-Net Acidity without ANCE	moles H^+ /t	5	Inorg-068	<5	101	42	40	5	[NT]	[NT]
Liming rate without ANCE	kg $CaCO_3$ /t	0.75	Inorg-068	<0.75	101	3.2	3.0	6	[NT]	[NT]
s-Net Acidity without ANCE	%w/w S	0.005	Inorg-068	<0.005	101	0.068	0.065	5	[NT]	[NT]

QUALITY CONTROL: Chromium Suite						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	190	22/02/2021	22/02/2021		[NT]	[NT]
Date analysed	-			[NT]	190	22/02/2021	22/02/2021		[NT]	[NT]
pH $_{kcl}$	pH units		Inorg-068	[NT]	190	3.8	3.8	0	[NT]	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-068	[NT]	190	0.1	0.1	0	[NT]	[NT]
TAA pH 6.5	moles H^+ /t	5	Inorg-068	[NT]	190	61	61	0	[NT]	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	[NT]	190	<0.005	<0.005	0	[NT]	[NT]
a-Chromium Reducible Sulfur	moles H^+ /t	3	Inorg-068	[NT]	190	<3	<3	0	[NT]	[NT]
S_{HCl}	%w/w S	0.005	Inorg-068	[NT]	190	0.035	0.035	0	[NT]	[NT]
S_{KCl}	%w/w S	0.005	Inorg-068	[NT]	190	0.031	0.028	10	[NT]	[NT]
S_{NAS}	%w/w S	0.005	Inorg-068	[NT]	190	<0.005	0.006	18	[NT]	[NT]
ANC_{BT}	% $CaCO_3$	0.05	Inorg-068	[NT]	190	NT	NT		[NT]	[NT]
s-ANC_{BT}	%w/w S	0.05	Inorg-068	[NT]	190	NT	NT		[NT]	[NT]
s-Net Acidity	%w/w S	0.005	Inorg-068	[NT]	190	0.10	0.11	10	[NT]	[NT]
a-Net Acidity	moles H^+ /t	5	Inorg-068	[NT]	190	66	67	2	[NT]	[NT]
Liming rate	kg $CaCO_3$ /t	0.75	Inorg-068	[NT]	190	5	5	0	[NT]	[NT]
a-Net Acidity without ANCE	moles H^+ /t	5	Inorg-068	[NT]	190	66	67	2	[NT]	[NT]
Liming rate without ANCE	kg $CaCO_3$ /t	0.75	Inorg-068	[NT]	190	4.9	5.1	4	[NT]	[NT]
s-Net Acidity without ANCE	%w/w S	0.005	Inorg-068	[NT]	190	0.10	0.11	10	[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.

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SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Vittal Boggaram, Alistair Mitchell, C Ridley

Sample Login Details

Your reference	E31888BR, Wetherill Park
Envirolab Reference	261320-A
Date Sample Received	04/02/2021
Date Instructions Received	18/02/2021
Date Results Expected to be Reported	25/02/2021

Sample Condition

Samples received in appropriate condition for analysis	Holding time exceedance
No. of Samples Provided	231 soil, 2 water, 1 material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18.2
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Please contact the laboratory within 24 hours if you wish to cancel the aformentioned testing. Otherwise testing will proceed as per the COC and hence invoice accordingly.

Please direct any queries to:

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

Analysis Underway, details on the following page:

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Sample ID	Metals in TCLP USEPA1311	CEC	Chromium Suite	On Hold
TP101-0-0.3				✓
TP101-0.4-0.6				✓
TP101-1.1-1.3			✓	
TP101-1.5-1.6				✓
TP101-1.9-2.0				✓
TP102-0-0.25				✓
TP102-0.3-0.5				✓
TP102-0.75-0.9				✓
BH103-0-0.2				✓
BH103-0.4-0.8				✓
BH103-1.4-1.8				✓
BH103-1.8-2.0				✓
BH103-2.5-2.7				✓
BH103-3.0-3.45			✓	
BH103-3.6-3.9				✓
BH103-4.3-4.5				✓
BH103-5.5-6.0				✓
BH103-7.5-8.0				✓
TP104-0-0.1				✓
TP104-0.2-0.4	✓			
TP104-0.6-0.8				✓
TP104-1.1-1.3				✓
TP104-1.6-1.8				✓
BH105-0.03-0.3	✓	✓		
BH105-0.8-1.0				✓
BH106-0.19-0.4				✓
BH106-0.8-0.95				✓
BH106-1.3-1.5				✓
BH106-1.8-2.0				✓
BH106-7.5-8.0				✓
BH107-0.22-0.5				✓
BH107-0.5-0.7				✓

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Sample ID	Metals in TCLP USEPA1311	CEC	Chromium Suite	On Hold
BH107-0.8-0.95				✓
BH107-1.3-1.5				✓
BH107-2.5-3.0				✓
BH107-4.0-4.5				✓
BH107-5.5-6.0				✓
BH108-0.03-0.2	✓	✓		
BH108-0.2-0.5				✓
BH109-0-0.2				✓
BH109-0.4-0.6				✓
BH109-0.6-0.9				✓
BH109-1.4-1.5				✓
BH109-1.5-1.7				✓
BH109-1.7-1.85				✓
BH109-1.85-2.0				✓
BH110-0-0.2				✓
BH110-0.4-0.5				✓
BH111-0.2-0.5	✓	✓		
BH111-0.5-0.95			✓	
BH111-1.2-1.4				✓
BH111-1.5-1.8				✓
BH111-2.2-2.4				✓
BH111-2.6-2.8				✓
BH111-3.0-3.3				✓
BH111-3.3-3.45				✓
BH111-3.7-4.0				✓
BH111-5.5-6.0				✓
BH111-7.5-8.0				✓
BH112-0-0.2				✓
BH112-0.4-0.5				✓
BH112-1.4-1.5				✓
BH112-1.5-1.7				✓
BH113-0-0.2				✓

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Sample ID	Metals in TCLP USEPA1311	CEC	Chromium Suite	On Hold
BH113-0.2-0.4			✓	
TP114-0-0.2				✓
TP114-0.4-0.5				✓
TP115-0-0.2				✓
TP115-0.2-0.4				✓
BH116-0.03-0.3				✓
BH116-0.3-0.5				✓
BH116-0.7-0.9				✓
BH116-1.2-1.4			✓	
BH116-1.6-1.8				✓
BH116-2.5-3.0				✓
BH116-4.0-4.2				✓
BH116-5.4-5.6				✓
TP117-0-0.2				✓
TP117-0.2-0.5				✓
BH118-0-0.2				✓
BH118-0.2-0.4				✓
BH118-1.3-1.5				✓
BH119-0.16-0.3	✓	✓		
BH119-0.4-0.6				✓
TP120-0-0.2				✓
TP120-0.2-0.4				✓
TP120-0.5-0.6				✓
TP121-0-0.2				✓
TP121-0.5-0.7				✓
TP121-1.1-1.3				✓
TP121-1.6-1.7				✓
TP121-1.8-1.9			✓	
TP122-0-0.2				✓
TP122-0.6-0.8				✓
TP122-1.2-1.4				✓
TP122-1.4-1.6				✓

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Sample ID	Metals in TCLP USEPA1311	CEC	Chromium Suite	On Hold
TP122-1.9-2.0				✓
BH123-0-0.2				✓
BH123-0.3-0.8				✓
BH123-1.0-1.3				✓
BH123-1.5-1.65			✓	
BH123-1.65-1.75				✓
BH123-1.8-2.0				✓
BH123-4.0-4.5				✓
BH123-5.5-6.0				✓
BH123-7.5-7.9				✓
TP124-0-0.2				✓
TP124-0.2-0.4				✓
TP124-0.9-1.1				✓
TP124-1.5-1.6				✓
TP124-1.8-1.9				✓
TP125-0-0.2				✓
TP125-0.2-0.4			✓	
TP125-0.8-1.0				✓
TP126-0-0.2				✓
TP126-0.3-0.5				✓
TP126-0.8-0.95				✓
BH127-0-0.2				✓
BH127-0.2-0.4				✓
BH128-0-0.2				✓
BH128-0.4-0.6				✓
BH128-1.3-1.5				✓
BH128-2.1-2.3				✓
BH128-2.3-2.5				✓
BH128-2.5-2.7			✓	
BH128-2.8-3.0				✓
BH128-3.0-3.3				✓
BH128-3.6-3.8				✓

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Sample ID	Metals in TCLP USEPA1311	CEC	Chromium Suite	On Hold
BH128-4.7-5.0				✓
BH129-0.5-0.7				✓
BH129-1.0-1.2				✓
TP130-0-0.2				✓
TP130-0.3-0.5				✓
TP130-0.9-1.1				✓
TP130-1.1-1.3				✓
TP130-1.8-2.0				✓
BH131-0-0.2				✓
BH131-0.2-0.4				✓
BH131-0.5-0.7				✓
TP132-0-0.15				✓
TP132-0.15-0.35				✓
TP132-0.8-0.95				✓
TP133-0-0.2				✓
TP133-0.2-0.4				✓
BH134-0-0.2	✓	✓		
BH134-0.3-0.5				✓
BH134-1.2-1.4				✓
BH134-1.5-1.95				✓
BH134-2.5-3.0				✓
BH134-4.0-4.5				✓
BH134-5.5-6.0				✓
BH134-7.5-8.0				✓
TP135-0-0.2				✓
TP135-0.3-0.5				✓
TP136-0-0.2				✓
TP136-0.2-0.4				✓
BH137-0-0.3				✓
BH137-0.3-0.6				✓
BH137-1.0-1.2				✓
BH137-1.5-1.7				✓

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Sample ID	Metals in TCLP USEPA1311	CEC	Chromium Suite	On Hold
BH138-0.05-0.3				✓
BH138-0.3-0.5			✓	
BH138-0.5-0.7				✓
BH138-0.7-0.85				✓
BH138-1.2-1.4				✓
BH139-0.05-0.3				✓
BH139-0.3-0.5				✓
BH139-0.6-0.8				✓
BH140-0.05-0.3				✓
BH140-0.3-0.5				✓
BH140-0.7-0.9				✓
BH140-1.2-1.4				✓
BH140-1.6-1.8				✓
BH140-1.8-2.0				✓
BH141-0-0.2				✓
BH141-0.3-0.4				✓
BH142-0-0.2				✓
BH142-0.5-0.95				✓
BH142-1.2-1.4			✓	
BH142-1.6-1.9				✓
BH143-0-0.2				✓
BH143-0.2-0.4				✓
BH143-0.5-0.8				✓
BH143-1.3-1.5				✓
BH143-2.5-3.0				✓
BH143-4.0-4.5				✓
BH143-5.5-6.0				✓
BH143-7.4-7.6				✓
TP144-0-0.2				✓
TP144-0.2-0.4			✓	
TP144-0.7-0.9				✓
TP144-1.7-1.9				✓

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Sample ID	Metals in TCLP USEPA1311	CEC	Chromium Suite	On Hold
TP144-2.1-2.2				✓
BH145-0-0.2				✓
BH145-0.5-0.95				✓
BH145-1.5-1.95				✓
BH145-2.5-2.7				✓
BH146-0-0.2				✓
BH146-0.3-0.5				✓
BH146-1.3-1.5				✓
BH146-2.3-2.4				✓
BH146-3.3-3.6				✓
BH146-3.6-3.8				✓
SDUP1--				✓
SDUP2--				✓
SDUP3--				✓
SDUP4--				✓
SDUP5--				✓
SDUP6--				✓
SDUP7--				✓
SDUP8--				✓
SDUP9--				✓
SDUP10--				✓
SDUP11--				✓
SDUP12--				✓
SDUP13--				✓
SDUP14--				✓
SDUP104				✓
SDUP105				✓
SDUP106				✓
SDUP107				✓
SDUP108				✓
SDUP109				✓
SDUP110				✓

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Sample ID	Metals in TCLP USEPA1311	CEC	Chromium Suite	On Hold
FR1-SPT				✓
FR2-SPT				✓
TB-S1				✓
TB-S2				✓
TS-S1				✓
TS-S2				✓
FCF1-Surface				✓
BH129-2.0-2.2				✓
BH134-0.7-0.9				✓
TP144-1.2-1.3				✓
TP132 - [TRIPLICATE]-0-0.15				✓
BH140 - [TRIPLICATE]-0.05-0.3				✓

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

Additional Info

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

Jessica Hie

From: Greta Petzold
Sent: Thursday, 18 February 2021 3:31 PM
To: Alistair Mitchell; Samplereceipt
Cc: Craig Ridley; Vittal Boggaram
Subject: RE: Results for Registration 261320 E31888BR, Wetherill Park

Hi Alistair,

No worries, we'll get that organised for you.

261320-A
Due 25/2/21
Std TAT

Kind Regards,

Greta Petzold | Senior Chemist | Envirolab Services

Great Science. Great Service.

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Samples will be analysed per our T&C's.

From: Alistair Mitchell <AMitchell@jkenvironments.com.au>
Sent: Thursday, 18 February 2021 3:26 PM
To: Greta Petzold <GPetzold@envirolab.com.au>
Cc: Craig Ridley <CRidley@jkenvironments.com.au>; Vittal Boggaram <VBoggaram@jkenvironments.com.au>
Subject: RE: Results for Registration 261320 E31888BR, Wetherill Park

CAUTION: This email originated from outside of the organisation. Do not act on instructions, click links or open attachments unless you recognise the sender and know the content is authentic and safe.

Hi Greta,

Additional testing for the above job.

Can I get nickel TCLP for the following samples please:

20 • TP104 (0.2-0.4);
24 • BH105 (0.03-0.3);
38 • BH108 (0.03-0.2);
49 • BH111 (0.2-0.5);
83 • BH119 (0.16-0.3); and
145 • BH134 (0-0.2).

Can I get CEC for the following samples please:

24 • BH105 (0.03-0.3);
38 • BH108 (0.03-0.2);
49 • BH111 (0.2-0.5);
83 • BH119 (0.16-0.3); and

145 • BH134 (0-0.2).

Can I get SCR for the following samples please:

3 • TP101 (1.1-1.3);
14 • BH103 (3.0-3.45);
50 • BH111 (0.5-0.95);
65 • BH113 (0.2-0.4);
73 • BH116 (1.2-1.4);
92 • TP121 (1.8-1.9);
101 • BH123 (1.5-1.65);
113 • TP125 (0.2-0.4);
125 • BH128 (2.5-2.7);
162 • BH138 (0.3-0.5);
179 • BH142 (1.2-1.4); and
190 • TP144 (0.2-0.4).

Thanks,

Regards
Alistair Mitchell
Environmental Scientist

Some of our staff are still working remotely, therefore, where possible, please contact staff on their mobile number.

T: +612 9888 5000
D: 0421 687 953
E: AMitchell@jkenvironments.com.au
www.jkenvironments.com.au

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NORTH RYDE BC NSW 1670
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JKEnvironments

This email and any attachments are confidential and may be privileged in which case neither is intended to be waived. If you have received this message in error, please notify us and remove it from your system. It is your responsibility to check any attachments for viruses and defects before opening or sending them on. At the Company's discretion we may send a paper copy for confirmation. In the event of any discrepancy between paper and electronic versions the paper version is to take precedence.

From: Craig Ridley
Sent: Thursday, 18 February 2021 9:16 AM
To: Alistair Mitchell <AMitchell@jkenvironments.com.au>
Subject: FW: Results for Registration 261320 E31888BR, Wetherill Park

Can you please save in file and start data entry?

Thanks mate

Regards
Craig Ridley
Senior Environmental Scientist

Some of our staff are still working remotely, therefore, where possible, please contact staff on their mobile number.

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CERTIFICATE OF ANALYSIS 262017

Client Details

Client	JK Environments
Attention	C Ridley
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E31888BR, Wetherill Park**
Number of Samples	15 WATER
Date samples received	17/02/2021
Date completed instructions received	17/02/2021

Analysis Details

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

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

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

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

Report Details

Date results requested by	24/02/2021
Date of Issue	24/02/2021

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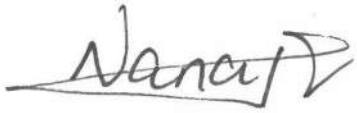
Results Approved By
Diego Bigolin, Team Leader, Inorganics
Dragana Tomas, Senior Chemist
Greta Petzold, Senior Chemist
Phalak Inthakesone, Organics Development Manager, Sydney

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in water						
Our Reference		262017-1	262017-2	262017-3	262017-4	262017-5
Your Reference	UNITS	MW103	MW106	MW111	MW123	MW128
Date Sampled		16/02/2021	16/02/2021	17/02/2021	15/02/2021	15/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Date extracted	-	18/02/2021	18/02/2021	18/02/2021	22/02/2021	18/02/2021
Date analysed	-	18/02/2021	18/02/2021	18/02/2021	23/02/2021	18/02/2021
Dichlorodifluoromethane	µg/L	<10	<10	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10	11	<10
Vinyl Chloride	µg/L	<10	<10	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1	<1
2,2-dichloropropane	µg/L	<1	<1	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1	<1
Benzene	µg/L	<1	<1	<1	66	<1
Dibromomethane	µg/L	<1	<1	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	4	<1
1,3-dichloropropane	µg/L	<1	<1	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1

VOCs in water						
Our Reference		262017-1	262017-2	262017-3	262017-4	262017-5
Your Reference	UNITS	MW103	MW106	MW111	MW123	MW128
Date Sampled		16/02/2021	16/02/2021	17/02/2021	15/02/2021	15/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Bromoform	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
Styrene	µg/L	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1	<1	<1
o-xylene	µg/L	<1	<1	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	104	102	102	102	102
Surrogate toluene-d8	%	100	99	99	100	100
Surrogate 4-BFB	%	96	95	94	95	95

VOCs in water					
Our Reference		262017-6	262017-7	262017-8	262017-13
Your Reference	UNITS	MW134	MW139	MW143	WDUP3
Date Sampled		15/02/2021	15/02/2021	16/02/2021	16/02/2021
Type of sample		WATER	WATER	WATER	WATER
Date extracted	-	18/02/2021	18/02/2021	18/02/2021	18/02/2021
Date analysed	-	18/02/2021	18/02/2021	18/02/2021	18/02/2021
Dichlorodifluoromethane	µg/L	<10	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1	<1
Chloroform	µg/L	<1	<1	<1	<1
2,2-dichloropropane	µg/L	<1	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1	<1
Benzene	µg/L	<1	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1
1,3-dichloropropane	µg/L	<1	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1

VOCs in water					
Our Reference		262017-6	262017-7	262017-8	262017-13
Your Reference	UNITS	MW134	MW139	MW143	WDUP3
Date Sampled		15/02/2021	15/02/2021	16/02/2021	16/02/2021
Type of sample		WATER	WATER	WATER	WATER
Bromoform	µg/L	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2
Styrene	µg/L	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1	<1
o-xylene	µg/L	<1	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	103	103	103	102
Surrogate toluene-d8	%	99	99	100	100
Surrogate 4-BFB	%	96	95	97	96

vTRH(C6-C10)/BTEXN in Water						
Our Reference		262017-1	262017-2	262017-3	262017-4	262017-5
Your Reference	UNITS	MW103	MW106	MW111	MW123	MW128
Date Sampled		16/02/2021	16/02/2021	17/02/2021	15/02/2021	15/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Date extracted	-	18/02/2021	18/02/2021	18/02/2021	22/02/2021	18/02/2021
Date analysed	-	18/02/2021	18/02/2021	18/02/2021	23/02/2021	18/02/2021
TRH C_6 - C_9	µg/L	<10	<10	<10	110	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10	110	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	41	<10
Benzene	µg/L	<1	<1	<1	66	<1
Toluene	µg/L	<1	<1	<1	4	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
o-xylene	µg/L	<1	<1	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	104	102	102	102	102
Surrogate toluene-d8	%	100	99	99	100	100
Surrogate 4-BFB	%	96	95	94	95	95

vTRH(C6-C10)/BTEXN in Water						
Our Reference		262017-6	262017-7	262017-8	262017-9	262017-10
Your Reference	UNITS	MW134	MW139	MW143	PMW1	PMW2
Date Sampled		15/02/2021	15/02/2021	16/02/2021	17/02/2021	17/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Date extracted	-	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
Date analysed	-	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
TRH C_6 - C_9	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10}	µg/L	<10	<10	<10	<10	<10
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	<10	<10	<10
Benzene	µg/L	<1	<1	<1	<1	<1
Toluene	µg/L	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2	<2	<2
o-xylene	µg/L	<1	<1	<1	<1	<1
Naphthalene	µg/L	<1	<1	<1	<1	<1
Surrogate Dibromofluoromethane	%	103	103	103	103	102
Surrogate toluene-d8	%	99	99	100	101	100
Surrogate 4-BFB	%	96	95	97	97	97

vTRH(C6-C10)/BTEXN in Water				
Our Reference	UNITS	262017-13	262017-14	262017-15
Your Reference		WDUP3	TB-W1	TS-W1
Date Sampled		16/02/2021	15/02/2021	15/02/2021
Type of sample		WATER	WATER	WATER
Date extracted	-	18/02/2021	18/02/2021	18/02/2021
Date analysed	-	18/02/2021	18/02/2021	18/02/2021
TRH C_6 - C_9	µg/L	<10	<10	[NA]
TRH C_6 - C_{10}	µg/L	<10	<10	[NA]
TRH C_6 - C_{10} less BTEX (F1)	µg/L	<10	<10	[NA]
Benzene	µg/L	<1	<1	113%
Toluene	µg/L	<1	<1	113%
Ethylbenzene	µg/L	<1	<1	115%
m+p-xylene	µg/L	<2	<2	106%
o-xylene	µg/L	<1	<1	113%
Naphthalene	µg/L	<1	<1	[NA]
Surrogate Dibromofluoromethane	%	102	101	101
Surrogate toluene-d8	%	100	99	100
Surrogate 4-BFB	%	96	96	99

svTRH (C10-C40) in Water						
Our Reference		262017-1	262017-2	262017-3	262017-4	262017-5
Your Reference	UNITS	MW103	MW106	MW111	MW123	MW128
Date Sampled		16/02/2021	16/02/2021	17/02/2021	15/02/2021	15/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Date extracted	-	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
Date analysed	-	19/02/2021	19/02/2021	19/02/2021	19/02/2021	19/02/2021
TRH C_{10} - C_{14}	µg/L	<50	<50	<50	87	69
TRH C_{15} - C_{28}	µg/L	<100	210	<100	<100	110
TRH C_{29} - C_{36}	µg/L	<100	180	<100	<100	<100
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50	60	85
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	<50	60	85
TRH >C_{16} - C_{34}	µg/L	<100	350	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	70	70	92	72	86

svTRH (C10-C40) in Water						
Our Reference		262017-6	262017-7	262017-8	262017-9	262017-10
Your Reference	UNITS	MW134	MW139	MW143	PMW1	PMW2
Date Sampled		15/02/2021	15/02/2021	16/02/2021	17/02/2021	17/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Date extracted	-	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
Date analysed	-	19/02/2021	19/02/2021	19/02/2021	19/02/2021	19/02/2021
TRH C_{10} - C_{14}	µg/L	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	µg/L	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	µg/L	<100	<100	<100	<100	<100
TRH >C_{10} - C_{16}	µg/L	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50	<50	<50	<50	<50
TRH >C_{16} - C_{34}	µg/L	<100	<100	<100	<100	<100
TRH >C_{34} - C_{40}	µg/L	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	74	72	74	76	71

svTRH (C10-C40) in Water		
Our Reference		262017-13
Your Reference	UNITS	WDUP3
Date Sampled		16/02/2021
Type of sample		WATER
Date extracted	-	18/02/2021
Date analysed	-	19/02/2021
TRH C_{10} - C_{14}	µg/L	<50
TRH C_{15} - C_{28}	µg/L	340
TRH C_{29} - C_{36}	µg/L	270
TRH >C_{10} - C_{16}	µg/L	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	µg/L	<50
TRH >C_{16} - C_{34}	µg/L	540
TRH >C_{34} - C_{40}	µg/L	120
Surrogate o-Terphenyl	%	74

PAHs in Water - Low Level						
Our Reference		262017-1	262017-2	262017-3	262017-4	262017-5
Your Reference	UNITS	MW103	MW106	MW111	MW123	MW128
Date Sampled		16/02/2021	16/02/2021	17/02/2021	15/02/2021	15/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Date extracted	-	18/02/2021	18/02/2021	18/02/2021	18/02/2021	18/02/2021
Date analysed	-	19/02/2021	19/02/2021	19/02/2021	19/02/2021	19/02/2021
Naphthalene	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	69	72	62	78	82

PAHs in Water - Low Level					
Our Reference	UNITS	262017-6	262017-7	262017-8	262017-13
Your Reference		MW134	MW139	MW143	WDUP3
Date Sampled		15/02/2021	15/02/2021	16/02/2021	16/02/2021
Type of sample		WATER	WATER	WATER	WATER
Date extracted	-	18/02/2021	18/02/2021	18/02/2021	18/02/2021
Date analysed	-	19/02/2021	19/02/2021	19/02/2021	19/02/2021
Naphthalene	µg/L	<0.2	<0.2	<0.2	<0.2
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	µg/L	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d14	%	85	75	77	73

Miscellaneous Inorganics						
Our Reference		262017-1	262017-2	262017-3	262017-4	262017-5
Your Reference	UNITS	MW103	MW106	MW111	MW123	MW128
Date Sampled		16/02/2021	16/02/2021	17/02/2021	15/02/2021	15/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Date prepared	-	19/02/2021	19/02/2021	19/02/2021	19/02/2021	19/02/2021
Date analysed	-	19/02/2021	19/02/2021	19/02/2021	19/02/2021	19/02/2021
pH	pH Units	6.7	8.3	6.6	6.4	6.9
Electrical Conductivity	µS/cm	13,000	1,500	19,000	18,000	5,500
Chloride, Cl	mg/L	4,800	410	7,300	7,200	1,800
Sulphate, SO4	mg/L	700	62	740	680	140

Miscellaneous Inorganics				
Our Reference		262017-6	262017-7	262017-8
Your Reference	UNITS	MW134	MW139	MW143
Date Sampled		15/02/2021	15/02/2021	16/02/2021
Type of sample		WATER	WATER	WATER
Date prepared	-	19/02/2021	19/02/2021	19/02/2021
Date analysed	-	19/02/2021	19/02/2021	19/02/2021
pH	pH Units	6.8	6.2	7.0
Electrical Conductivity	µS/cm	17,000	22,000	25,000
Chloride, Cl	mg/L	6,500	9,700	10,000
Sulphate, SO4	mg/L	360	42	540

HM in water - dissolved						
Our Reference		262017-1	262017-2	262017-3	262017-4	262017-5
Your Reference	UNITS	MW103	MW106	MW111	MW123	MW128
Date Sampled		16/02/2021	16/02/2021	17/02/2021	15/02/2021	15/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Date prepared	-	19/02/2021	19/02/2021	19/02/2021	19/02/2021	19/02/2021
Date analysed	-	21/02/2021	21/02/2021	21/02/2021	21/02/2021	21/02/2021
Arsenic-Dissolved	µg/L	4	1	<1	5	2
Cadmium-Dissolved	µg/L	0.1	<0.1	<0.1	0.5	0.2
Chromium-Dissolved	µg/L	<1	1	1	<1	16
Copper-Dissolved	µg/L	<1	2	<1	1	2
Lead-Dissolved	µg/L	<1	<1	<1	<1	<1
Mercury-Dissolved	µg/L	0.07	<0.05	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	11	1	3	39	22
Zinc-Dissolved	µg/L	9	7	9	66	48

HM in water - dissolved					
Our Reference		262017-6	262017-7	262017-8	262017-13
Your Reference	UNITS	MW134	MW139	MW143	WDUP3
Date Sampled		15/02/2021	15/02/2021	16/02/2021	16/02/2021
Type of sample		WATER	WATER	WATER	WATER
Date prepared	-	19/02/2021	19/02/2021	19/02/2021	19/02/2021
Date analysed	-	21/02/2021	21/02/2021	21/02/2021	21/02/2021
Arsenic-Dissolved	µg/L	25	1	9	1
Cadmium-Dissolved	µg/L	<0.1	<0.1	0.7	<0.1
Chromium-Dissolved	µg/L	<1	<1	2	1
Copper-Dissolved	µg/L	<1	<1	<1	3
Lead-Dissolved	µg/L	<1	<1	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	30	54	76	1
Zinc-Dissolved	µg/L	10	58	45	9

PFAS in Waters Trace Extended						
Our Reference		262017-1	262017-2	262017-3	262017-4	262017-5
Your Reference	UNITS	MW103	MW106	MW111	MW123	MW128
Date Sampled		16/02/2021	16/02/2021	17/02/2021	15/02/2021	15/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Date prepared	-	23/02/2021	23/02/2021	23/02/2021	23/02/2021	23/02/2021
Date analysed	-	23/02/2021	23/02/2021	23/02/2021	23/02/2021	23/02/2021
Perfluorobutanesulfonic acid	µg/L	0.001	0.046	0.0006	0.0004	0.0050
Perfluoropentanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	0.0004	0.002	0.0003	0.0003	0.0005
Perfluorodecanesulfonic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorobutanoic acid	µg/L	<0.01	0.02	<0.01	<0.01	0.01
Perfluoropentanoic acid	µg/L	<0.01	0.047	<0.01	<0.01	<0.01
Perfluorohexanoic acid	µg/L	<0.0004	0.027	<0.0004	0.004	0.0053
Perfluoroheptanoic acid	µg/L	<0.0004	0.0084	<0.0004	<0.0004	<0.0004
Perfluorooctanoic acid PFOA	µg/L	0.0003	0.002	0.0003	0.0002	0.001
Perfluorononanoic acid	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
4:2 FTS	µg/L	<0.001	<0.001	<0.001	<0.001	<0.001
6:2 FTS	µg/L	<0.0004	0.084	<0.0004	0.003	0.003
8:2 FTS	µg/L	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
10:2 FTS	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.01	<0.01	<0.01	<0.01	<0.01
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.005	<0.005	<0.005	<0.005	<0.005
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05	<0.05	<0.05
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Surrogate $^{13}C_8$ *PFOS*	%	90	100	97	94	91
Surrogate $^{13}C_2$ *PFOA*	%	94	97	99	94	99
Extracted ISTD $^{13}C_3$ *PFBS*	%	83	82	79	80	81
Extracted ISTD $^{18}O_2$ *PFHxS*	%	102	99	96	95	99
Extracted ISTD $^{13}C_4$ *PFOS*	%	93	76	88	86	81
Extracted ISTD $^{13}C_4$ *PFBA*	%	93	90	86	87	91

PFAS in Waters Trace Extended						
Our Reference		262017-1	262017-2	262017-3	262017-4	262017-5
Your Reference	UNITS	MW103	MW106	MW111	MW123	MW128
Date Sampled		16/02/2021	16/02/2021	17/02/2021	15/02/2021	15/02/2021
Type of sample		WATER	WATER	WATER	WATER	WATER
Extracted ISTD $^{13}C_3$ *PFPeA*	%	92	91	89	93	91
Extracted ISTD $^{13}C_2$ *PFHxA*	%	96	75	88	92	60
Extracted ISTD $^{13}C_4$ *PFHpA*	%	102	86	90	100	79
Extracted ISTD $^{13}C_4$ *PFOA*	%	107	83	93	106	82
Extracted ISTD $^{13}C_5$ *PFNA*	%	97	79	95	98	76
Extracted ISTD $^{13}C_2$ *PFDA*	%	111	90	106	108	94
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	121	93	107	116	113
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	109	61	109	105	105
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	42	#	52	52	54
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	89	100	83	84	102
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	126	150	122	129	143
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	120	138	135	131	146
Extracted ISTD $^{13}C_8$ *FOSA*	%	72	28	79	66	60
Extracted ISTD d_3 *N MeFOSA*	%	49	#	57	51	50
Extracted ISTD d_5 *N EtFOSA*	%	48	#	54	52	49
Extracted ISTD d_7 *N MeFOSE*	%	73	29	79	68	86
Extracted ISTD d_9 *N EtFOSE*	%	63	28	67	62	76
Extracted ISTD d_3 *N MeFOSAA*	%	133	115	130	118	139
Extracted ISTD d_5 *N EtFOSAA*	%	97	99	110	96	133
Total Positive PFHxS & PFOS	µg/L	0.0004	0.002	0.0003	0.0003	0.0006
Total Positive PFOS & PFOA	µg/L	0.0006	0.0034	0.0006	0.0005	0.002
Total Positive PFAS	µg/L	0.002	0.23	0.001	0.0074	0.028

PFAS in Waters Trace Extended					
Our Reference		262017-6	262017-7	262017-8	262017-13
Your Reference	UNITS	MW134	MW139	MW143	WDUP3
Date Sampled		15/02/2021	15/02/2021	16/02/2021	16/02/2021
Type of sample		WATER	WATER	WATER	WATER
Date prepared	-	23/02/2021	23/02/2021	23/02/2021	23/02/2021
Date analysed	-	23/02/2021	23/02/2021	23/02/2021	23/02/2021
Perfluorobutanesulfonic acid	µg/L	0.001	0.001	0.0047	0.049
Perfluoropentanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluorohexanesulfonic acid - PFHxS	µg/L	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanesulfonic acid	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluorooctanesulfonic acid PFOS	µg/L	<0.0002	<0.0002	<0.0002	0.002
Perfluorodecanesulfonic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorobutanoic acid	µg/L	<0.01	<0.01	<0.01	0.02
Perfluoropentanoic acid	µg/L	<0.01	<0.01	<0.01	0.046
Perfluorohexanoic acid	µg/L	<0.0004	0.002	0.0006	0.022
Perfluoroheptanoic acid	µg/L	<0.0004	<0.0004	<0.0004	0.0080
Perfluorooctanoic acid PFOA	µg/L	<0.0002	0.0003	0.0004	0.002
Perfluorononanoic acid	µg/L	<0.001	<0.001	<0.001	<0.001
Perfluorodecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluoroundecanoic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorododecanoic acid	µg/L	<0.005	<0.005	<0.005	<0.005
Perfluorotridecanoic acid	µg/L	<0.01	<0.01	<0.01	<0.01
Perfluorotetradecanoic acid	µg/L	<0.05	<0.05	<0.05	<0.05
4:2 FTS	µg/L	<0.001	<0.001	<0.001	<0.001
6:2 FTS	µg/L	0.0006	0.0080	0.001	0.041
8:2 FTS	µg/L	<0.0004	<0.0004	<0.0004	<0.0004
10:2 FTS	µg/L	<0.002	<0.002	<0.002	<0.002
Perfluorooctane sulfonamide	µg/L	<0.01	<0.01	<0.01	<0.01
N-Methyl perfluorooctane sulfonamide	µg/L	<0.005	<0.005	<0.005	<0.005
N-Ethyl perfluorooctanesulfon amide	µg/L	<0.01	<0.01	<0.01	<0.01
N-Me perfluorooctanesulfonamid oethanol	µg/L	<0.005	<0.005	<0.005	<0.005
N-Et perfluorooctanesulfonamid oethanol	µg/L	<0.05	<0.05	<0.05	<0.05
MePerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002
EtPerfluorooctanesulf- amid oacetic acid	µg/L	<0.002	<0.002	<0.002	<0.002
Surrogate $^{13}C_8$ *PFOS*	%	97	93	99	95
Surrogate $^{13}C_2$ *PFOA*	%	95	97	98	98
Extracted ISTD $^{13}C_3$ *PFBS*	%	80	85	80	86
Extracted ISTD $^{18}O_2$ *PFHxS*	%	101	102	96	96
Extracted ISTD $^{13}C_4$ *PFOS*	%	89	89	88	77
Extracted ISTD $^{13}C_4$ *PFBA*	%	86	85	83	87

PFAS in Waters Trace Extended					
Our Reference		262017-6	262017-7	262017-8	262017-13
Your Reference	UNITS	MW134	MW139	MW143	WDUP3
Date Sampled		15/02/2021	15/02/2021	16/02/2021	16/02/2021
Type of sample		WATER	WATER	WATER	WATER
Extracted ISTD $^{13}C_3$ *PFPeA*	%	89	88	89	90
Extracted ISTD $^{13}C_2$ *PFHxA*	%	102	103	99	65
Extracted ISTD $^{13}C_4$ *PFHpA*	%	100	103	98	78
Extracted ISTD $^{13}C_4$ *PFOA*	%	105	103	100	78
Extracted ISTD $^{13}C_5$ *PFNA*	%	96	95	96	76
Extracted ISTD $^{13}C_2$ *PFDA*	%	109	103	109	85
Extracted ISTD $^{13}C_2$ *PFUnDA*	%	108	105	116	84
Extracted ISTD $^{13}C_2$ *PFDoDA*	%	106	96	105	64
Extracted ISTD $^{13}C_2$ *PFTeDA*	%	54	34	56	#
Extracted ISTD $^{13}C_2$ *4:2FTS*	%	95	88	93	92
Extracted ISTD $^{13}C_2$ *6:2FTS*	%	120	118	128	146
Extracted ISTD $^{13}C_2$ *8:2FTS*	%	122	100	127	152
Extracted ISTD $^{13}C_8$ *FOSA*	%	70	66	66	31
Extracted ISTD d_3 *N MeFOSA*	%	51	49	52	#
Extracted ISTD d_5 *N EtFOSA*	%	53	48	49	#
Extracted ISTD d_7 *N MeFOSE*	%	71	74	71	33
Extracted ISTD d_9 *N EtFOSE*	%	65	64	62	24
Extracted ISTD d_3 *N MeFOSAA*	%	122	94	118	106
Extracted ISTD d_5 *N EtFOSAA*	%	89	69	93	99
Total Positive PFHxS & PFOS	µg/L	<0.0002	<0.0002	<0.0002	0.002
Total Positive PFOS & PFOA	µg/L	<0.0002	0.0003	0.0004	0.0037
Total Positive PFAS	µg/L	0.002	0.012	0.0068	0.19

Method ID	Methodology Summary
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-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.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
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-022/025	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS/GC-MSMS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-023	Water samples are analysed directly by purge and trap GC-MS.
Org-023	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. 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-029	Soil samples are extracted with basified Methanol. Waters and soil extracts are directly injected and/or concentrated/extracted using SPE. TCLPs/ASLP leachates are centrifuged, the supernatant is then analysed (including amendment with solvent) - as per the option in AS4439.3. Analysis is undertaken with LC-MS/MS. PFAS results include the sum of branched and linear isomers where applicable. Please note that PFAS results are corrected for Extracted Internal Standards (QSM 5.3 Table B-15 terminology), which are mass labelled analytes added prior to sample preparation to assess matrix effects and verify processing of the sample. PFAS analytes without a commercially available mass labelled analogue are corrected vs a closely eluting mass labelled PFAS compound. Surrogates are also reported, in this context they are mass labelled PFAS compounds added prior to extraction but are used as monitoring compounds only (not used for result correction). Envicarb (or similar) is used discretionally to remove interfering matrix components. Please contact the laboratory if estimates of Measurement Uncertainty are required as per WA DER.

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			18/02/2021	4	22/02/2021	19/02/2021		18/02/2021	[NT]
Date analysed	-			18/02/2021	4	23/02/2021	22/02/2021		18/02/2021	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	<10	4	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	<10	4	11	17	43	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	<10	4	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	<10	4	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	<10	4	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	<10	4	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	<1	4	<1	<1	0	92	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	<1	4	<1	<1	0	95	[NT]
2,2-dichloropropane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	<1	4	<1	<1	0	92	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	<1	4	<1	<1	0	92	[NT]
1,1-dichloropropene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	<1	4	66	61	8	[NT]	[NT]
Dibromomethane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	<1	4	<1	<1	0	91	[NT]
Bromodichloromethane	µg/L	1	Org-023	<1	4	<1	<1	0	92	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	<1	4	4	3	29	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	<1	4	<1	<1	0	90	[NT]
1,2-dibromoethane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	<1	4	<1	<1	0	93	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Bromoform	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	<2	4	<2	<2	0	[NT]	[NT]
Styrene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
o-xylene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	102	4	102	103	1	102	[NT]
Surrogate toluene-d8	%		Org-023	99	4	100	100	0	99	[NT]
Surrogate 4-BFB	%		Org-023	93	4	95	99	4	97	[NT]

QUALITY CONTROL: VOCs in water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	18/02/2021	19/02/2021		[NT]	[NT]
Date analysed	-			[NT]	13	18/02/2021	22/02/2021		[NT]	[NT]
Dichlorodifluoromethane	µg/L	10	Org-023	[NT]	13	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-023	[NT]	13	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-023	[NT]	13	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-023	[NT]	13	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-023	[NT]	13	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-023	[NT]	13	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
2,2-dichloropropane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1,1-trichloroethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1-dichloropropene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Dibromomethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Bromodichloromethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2-dibromoethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Bromoform	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	[NT]	13	<2	<2	0	[NT]	[NT]
Styrene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
o-xylene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	[NT]	13	102	102	0	[NT]	[NT]
Surrogate toluene-d8	%		Org-023	[NT]	13	100	100	0	[NT]	[NT]
Surrogate 4-BFB	%		Org-023	[NT]	13	96	98	2	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			18/02/2021	4	22/02/2021	19/02/2021		18/02/2021	[NT]
Date analysed	-			18/02/2021	4	23/02/2021	22/02/2021		18/02/2021	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	<10	4	110	120	9	92	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	<10	4	110	120	9	92	[NT]
Benzene	µg/L	1	Org-023	<1	4	66	61	8	92	[NT]
Toluene	µg/L	1	Org-023	<1	4	4	3	29	92	[NT]
Ethylbenzene	µg/L	1	Org-023	<1	4	<1	<1	0	92	[NT]
m+p-xylene	µg/L	2	Org-023	<2	4	<2	<2	0	91	[NT]
o-xylene	µg/L	1	Org-023	<1	4	<1	<1	0	92	[NT]
Naphthalene	µg/L	1	Org-023	<1	4	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	102	4	102	103	1	102	[NT]
Surrogate toluene-d8	%		Org-023	99	4	100	100	0	99	[NT]
Surrogate 4-BFB	%		Org-023	93	4	95	99	4	97	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	18/02/2021	19/02/2021		[NT]	[NT]
Date analysed	-			[NT]	13	18/02/2021	22/02/2021		[NT]	[NT]
TRH C_6 - C_9	µg/L	10	Org-023	[NT]	13	<10	<10	0	[NT]	[NT]
TRH C_6 - C_{10}	µg/L	10	Org-023	[NT]	13	<10	<10	0	[NT]	[NT]
Benzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-023	[NT]	13	<2	<2	0	[NT]	[NT]
o-xylene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Naphthalene	µg/L	1	Org-023	[NT]	13	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-023	[NT]	13	102	102	0	[NT]	[NT]
Surrogate toluene-d8	%		Org-023	[NT]	13	100	100	0	[NT]	[NT]
Surrogate 4-BFB	%		Org-023	[NT]	13	96	98	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	262017-2
Date extracted	-			18/02/2021	1	18/02/2021	18/02/2021		18/02/2021	18/02/2021
Date analysed	-			19/02/2021	1	19/02/2021	19/02/2021		19/02/2021	19/02/2021
TRH C_{10} - C_{14}	µg/L	50	Org-020	<50	1	<50	<50	0	75	74
TRH C_{15} - C_{28}	µg/L	100	Org-020	<100	1	<100	<100	0	70	71
TRH C_{29} - C_{36}	µg/L	100	Org-020	<100	1	<100	<100	0	92	120
TRH >C_{10} - C_{16}	µg/L	50	Org-020	<50	1	<50	<50	0	75	74
TRH >C_{16} - C_{34}	µg/L	100	Org-020	<100	1	<100	<100	0	70	71
TRH >C_{34} - C_{40}	µg/L	100	Org-020	<100	1	<100	<100	0	92	120
Surrogate o-Terphenyl	%		Org-020	77	1	70	84	18	97	80

QUALITY CONTROL: svTRH (C10-C40) in Water						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	18/02/2021	18/02/2021		[NT]	[NT]
Date analysed	-			[NT]	13	19/02/2021	19/02/2021		[NT]	[NT]
TRH C_{10} - C_{14}	µg/L	50	Org-020	[NT]	13	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	µg/L	100	Org-020	[NT]	13	340	340	0	[NT]	[NT]
TRH C_{29} - C_{36}	µg/L	100	Org-020	[NT]	13	270	250	8	[NT]	[NT]
TRH >C_{10} - C_{16}	µg/L	50	Org-020	[NT]	13	<50	100	67	[NT]	[NT]
TRH >C_{16} - C_{34}	µg/L	100	Org-020	[NT]	13	540	520	4	[NT]	[NT]
TRH >C_{34} - C_{40}	µg/L	100	Org-020	[NT]	13	120	110	9	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-020	[NT]	13	74	76	3	[NT]	[NT]

QUALITY CONTROL: PAHs in Water - Low Level						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	262017-3
Date extracted	-			18/02/2021	1	18/02/2021	18/02/2021		18/02/2021	18/02/2021
Date analysed	-			19/02/2021	1	19/02/2021	19/02/2021		19/02/2021	19/02/2021
Naphthalene	µg/L	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	83	78
Acenaphthylene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	70	88
Fluorene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	75	88
Phenanthrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	78	80
Anthracene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	71	88
Pyrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	73	88
Benzo(a)anthracene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	80	82
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	73	100
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	97	1	69	86	22	81	93

QUALITY CONTROL: PAHs in Water - Low Level						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	13	18/02/2021	18/02/2021		[NT]	[NT]
Date analysed	-			[NT]	13	19/02/2021	19/02/2021		[NT]	[NT]
Naphthalene	µg/L	0.2	Org-022/025	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Acenaphthylene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Fluorene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Anthracene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Pyrene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Chrysene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-022/025	[NT]	13	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-022/025	[NT]	13	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-022/025	[NT]	13	73	77	5	[NT]	[NT]

QUALITY CONTROL: Miscellaneous Inorganics						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	262017-2
Date prepared	-			19/02/2021	1	19/02/2021	19/02/2021		19/02/2021	19/02/2021
Date analysed	-			19/02/2021	1	19/02/2021	19/02/2021		19/02/2021	19/02/2021
pH	pH Units		Inorg-001	[NT]	1	6.7	6.8	1	100	[NT]
Electrical Conductivity	µS/cm	1	Inorg-002	<1	1	13000	13000	0	103	[NT]
Chloride, Cl	mg/L	1	Inorg-081	<1	1	4800	4900	2	87	#
Sulphate, SO4	mg/L	1	Inorg-081	<1	1	700	700	0	86	79

QUALITY CONTROL: HM in water - dissolved						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W4	262017-2
Date prepared	-			19/02/2021	1	19/02/2021	19/02/2021		19/02/2021	19/02/2021
Date analysed	-			21/02/2021	1	21/02/2021	21/02/2021		21/02/2021	21/02/2021
Arsenic-Dissolved	µg/L	1	Metals-022	<1	1	4	4	0	103	108
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	1	0.1	0.1	0	101	107
Chromium-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	98	101
Copper-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	97	97
Lead-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	99	92
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	1	0.07	0.07	0	103	99
Nickel-Dissolved	µg/L	1	Metals-022	<1	1	11	10	10	101	101
Zinc-Dissolved	µg/L	1	Metals-022	<1	1	9	8	12	102	106

QUALITY CONTROL: PFAS in Waters Trace Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	262017-2
Date prepared	-			23/02/2021	1	23/02/2021	23/02/2021		23/02/2021	23/02/2021
Date analysed	-			23/02/2021	1	23/02/2021	23/02/2021		23/02/2021	23/02/2021
Perfluorobutanesulfonic acid	µg/L	0.0004	Org-029	<0.0004	1	0.001	0.001	0	102	130
Perfluoropentanesulfonic acid	µg/L	0.001	Org-029	<0.001	1	<0.001	<0.001	0	105	105
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.0002	Org-029	<0.0002	1	<0.0002	<0.0002	0	99	99
Perfluoroheptanesulfonic acid	µg/L	0.001	Org-029	<0.001	1	<0.001	<0.001	0	98	112
Perfluorooctanesulfonic acid PFOS	µg/L	0.0002	Org-029	<0.0002	1	0.0004	0.0004	0	102	116
Perfluorodecanesulfonic acid	µg/L	0.002	Org-029	<0.002	1	<0.002	<0.002	0	80	78
Perfluorobutanoic acid	µg/L	0.002	Org-029	<0.002	1	<0.01	<0.01	0	101	108
Perfluoropentanoic acid	µg/L	0.002	Org-029	<0.002	1	<0.01	<0.01	0	101	107
Perfluorohexanoic acid	µg/L	0.0004	Org-029	<0.0004	1	<0.0004	<0.0004	0	104	103
Perfluoroheptanoic acid	µg/L	0.0004	Org-029	<0.0004	1	<0.0004	<0.0004	0	101	117
Perfluorooctanoic acid PFOA	µg/L	0.0002	Org-029	<0.0002	1	0.0003	0.0003	0	103	107
Perfluorononanoic acid	µg/L	0.001	Org-029	<0.001	1	<0.001	<0.001	0	106	115
Perfluorodecanoic acid	µg/L	0.002	Org-029	<0.002	1	<0.002	<0.002	0	103	74
Perfluoroundecanoic acid	µg/L	0.002	Org-029	<0.002	1	<0.002	<0.002	0	100	103
Perfluorododecanoic acid	µg/L	0.005	Org-029	<0.005	1	<0.005	<0.005	0	103	105
Perfluorotridecanoic acid	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	89	95
Perfluorotetradecanoic acid	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	112	133
4:2 FTS	µg/L	0.001	Org-029	<0.001	1	<0.001	<0.001	0	103	98
6:2 FTS	µg/L	0.0004	Org-029	<0.0004	1	<0.0004	<0.0004	0	106	120
8:2 FTS	µg/L	0.0004	Org-029	<0.0004	1	<0.0004	<0.0004	0	109	117
10:2 FTS	µg/L	0.002	Org-029	<0.002	1	<0.002	<0.002	0	120	94
Perfluorooctane sulfonamide	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	106	105
N-Methyl perfluorooctane sulfonamide	µg/L	0.005	Org-029	<0.005	1	<0.005	<0.005	0	96	113
N-Ethyl perfluorooctanesulfon amide	µg/L	0.01	Org-029	<0.01	1	<0.01	<0.01	0	89	106
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.005	Org-029	<0.005	1	<0.005	<0.005	0	120	120
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	<0.05	1	<0.05	<0.05	0	100	86
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	1	<0.002	<0.002	0	101	103
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	<0.002	1	<0.002	<0.002	0	105	133
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	101	1	90	96	6	100	98
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	96	1	94	97	3	101	102

QUALITY CONTROL: PFAS in Waters Trace Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	262017-2
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	81	1	83	83	0	86	84
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	89	1	102	106	4	89	103
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	86	1	93	95	2	85	74
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	96	1	93	91	2	93	87
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	79	1	92	91	1	79	88
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	92	1	96	96	0	91	73
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	91	1	102	100	2	90	84
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	92	1	107	106	1	88	84
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	92	1	97	102	5	88	80
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	90	1	111	113	2	89	97
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	94	1	121	126	4	97	85
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	114	1	109	112	3	105	54
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	51	1	42	48	13	43	#
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	97	1	89	87	2	92	103
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	123	1	126	130	3	116	154
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	106	1	120	109	10	96	156
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	68	1	72	75	4	63	30
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	40	1	49	49	0	38	#
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	39	1	48	45	6	37	#
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	71	1	73	68	7	51	33

QUALITY CONTROL: PFAS in Waters Trace Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	262017-2
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	59	1	63	66	5	53	28
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	101	1	133	127	5	100	96
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	86	1	97	108	11	84	101

QUALITY CONTROL: PFAS in Waters Trace Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	13	23/02/2021	23/02/2021		[NT]	[NT]
Date analysed	-			[NT]	13	23/02/2021	23/02/2021		[NT]	[NT]
Perfluorobutanesulfonic acid	µg/L	0.0004	Org-029	[NT]	13	0.049	0.055	12	[NT]	[NT]
Perfluoropentanesulfonic acid	µg/L	0.001	Org-029	[NT]	13	<0.001	<0.001	0	[NT]	[NT]
Perfluorohexanesulfonic acid - PFHxS	µg/L	0.0002	Org-029	[NT]	13	<0.0002	<0.0002	0	[NT]	[NT]
Perfluoroheptanesulfonic acid	µg/L	0.001	Org-029	[NT]	13	<0.001	<0.001	0	[NT]	[NT]
Perfluorooctanesulfonic acid PFOS	µg/L	0.0002	Org-029	[NT]	13	0.002	0.002	0	[NT]	[NT]
Perfluorodecanesulfonic acid	µg/L	0.002	Org-029	[NT]	13	<0.002	<0.002	0	[NT]	[NT]
Perfluorobutanoic acid	µg/L	0.002	Org-029	[NT]	13	0.02	0.02	0	[NT]	[NT]
Perfluoropentanoic acid	µg/L	0.002	Org-029	[NT]	13	0.046	0.046	0	[NT]	[NT]
Perfluorohexanoic acid	µg/L	0.0004	Org-029	[NT]	13	0.022	0.023	4	[NT]	[NT]
Perfluoroheptanoic acid	µg/L	0.0004	Org-029	[NT]	13	0.0080	0.0070	13	[NT]	[NT]
Perfluorooctanoic acid PFOA	µg/L	0.0002	Org-029	[NT]	13	0.002	0.002	0	[NT]	[NT]
Perfluorononanoic acid	µg/L	0.001	Org-029	[NT]	13	<0.001	<0.001	0	[NT]	[NT]
Perfluorodecanoic acid	µg/L	0.002	Org-029	[NT]	13	<0.002	<0.002	0	[NT]	[NT]
Perfluoroundecanoic acid	µg/L	0.002	Org-029	[NT]	13	<0.002	<0.002	0	[NT]	[NT]
Perfluorododecanoic acid	µg/L	0.005	Org-029	[NT]	13	<0.005	<0.005	0	[NT]	[NT]
Perfluorotridecanoic acid	µg/L	0.01	Org-029	[NT]	13	<0.01	<0.01	0	[NT]	[NT]
Perfluorotetradecanoic acid	µg/L	0.05	Org-029	[NT]	13	<0.05	<0.05	0	[NT]	[NT]
4:2 FTS	µg/L	0.001	Org-029	[NT]	13	<0.001	<0.001	0	[NT]	[NT]
6:2 FTS	µg/L	0.0004	Org-029	[NT]	13	0.041	0.042	2	[NT]	[NT]
8:2 FTS	µg/L	0.0004	Org-029	[NT]	13	<0.0004	<0.0004	0	[NT]	[NT]
10:2 FTS	µg/L	0.002	Org-029	[NT]	13	<0.002	<0.002	0	[NT]	[NT]
Perfluorooctane sulfonamide	µg/L	0.01	Org-029	[NT]	13	<0.01	<0.01	0	[NT]	[NT]
N-Methyl perfluorooctane sulfonamide	µg/L	0.005	Org-029	[NT]	13	<0.005	<0.005	0	[NT]	[NT]
N-Ethyl perfluorooctanesulfon amide	µg/L	0.01	Org-029	[NT]	13	<0.01	<0.01	0	[NT]	[NT]
N-Me perfluorooctanesulfonamid oethanol	µg/L	0.005	Org-029	[NT]	13	<0.005	<0.005	0	[NT]	[NT]
N-Et perfluorooctanesulfonamid oethanol	µg/L	0.05	Org-029	[NT]	13	<0.05	<0.05	0	[NT]	[NT]
MePerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	[NT]	13	<0.002	<0.002	0	[NT]	[NT]
EtPerfluorooctanesulf- amid oacetic acid	µg/L	0.002	Org-029	[NT]	13	<0.002	<0.002	0	[NT]	[NT]
Surrogate $^{13}C_8$ *PFOS*	%		Org-029	[NT]	13	95	92	3	[NT]	[NT]
Surrogate $^{13}C_2$ *PFOA*	%		Org-029	[NT]	13	98	92	6	[NT]	[NT]

QUALITY CONTROL: PFAS in Waters Trace Extended						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFBS*	%		Org-029	[NT]	13	86	77	11	[NT]	[NT]
Extracted ISTD $^{18}O_2$ *PFHxS*	%		Org-029	[NT]	13	96	99	3	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOS*	%		Org-029	[NT]	13	77	80	4	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFBA*	%		Org-029	[NT]	13	87	85	2	[NT]	[NT]
Extracted ISTD $^{13}C_3$ *PFPeA*	%		Org-029	[NT]	13	90	89	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFHxA*	%		Org-029	[NT]	13	65	66	2	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFHpA*	%		Org-029	[NT]	13	78	85	9	[NT]	[NT]
Extracted ISTD $^{13}C_4$ *PFOA*	%		Org-029	[NT]	13	78	83	6	[NT]	[NT]
Extracted ISTD $^{13}C_5$ *PFNA*	%		Org-029	[NT]	13	76	78	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDA*	%		Org-029	[NT]	13	85	91	7	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFUnDA*	%		Org-029	[NT]	13	84	90	7	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFDoDA*	%		Org-029	[NT]	13	64	66	3	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *PFTeDA*	%		Org-029	[NT]	13	#	#		[NT]	[NT]
Extracted ISTD $^{13}C_2$ *4:2FTS*	%		Org-029	[NT]	13	92	101	9	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *6:2FTS*	%		Org-029	[NT]	13	146	144	1	[NT]	[NT]
Extracted ISTD $^{13}C_2$ *8:2FTS*	%		Org-029	[NT]	13	152	145	5	[NT]	[NT]
Extracted ISTD $^{13}C_8$ *FOSA*	%		Org-029	[NT]	13	31	31	0	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSA*	%		Org-029	[NT]	13	#	#		[NT]	[NT]
Extracted ISTD d_5 *N EtFOSA*	%		Org-029	[NT]	13	#	#		[NT]	[NT]
Extracted ISTD d_7 *N MeFOSE*	%		Org-029	[NT]	13	33	35	6	[NT]	[NT]

QUALITY CONTROL: PFAS in Waters Trace Extended					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Extracted ISTD d_9 *N EtFOSE*	%		Org-029	[NT]	13	24	23	4	[NT]	[NT]
Extracted ISTD d_3 *N MeFOSAA*	%		Org-029	[NT]	13	106	120	12	[NT]	[NT]
Extracted ISTD d_5 *N EtFOSAA*	%		Org-029	[NT]	13	99	111	11	[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

MISC_INORG
Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

For PFAS Extracted Internal Standards denoted with # or outside the 50-150% acceptance range, the respective target analyte results may be unaffected, in other circumstances the PQL has been raised to accommodate the outlier(s).

PFAS_W_EXT1_TR: PQLs raised for PFBA and PFPeA due to matrix interference.

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

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	C Ridley

Sample Login Details

Your reference	E31888BR, Wetherill Park
Envirolab Reference	262017
Date Sample Received	17/02/2021
Date Instructions Received	17/02/2021
Date Results Expected to be Reported	24/02/2021

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	15 WATER
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	16
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

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

Analysis Underway, details on the following page:

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

Sample ID	VOCs in water	vTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4	HM in water - dissolved	PFAS in Waters Trace Extended	On Hold
MW103	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
MW106	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
MW111	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
MW123	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
MW128	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
MW134	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
MW139	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
MW143	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
PMW1		✓	✓								
PMW2		✓	✓								
WDUP1											✓
WDUP2											✓
WDUP3	✓	✓	✓	✓					✓	✓	
TB-W1		✓									
TS-W1		✓									

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

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	JKE Job Number: E31888BR	JKEnvironments
12 ASHLEY STREET		REAR OF 11S WICKS ROAD
CHATSWOOD NSW 2067		MACQUARIE PARK, NSW 2113
P: (02) 99106200	Date Results Required: STANDARD	P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201		Attention: Craig Ridley
Attention: Aileen	Page: 1 of 2	

Location:	Wetherill Park	Sample Preserved in Esky on Ice
Sampler:	AM	Tests Required

Date Sampled	Lab Ref:	Sample Number	Sample Containers	PID	Sample Description	Combo 3L	PFAS (Trace Level extended)	VOCs	pH / EC	sulfate/chloride	LL PAHs	TRH/BTEX	BTEX
16.2.21	1	MW103	G1 x 2, V x 4, H, PVC, PFAS	0.5	Water	X	X	X	X	X			
16.2.21	2	MW106	G1 x 2, V x 4, H, PVC, PFAS	0.2	Water	X	X	X	X	X			
17.2.21	3	MW111	G1 x 2, V x 4, H, PVC, PFAS	3.2	Water	X	X	X	X	X			
15.2.21	4	MW123	G1 x 2, V x 4, H, PVC, PFAS	1.3	Water	X	X	X	X	X			
15.2.21	5	MW128	G1 x 2, V x 4, H, PVC, PFAS	4.2	Water	X	X	X	X	X			
15.2.21	6	MW134	G1 x 2, V x 4, H, PVC, PFAS	0.3	Water	X	X	X	X	X			
15.2.21	7	MW139	G1 x 2, V x 4, H, PVC, PFAS	0	Water	X	X	X	X	X			
16.2.21	8	MW143	G1 x 2, V x 4, H, PVC, PFAS	0.3	Water	X	X	X	X	X			
17.2.21	9	PMW1	G1 x 2, V x 4,	0.1	Water							X	
17.2.21	10	PMW2	G1 x 2, V x 4,	0	Water							X	
15.2.21	11	WDUP1	G1 x 2, V x 4, H, PFAS	-	DUP Water								
15.2.21	12	WDUP2	G1 x 2, V x 4, H, PFAS	-	DUP Water								
16.2.21	13	WDUP3	G1 x 2, V x 4, H, PFAS	-	DUP Water	X	X	X					
16.2.21	VIC	WDUP4	G1 x 2, V x 4, H, PFAS	-	DUP Water	X	X	X	Send to VIC				
15.2.21	14	TB-W1	V, PFAS	-	Trip Blank Water								X

SCB0186

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

Job No: 262017
Date Received: 17/02/21
Time Received:
Received By: RL
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

Remarks (comments/detection limits required):

All analysis PQLs to ANZECC (2000) Detection Limits Please

Sample Containers:
G1 - 125mL Amber Glass Bottle
V - BTEX Vial H - HNO3 Wash PVC PFAS - PFAS Plastic Bottle
PVC - HDPE Plastic Bottles

Relinquished By:	Date:	Time:	Received By:	Date:
	17/2/2021. 13:50		R Khazeen.	17/02/21

1

SAMPLE AND CHAIN OF CUSTODY FORM

2/2/2017

TO:		FROM:
ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	JKE Job Number: E31888BR Date Results Required: STANDARD Page: 2 of 2	JKEnvironments REAR OF 11S WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Craig Ridley

Location:	Wetherill Park	Sample Preserved in Esky on Ice
Sampler:	AM	Tests Required

Date Sampled	Lab Ref:	Sample Number	Sample Containers	PID	Sample Description	Combo 3L	PFAS (Trace Level extended)	VOCs	pH / EC	sulfate/chloride	PAHs	TRH/BTEX	BTEX				
15.2.21	15	TS-W1	V	-	Trip Spike Water								X				

Remarks (comments/detection limits required):	Sample Containers:
All analysis PQLs to ANZECC (2000) Detection Limits Please	G1 - 125mL Amber Glass Bottle V - BTEX Vial H - HNO3 Wash PVC PFAS - PFAS Plastic Bottle PVC - HDPE Plastic Bottles

Relinquished By:	Date:	Time:	Received By:	Date:

Appendix F: Report Explanatory Notes

QA/QC Definitions

The QA/QC terms used in this report are defined below. The definitions are in accordance with US EPA publication SW-846, entitled *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (1994)[19] methods and those described in *Environmental Sampling and Analysis, A Practical Guide,* (1991)[20]. The NEPM (2013) is consistent with these documents.

A. Practical Quantitation Limit (PQL), Limit of Reporting (LOR) & Estimated Quantitation Limit (EQL)

These terms all refer to the concentration above which results can be expressed with a minimum 95% confidence level. The laboratory reporting limits are generally set at ten times the standard deviation for the Method Detection Limit for each specific analyte. For the purposes of this report the LOR, PQL, and EQL are considered to be equivalent.

When assessing laboratory data it should be borne in mind that values at or near the PQL have two important limitations: *"The uncertainty of the measurement value can approach, and even equal, the reported value. Secondly, confirmation of the analytes reported is virtually impossible unless identification uses highly selective methods. These issues diminish when reliably measurable amounts of analytes are present. Accordingly, legal and regulatory actions should be limited to data at or above the reliable detection limit*" (Keith, 1991).

B. Precision

The degree to which data generated from repeated measurements differ from one another due to random errors. Precision is measured using the standard deviation or Relative Percent Difference (RPD).

C. Accuracy

Accuracy is a measure of the agreement between an experimental result and the true value of the parameter being measured (i.e. the proximity of an averaged result to the true value, where all random errors have been statistically removed). The assessment of accuracy for an analysis can be achieved through the analysis of known reference materials or assessed by the analysis of surrogates, field blanks, trip spikes and matrix spikes. Accuracy is typically reported as percent recovery.

D. Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is primarily dependent upon the design and implementation of the sampling program. Representativeness of the data is partially ensured by the avoidance of contamination, adherence to sample handling and analysis protocols and use of proper chain-of-custody and documentation procedures.

E. Completeness

Completeness is a measure of the number of valid measurements in a data set compared to the total number of measurements made and overall performance against DQIs. The following information is assessed for completeness:

- Chain-of-custody forms;
- Sample receipt form;
- All sample results reported;
- All blank data reported;

[19] US EPA, (1994). *SW-846: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.* (US EPA SW-846)

[20] Keith., H, (1991). *Environmental Sampling and Analysis, A Practical Guide*

- All laboratory duplicate and RPDs calculated;
- All surrogate spike data reported;
- All matrix spike and lab control spike (LCS) data reported and RPDs calculated;
- Spike recovery acceptable limits reported; and
- NATA stamp on reports.

F. Comparability

Comparability is the evaluation of the similarity of conditions (e.g. sample depth, sample homogeneity) under which separate sets of data are produced. Data comparability checks include a bias assessment that may arise from the following sources:

- Collection and analysis of samples by different personnel; Use of different techniques;
- Collection and analysis by the same personnel using the same methods but at different times; and
- Spatial and temporal changes (due to environmental dynamics).

G. Blanks

The purpose of laboratory and field blanks is to check for artefacts and interferences that may arise during sampling, transport and analysis.

H. Matrix Spikes

Samples are spiked with laboratory grade standards to detect interactive effects between the sample matrix and the analytes being measured. Matrix Spikes are reported as a percent recovery and are prepared for 1 in every 20 samples. Sample batches that contain less than 20 samples may be reported with a Matrix Spike from another batch. The percent recovery is calculated using the formula below. Acceptable recovery limits are 70% to 130%.

$$\frac{\text{(Spike Sample Result – Sample Result) x 100}}{\text{Concentration of Spike Added}}$$

I. Surrogate Spikes

Samples are spiked with a known concentration of compounds that are chemically related to the analyte being investigated but unlikely to be detected in the environment. The purpose of the Surrogate Spikes is to check the accuracy of the analytical technique. Surrogate Spikes are reported as percent recovery.

J. Duplicates

Laboratory duplicates measure precision, expressed as Relative Percent Difference. Duplicates are prepared from a single field sample and analysed as two separate extraction procedures in the laboratory. The RPD is calculated using the formula where D1 is the sample concentration and D2 is the duplicate sample concentration:

$$\frac{(D1 - D2) \times 100}{\{(D1 + D2)/2\}}$$

Appendix G: Data (QA/QC) Evaluation

Data (QA/QC) Evaluation

A. INTRODUCTION

This Data (QA/QC) Evaluation forms part of the validation process for the DQOs documented in Section 6.1 of this report. Checks were made to assess the data in terms of precision, accuracy, representativeness, comparability and completeness. These 'PARCC' parameters are referred to collectively as DQIs and are defined in the Report Explanatory Notes attached in the report appendices.

1. Field and Laboratory Considerations

The quality of the analytical data produced for this project has been considered in relation to the following:

- Sample collection, storage, transport and analysis;
- Laboratory PQLs;
- Field QA/QC results; and
- Laboratory QA/QC results.

2. Field QA/QC Samples and Analysis

A summary of the field QA/QC samples collected and analysed for this investigation is provided in the following table:

Sample Type	Sample Identification	Frequency (of Sample Type)	Analysis Performed
Intra-laboratory duplicate (soil)	SDUP1 (primary sample BH146 0-0.2m)	Approximately 7% of primary samples	Heavy metals, TRH/BTEX, PAHs
Intra-laboratory duplicate (soil)	SDUP4 (primary sample BH103 0-0.2m)	As above	As above
Intra-laboratory duplicate (soil)	SDUP7 (primary sample BH145 0-0.2m)	As above	Heavy metals, TRH/BTEX, PAHs, OCPs, PCBs and phenols
Intra-laboratory duplicate (soil)	SDUP10 (primary sample BH106 0.19-0.4m)	As above	As above
Inter-laboratory duplicate (soil)	SDUP101 (primary sample TP101 0-0.3m)	Approximately 7% of primary samples	Heavy metals, TRH/BTEX, PAHs
Inter-laboratory duplicate (soil)	SDUP102 (primary sample TP122 0-0.2m)	As above	Heavy metals, TRH/BTEX, PAHs, OCPs, PCBs and phenols
Inter-laboratory duplicate (soil)	SDUP103 (primary sample TP130 0-0.2m)	As above	Heavy metals, TRH/BTEX, PAHs
Inter-laboratory duplicate (soil)	SDUP111 (primary sample BH110 0-0.2m)	As above	Heavy metals, TRH/BTEX, PAHs, OCPs, PCBs and phenols
Intra-laboratory duplicate (water)	WDUP3 (primary sample MW106)	Approximately 12% of primary samples	Heavy metals, TRH/BTEX, low level PAHs, PFAS and VOCs

Sample Type	Sample Identification	Frequency (of Sample Type)	Analysis Performed
Inter-laboratory duplicate (water)	WDUP4 (primary sample MW143)	Approximately 12% of primary samples	Heavy metals, TRH/BTEX, low level PAHs, PFAS and VOCs
Trip spike (soil)	TS-S1 (1/2/2021) TS-S2 (3/2/2021)	Two for the investigation to demonstrate adequacy of preservation, storage and transport methods	BTEX
Trip spike (water)	TS-W1 (15/2/2021)	One for the investigation to demonstrate adequacy of preservation, storage and transport methods	BTEX
Trip blank (soil)	TB-S1 (1/2/2021) TB-S2 (3/2/2021)	Two for the investigation to demonstrate adequacy of storage and transport methods	BTEX
Trip blank (water)	TB-W1 (15/2/2021)	One for the investigation to demonstrate adequacy of storage and transport methods	BTEX
Rinsate (soil SPT)	FR1-SPT (3/2/2021) FR2-SPT (5/2/2021)	Two for the investigation to demonstrate adequacy of decontamination methods	BTEX

The results for the field QA/QC samples are detailed in the laboratory summary tables (Table S9 and Table XX) attached to the investigation report and are discussed in the subsequent sections of this Data (QA/QC) Evaluation report.

3. Data Assessment Criteria

JKE adopted the following criteria for assessing the field and laboratory QA/QC analytical results:

Field Duplicates

Acceptable targets for precision of field duplicates in this report will be 30% or less, consistent with NEPM (2013). RPD failures will be considered qualitatively on a case-by-case basis taking into account factors such as the concentrations used to calculate the RPD (i.e. RPD exceedance where concentrations are close to the PQL are typically not as significant as those where concentrations are reported at least five or 10 times the PQL), sample type, collection methods and the specific analyte where the RPD exceedance was reported.

Field/Trip Blanks and Rinsates

Acceptable targets for field blank and rinsate samples in this report will be less than the PQL for organic analytes.

Trip Spikes

Acceptable targets for trip spike samples in this report will be 70% to 130%.

Laboratory QA/QC

The suitability of the laboratory data is assessed against the laboratory QA/QC criteria which is outlined in the laboratory reports. These criteria were developed and implemented in accordance with the laboratory's NATA accreditation and align with the acceptable limits for QA/QC samples as outlined in NEPM (2013) and other relevant guidelines.

A summary of the acceptable limits adopted by the primary laboratory (Envirolab) is provided below:

RPDs

- Results that are <5 times the PQL, any RPD is acceptable; and
- Results >5 times the PQL, RPDs between 0-50% are acceptable.

Laboratory Control Samples (LCS) and Matrix Spikes

- 70-130% recovery acceptable for metals and inorganics;
- 60-140% recovery acceptable for organics; and
- 10-140% recovery acceptable for VOCs.

Surrogate Spikes

- 60-140% recovery acceptable for general organics; and
- 10-140% recovery acceptable for VOCs.

Method Blanks

- All results less than PQL.

B. DATA EVALUATION

1. Sample Collection, Storage, Transport and Analysis

Samples were collected by trained field staff in accordance with JKE field manual. Field sampling procedures were designed to be consistent with relevant guidelines, including NEPM (2013) and other guidelines made under the CLM Act 1997.

Appropriate sample preservation, handling and storage procedures were adopted. Laboratory analysis was undertaken within specified holding times generally in accordance with Schedule B(3) of NEPM (2013) and the laboratory NATA accredited methodologies. Envirolab noted that the asbestos results were reported to be consistent with the recommendations in NEPM (2013), however this level of reporting is outside the scope of their NATA accreditation. In the absence of other available analytical methods for asbestos, this was found to be acceptable for the purpose of this investigation.

JKE note that the temperature on receipt of soil samples was reported to be up to 18.2°C. JKE understand that the temperature is measured at the laboratory using an infrared temperature probe by scanning the outside of the sample container (i.e. one sample jar/container at the time of registering the samples). This procedure is not considered to be robust as there is a potential for the outside of the jar to warm to ambient temperature, or at least to increase from that of the internal contents, relatively quickly. On this basis, JKE are of the opinion that the temperatures reported on the Sample Receipts are unlikely to be reliable or

representative of the overall batch. This is further supported by the trip spike recovery results (discussed further below) which reported adequate recovery in the range of 95% to 105%.

Whilst it could be argued that 5% loss of volatiles may have led to these contaminants being under-reported (i.e. the lower end of the trip spike recovery was 95%), it is noted that all BTEX results and volatile TRHs (F1 and F2) were below the PQLs and even a nominal 5% increase of TRH/BTEX concentrations in these samples would not result in exceedance of the SAC.

On receipt of groundwater samples the temperature was reported to be up to 16°C The samples were transported in an ice-chilled container and that the samples were delivered to the laboratory on the completion of sampling. On this basis, JKE consider the samples were in the initial cool-down process and therefore the data is representative. This is further supported by the trip spile recovery results (discussed further below) which reported adequate recovery in the range of 106% to 115%. JKE note that the temperature on receipt of the inter-laboratory water sample was up to 23.8°C.

Due to a clerical error by JKE, the trip spike sample (TS-S2) was labelled as prepared on 1 February 2021. The sample was prepared on 3 February 2021.

The holding times for the analysis of pH and EC were beyond the recommended holding time by a few days. JKE consider it is unlikely that significant physiochemical changes would have occurred during this period, and the samples were stored chilled. On this basis, JKE consider the exceedances would not materially impact upon the representativeness of the samples. The data was considered useable in the context of this investigation.

Review of the project data also indicated that:

- COC documentation was adequately maintained;
- Sample receipt advice documentation was provided for all sample batches;
- All analytical results were reported; and
- Consistent units were used to report the analysis results.

2. <u>Laboratory PQLs</u>

Appropriate PQLs were adopted for the analysis and all PQLs were below the SAC.

Appropriate PQLs were adopted for the analysis and all PQLs were below the SAC, with the exception of anthracene, hexachlorobutadiene and vinyl chloride PQLs for groundwater analysis. The anthracene PQL was 10 times greater than the ecological SAC. The hexachlorobutadiene PQL was 1.4 times greater than the human health SAC. The vinyl chloride PQL was approximately three times greater than the recreational SAC and 33 times greater than the human health SAC.

In light of the PAH concentrations reported for soil and groundwater and VOC concentrations reported for groundwater, JKE are of the opinion that this is not significant, and it does not affect the quality of the dataset as a whole or the outcome of the investigation.

3. Field QA/QC Sample Results

Field Duplicates

The results indicated that field precision was acceptable. RPD non-conformances were reported for some analytes as discussed below:

- Elevated RPDs were reported for two PAH compounds, copper, lead and zinc in SDUP1/BH146 (0-0.2m);
- Elevated RPDs were reported for nickel and zinc in SDUP4/BH103 (0-0.2m);
- Elevated RPDs were reported for copper, nickel and zinc in SDUP10/BH106 (0.19-0.4m);
- Elevated RPDs were reported for TRH F2, TRH F3, and pyrene in SDUP101/TP101 (0-0.3m);
- Elevated RPDs were reported for several PAH compounds, copper, nickel and zinc in SDUP102/TP122 (0-0.2m);
- Elevated RPDs were reported for TRH F3, TRH F4, several PAH compounds and several heavy metals in SDUP103/TP130 (0-0.2m); and
- Elevated RPDs were reported for arsenic in SDUP111/BH110 (0-0.2m).

Values outside the acceptable limits have been attributed to sample heterogeneity and the difficulties associated with obtaining homogenous duplicate samples of heterogeneous matrices. As both the primary and duplicate sample results were screened in comparison to the SAC, the exceedances are not considered to have had an adverse impact on the data set as a whole.

The groundwater inter-laboratory data is pending and with be updated once received.

Trip Blanks

During the investigation, two soil trip blanks and one water trip blank were placed in the eskies during sampling and transported back to the laboratory. The results were all less than the PQLs, therefore cross contamination between samples that may have significance for data validity did not occur.

Rinsates

All results were below the PQL. This indicated that cross-contamination artefacts associated with sampling equipment were not present and the potential for cross-contamination to have occurred was low.

Trip Spikes

The results for the soil trip spikes ranged from 95% to 105% and the results for the water trip spike ranged from 106% to 115%. The results indicated that field preservation methods were appropriate.

4. Laboratory QA/QC

The analytical methods implemented by the laboratory were performed in accordance with their NATA accreditation and were consistent with Schedule B(3) of NEPM (2013). The frequency of data reported for the laboratory QA/QC (i.e. duplicates, spikes, blanks, LCS) was considered to be acceptable for the purpose of this investigation. A review of the laboratory QA/QC data identified the following minor non-conformances:

- Report 261320 – The laboratory RPD acceptance criteria were exceeded for zinc in one soil sample and several heavy metals in a second soil sample. The laboratory issued triplicate results for both samples;

- Report 261320 – Matrix spike recoveries were not possible for copper and zinc in one soil sample and nickel in a second soil sample, due to the heterogeneous nature of the samples. However, acceptable recoveries were achieved in the laboratory control spikes;
- Report 261320 - Matrix spike recoveries were not possible for chloride in one soil sample and sulphate in a second soil sample, due to the high concentrations recorded in the samples. Acceptable recoveries were achieved in the laboratory control spikes. JKE note these analytes relate to the salinity investigation undertaken concurrent with this investigation;
- Report 24410 – A low matrix spike recovery was obtained for pentachlorophenol in one soil sample due to matrix interference. An acceptable recovery was achieved in the laboratory control spike;
- Report 262017 – Matrix spike recovery was not possible for chloride in one water sample due to high chloride concentrations within the sample. An acceptable recovery was achieved in the laboratory control spike; and
- Report 262017 – PQLs for PFBA and PFPeA were raised due to matrix interference.

The inter-laboratory groundwater analysis report is pending. The laboratory QA/QC review will be updated once received.

C. DATA QUALITY SUMMARY

JKE are of the opinion that the data are adequately precise, accurate, representative, comparable and complete to serve as a basis for interpretation to achieve the investigation objectives.

Non-conformances were reported for some field QA/QC samples and laboratory QA/QC analysis. These non-conformances were considered to be sporadic and minor, and were not considered to be indicative of systematic sampling or analytical errors. On this basis, these non-conformances are not considered to materially impact the report findings.

There was only one groundwater monitoring event undertaken for the investigation. On this basis there is some uncertainty around the representativeness of the groundwater data, particularly during different climatic conditions and after wet/dry periods. However, given the low contaminant concentrations reported, the site history and the surrounding land uses, this is not considered to alter the conclusions of the investigation.

Appendix H: Field Work Documents

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	103
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	8.0m

WELL FINISH DETAILS

	Gatic Cover ☒	**Standpipe** ☐	**Other (describe)** ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	3.40
Date:	8/2/21	**Time – Before:**	12.00
Undertaken By:	AM	**SWL – After (m):**	—
Total Vol. Removed:	10	**Time – After:**	12.15
PID Reading (ppm):	—		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
1	20.5	7.5	13682	6.79	-4.0
5	20.0	2.7	11736	6.81	-20.3
10	20.1	1.6	13582	6.75	-26.0
Well	Dry				

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: 5

Low silt Good, low recharge

Tested By:	AM	**Remarks:**
Date Tested:	8/2/21	- Steady state conditions - Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
Checked By:	CN	- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Date:	17/2/21.	

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	106
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	8.0m

WELL FINISH DETAILS

	Gatic Cover ☒	**Standpipe** ☐	**Other (describe)** ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	1.80
Date:	8/2/21	**Time – Before:**	10:22
Undertaken By:	AM	**SWL – After (m):**	–
Total Vol. Removed:	30	**Time – After:**	1047
PID Reading (ppm):	–		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
1	22.4	5.1	16727	7.39	-12.1
5	22.6	2.5	13881	7.17	-19.7
10	22.6	2.3	13749	7.05	-24.1
15	24.5	7.2	737	7.93	-11.6
20	24.0	6.7	1512	7.51	-10.6
25	23.6	6.7	3789	7.21	-11.0
30	23.3	5.8	4418	7.23	-16.5
Well	Dry				

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: High silt Coarse 20L collected recharge silt Coarse Low recharge

Tested By:	AM	**Remarks:**
Date Tested:	8/2/21	- Steady state conditions - Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
Checked By:	CM	- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Date:	17/2/21	

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	MW11
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	8.0

WELL FINISH DETAILS

	Gatic Cover ☐	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	4.20
Date:	8/2/21	**Time – Before:**	12:39
Undertaken By:	AM	**SWL – After (m):**	—
Total Vol. Removed:	25	**Time – After:**	1:10
PID Reading (ppm):	—		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
1	20.3	1.6	18417	6.96	-16.6
5	20.8	0.7	17893	6.91	-25.7
10	20.8	0.6	18742	6.75	-26.7
15	20.8	1.1	18861	6.63	-29.2
18	21.2	2.0	10061	6.58	-27.9
25	21.2	1.3	14277	6.56	-23.6
Well	Dry				

Comments: Odours (YES / (NO)) NAPL/PSH (YES / (NO)) Sheen (YES / (NO)) Steady State Achieved (YES / (NO))

YSI Used: 5 High Silt Coal medium recharge

Tested By:	AM	**Remarks:**
Date Tested:	8/2/21	- Steady state conditions - Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
Checked By:	CA	- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Date:	17/2/21	

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	116
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	5.6m

WELL FINISH DETAILS

	Gatic Cover ☐	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	–
Date:	8/2/21	**Time – Before:**	11:20
Undertaken By:	AM	**SWL – After (m):**	–
Total Vol. Removed:	–	**Time – After:**	11:20
PID Reading (ppm):	–		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
Well	Dry				

Comments:Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: 5 Well Dry

Tested By:	AM
Date Tested:	8/2/21
Checked By:	CR
Date:	17/2/21

Remarks:

- Steady state conditions
- Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	123
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	7.9m

WELL FINISH DETAILS

	Gatic Cover ☒	**Standpipe** ☐	**Other (describe)** ☐

WELL DEVELOPMENT DETAILS

Method:	Peristaltic	**SWL – Before (m):**	3.8
Date:	8/2/21	**Time – Before:**	1:23
Undertaken By:	AM	**SWL – After (m):**	—
Total Vol. Removed:	4	**Time – After:**	1:33
PID Reading (ppm):	—		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
1	21.3	5.1	17742	6.72	-9.9
4	23.3	2.9	18170	6.77	-20.4
Well Dry					

Comments: Odours (YES / (NO)), NAPL/PSH (YES / (NO)), Sheen (YES / (NO)), Steady State Achieved (YES / (NO))

YSI Used: 5 — low silt load. Low recharge

Tested By:	AM	**Remarks:**
Date Tested:	8/2/21	- Steady state conditions - Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
Checked By:	CM	- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Date:	17/2/21	

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	128
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	6.1

WELL FINISH DETAILS

	Gatic Cover ☒	**Standpipe** ☐	**Other (describe)** ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	3.0m
Date:	8/2/21	**Time – Before:**	1:50
Undertaken By:	AM	**SWL – After (m):**	—
Total Vol. Removed:	3	**Time – After:**	2:05
PID Reading (ppm):	—		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
1	23.2	5.0	12450	7.13	-40.8
3	22.5	6.9	12947	6.83	-23.5
Well	Dry				

Comments: Odours (YES / (NO)), NAPL/PSH (YES / (NO)), Sheen (YES / (NO)), Steady State Achieved (YES / (NO))

YSI Used: 5 Low recharge, low silt Good

Tested By:	AM
Date Tested:	8/2/21
Checked By:	CR
Date:	17/2/21

Remarks:

- Steady state conditions
- Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	134
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	8.0m

WELL FINISH DETAILS

	Gatic Cover ☒	**Standpipe** ☐	**Other (describe)** ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	3.5m
Date:	8/2/21	**Time – Before:**	9.50
Undertaken By:	AM	**SWL – After (m):**	—
Total Vol. Removed:	10	**Time – After:**	10.01
PID Reading (ppm):	—		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
1	21.0	2.7	16702	6.92	-26.2
5	20.9	2.9	15750	6.87	-25.2
10	21.0	3.0	16044	6.78	-32.6
Well Purg					

Comments: Odours (YES / (NO)) NAPL/PSH (YES / (NO)), Sheen (YES / (NO)), Steady State Achieved (YES / (NO))

YSI Used: 5 Low silt Cored, low recharge

Tested By:	AM	**Remarks:**
Date Tested:	8/2/21	- Steady state conditions - Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
Checked By:	CR	- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Date:	17/2/21	

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	139
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	7.0m

WELL FINISH DETAILS

	Gatic Cover ☒	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	5.9m
Date:	8/2/21	**Time – Before:**	8:40
Undertaken By:	AM	**SWL – After (m):**	–
Total Vol. Removed:	4	**Time – After:**	8:51
PID Reading (ppm):	–		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
3	22.7	2.0	19719	6.09	-15.3
4	22.2	2.5	20420	6.20	-24.1
Well	Dry				

Comments: Odours (YES / (NO)), NAPL/PSH (YES / (NO)) Sheen (YES / (NO)), Steady State Achieved (YES / (NO))

YSI Used: ↑ Low recharge High silt load

Tested By:	AM
Date Tested:	8/2/21
Checked By:	CR
Date:	19/2/21

Remarks:

- Steady state conditions
- Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	143
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	7.6m

WELL FINISH DETAILS

	Gatic Cover ☒	Standpipe ☐	Other (describe) ☐

WELL DEVELOPMENT DETAILS

Method:	Development	**SWL – Before (m):**	4.60
Date:	8/2/21	**Time – Before:**	9:20
Undertaken By:	AM	**SWL – After (m):**	—
Total Vol. Removed:	5	**Time – After:**	9:35
PID Reading (ppm):	—		

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
1	21.1	5.0	23881	6.75	-20.4
5	21.0	4.8	23667	6.72	-23.5
Well	Dry				

Comments: Odours (YES / (NO)) NAPL/PSH (YES / (NO)) Sheen (YES / (NO)) Steady State Achieved (YES / (NO))

YSI Used: 5 6m recharge

Tested By:	AM	**Remarks:**
Date Tested:	8/2/21	- Steady state conditions - Difference in the pH less than 0.2 units, difference in the conductiveity less than 10% and SWL stable/not in drawdown
Checked By:	CR	- Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Date:	17/2/21	

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888KD
Project:	Due Diligence Investigation	**Well No.:**	PMW1
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	—

WELL FINISH

X	**Gatic Cover**		**Standpipe**		**Other (describe)**

WELL PURGE DETAILS:

Method:	Bailer	**SWL – Before:**	3.2
Date:	17/2/21	**Time – Before:**	9.45
Undertaken By:	AM	**Total Vol Removed:**	2
Pump Program No:	—	**PID (ppm):**	0.1

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
9.50	—	1		21.1	5.6	23068	6.75	-29.5
			Started Sampling					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

Sampling Containers Used: 2x glass amber, 4 x BTEX vials, 0 x HNO3 plastic, 0x H2SO4 plastic, 6 x unpreserved plastic

YSI used: 5

Tested By: Alistair Mitchell	**Remarks:**
Date Tested: 17/2/21	- Steady state conditions - difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Checked By: CR	
Date: 17/2/21.	

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888KD
Project:	Due Diligence Investigation	**Well No.:**	PMW2
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	—

WELL FINISH

X	**Gatic Cover**		**Standpipe**		**Other (describe)**

WELL PURGE DETAILS:

Method:	Bailer	**SWL – Before:**	0.32
Date:	17/2/21	**Time – Before:**	10:30
Undertaken By:	AM	**Total Vol Removed:**	2
Pump Program No:	—	**PID (ppm):**	0

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
10:35	—	1		25.8	3.7	4321	7.51	-11
			Started Sampling					

Comments: Odours (YES / (NO)), NAPL/PSH (YES / (NO)), Sheen (YES / (NO)), Steady State Achieved (YES / (NO))

Sampling Containers Used: 2x glass amber, 4x BTEX vials, x HNO3 plastic, x H2SO4 plastic, x unpreserved plastic

YSI used: 5

Tested By: Alistair Mitchell	**Remarks:**
Date Tested: 17/2/21	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 17/2/21	

10L

JKEnvironments

Client:	Woolworths Group	Job No.:	E31888BR
Project:	Additional Site Investigation	Well No.:	103
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	Depth (m):	8.0m

WELL FINISH

X	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Peristaltic	SWL – Before:	4.78
Date:	16/2/21	Time – Before:	2:30
Undertaken By:	AM	Total Vol Removed:	17
Pump Program No:	106204	PID (ppm):	0.5

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
2:34	4.98	1		22.0	2.1	4461	6.84	-32.0
2:38	5.28	2		21.3	1.8	11770	6.62	-25.8
2:42	5.60	3		21.5	2.3	13562	6.60	-12.9
2:46	5.87	5		20.7	2.7	12257	6.57	-10.9
2:50	6.02	6		20.6	1.9	12204	6.55	-2.6
2:54	6.21	7		20.5	1.8	12414	6.55	-7.2
2:58	6.33	9		20.5	1.9	12763	6.53	-12.5
3:01	6.47	10		20.5	1.9	12777	6.53	-15.8
3:04	6.58	11		20.6	2.0	12906	6.51	-20.8
3:07	6.70	12		20.5	2.0	13051	6.50	-23.1
3:10	6.79	13		20.7	2.6	13194	6.49	-27.1
3:13	6.89	14		20.7	1.9	13344	6.47	-28.2
3:16	7.00	15		20.9	1.8	13390	6.47	-32.6
			Started Sampling					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

1x PFAS

Sampling Containers Used: 2x glass amber, 4 x BTEX vials, 1 x HNO3 plastic, 0 x H2SO4 plastic, 1 x unpreserved plastic

YSI used: 5

Low silt load

Tested By: ~~Craig Ridley~~ AM	**Remarks:**
Date Tested: 16/2/21	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 17/2/21	

106

JKEnvironments

Client:	Woolworths Group	Job No.:	E31888BR
Project:	Additional Site Investigation	Well No.:	106
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	Depth (m):	8.0m

WELL FINISH

x	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Peristaltic	SWL – Before:	1.50
Date:	16/2/21	Time – Before:	8:22
Undertaken By:	AM	Total Vol Removed:	30
Pump Program No:	85937	PID (ppm):	0.2

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
8:26	1.60	1		24.1	3.4	14390	6.62	105.3
8:30	2.25	2		23.2	2.3	14484	6.71	12.9
8:34	2.65	3		23.3	2.2	14490	6.73	-8.1
8:37	2.91	4		23.5	2.5	14441	6.74	-14.7
8:40	3.24	5		23.7	3.0	14336	6.75	-19.3
8:43	3.56	6		23.9	3.5	14840	6.73	-22.1
8:46	3.85	7		24.0	3.6	14080	6.68	-23.5
8:49	4.10	8		24.1	3.6	14112	6.65	-24.0
8:52	4.44	9		23.9	3.3	14306	6.66	-25.4
8:56	4.87	10		23.5	2.6	14585	6.80	-28.7
8:59	5.26	11		23.2	2.0	14590	6.72	-33.0
9:02	5.47	12		23.0	2.0	14593	6.73	-34.2
9:05	5.47	13		23.1	5.0	8271	6.97	30.3
9:18	Top of well	14		23.8	7.7	942	8.10	-30.8
9:33	3.74	23		24.5	9.1	691	8.43	-26.5
9:39	4.70	25		23.7	7.4	4195	7.51	-30.1
9:42	5.30	27		23.1	5.7	7074	7.17	-30.5
Rain Started Sampling								

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

WDUP3 2x PFAS

Sampling Containers Used: 4 x glass amber, 8 x BTEX vials, 2 x HNO3 plastic, 0 x H2SO4 plastic, 1 x unpreserved plastic

YSI used: 5 Low silt load Note 13L well filled from seepage, seal no for top 1m broken. Well filled as rain was particular heavy

Tested By: ~~Craig Ridley~~ AM	**Remarks:**
Date Tested: 16/2/21	- Steady state conditions
Checked By: ER	- difference in the pH less than 0.2 units, difference in conductivity less than 10%
Date: 17/2/21	10% and SWL stable/not in drawdown

25L

JKEnvironments

Client:	Woolworths Group	Job No.:	E31888BR
Project:	Additional Site Investigation	Well No.:	111
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	Depth (m):	8.0

WELL FINISH

X	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Peristaltic	SWL – Before:	5.13
Date:	17/2/21	Time – Before:	8:36
Undertaken By:	AM	Total Vol Removed:	14
Pump Program No:	106204	PID (ppm):	3.2

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
8:40	5.30	1		20.7	2.6	17490	6.55	-23.2
8:44	5.51	2		20.7	0.9	18189	6.40	-41.6
8:48	5.69	3		20.7	0.5	18710	6.38	-48.9
8:52	5.81	4		20.7	0.5	18924	6.36	-49.2
8:56	5.92	5		20.7	0.4	19043	6.35	-49.2
9:00	6.00	6		20.8	0.4	19128	6.34	-48.3
9:04	6.05	7		20.9	2.2	19197	6.33	-37.0
9:08	6.11	8		20.9	0.4	19263	6.32	-44.4
9:11	6.14	9		20.9	0.3	19308	6.32	-42.4
9:14	6.16	10		20.9	0.3	19383	6.31	-41.0
9:17	6.16	11		20.9	0.3	19366	6.31	-40.7
9:20	6.16	12		20.9	0.3	19380	6.31	-40.2
			Started Sampling					

Comments: Odours (YES / NO) NAPL/PSH (YES / NO) Sheen (YES / NO) Steady State Achieved (YES / NO)

1 x PFAS

Sampling Containers Used: 2x glass amber, 4 x BTEX vials, 1 x HNO3 plastic, 0 x H2SO4 plastic, 1 x unpreserved plastic

YSI used: 5

Low Silt Good

Tested By: ~~Craig Ridley~~ AM	**Remarks:**
Date Tested: 17/2/21	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 17/2/21.	

JKEnvironments

Client:	Woolworths Group	Job No.:	E31888BR
Project:	Additional Site Investigation	Well No.:	116
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	Depth (m):	5-6m

WELL FINISH

X	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Peristaltic	SWL – Before:	–
Date:	15/2/21	Time – Before:	11:34
Undertaken By:	AM	Total Vol Removed:	0
Pump Program No:	–	PID (ppm):	2.9m

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
			Well Dry					

Comments: Odours (YES / (NO)) NAPL/PSH (YES / (NO)), Sheen (YES / (NO)), Steady State Achieved (YES / (NO))

Well Dry

0 x PFAS

Sampling Containers Used: 0x glass amber, 0x BTEX vials, 0x HNO3 plastic, 0x H2SO4 plastic, 0 x unpreserved plastic

YSI used: 5

Tested By: Craig Ridley AM	**Remarks:**
Date Tested: 15/2/21	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 17/2/21	

JKEnvironments

Client:	Woolworths Group	Job No.:	E31888BR
Project:	Additional Site Investigation	Well No.:	123
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	Depth (m):	7.9

WELL FINISH

x	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Peristaltic	SWL – Before:	4.77
Date:	15/2/21	Time – Before:	1:30
Undertaken By:	AM	Total Vol Removed:	9
Pump Program No:	85973	PID (ppm):	1.3

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
1:35	5.16	1		21.5	0.8	18106	6.51	-32.2
1:40	5.59	2		21.4	0.4	18006	6.45	-29.1
1:45	5.94	3		21.4	0.3	17575	6.45	-28.4
1:50	6.35	4		21.4	0.3	17366	6.47	-27.1
1:54	6.65	5		21.4	0.3	17470	6.48	-26.6
1:58	6.86	6		21.4	0.3	17660	6.48	-25.1
2:02	7.16	7		21.4	0.2	17508	6.38	-23.1
			Started Sampling					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

1x PFAS

Sampling Containers Used: 2x glass amber, 4 x BTEX vials, 1 x HNO3 plastic, 0x H2SO4 plastic, 1 x unpreserved plastic

YSI used: 5 Low Silt Load

Tested By: ~~Craig Ridley~~ AM	**Remarks:**
Date Tested: 15/2/21	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% > 10% and SWL stable/not in drawdown
Date: 17/2/21	

JKEnvironments

Client:	Woolworths Group	Job No.:	E31888BR
Project:	Additional Site Investigation	Well No.:	128
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	Depth (m):	6.1

WELL FINISH

x	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Peristaltic	SWL – Before:	4.20m
Date:	15/2/21	Time – Before:	12:07
Undertaken By:	AM	Total Vol Removed:	5
Pump Program No:	85937	PID (ppm):	4.2

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
12:12	4.49	1		22.8	1.5	11213	6.98	-41.3
12:17	4.80	2		22.4	1.6	14353	6.87	-8.5
12:22	5.12	3		23.0	0.8	6628	7.07	-39.9
			Started Sampling					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO) Steady State Achieved (YES / NO)

Sampling Containers Used: 2 x glass amber, 4 x BTEX vials, 2 x HNO3 plastic, x H2SO4 plastic, 1 x unpreserved plastic 1 x PFAS

YSI used: 5 Low silt Load

Tested By: ~~Craig Ridley~~ AM	**Remarks:**
Date Tested: 15/2/21	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 17/2/21	

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	134
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	8

WELL FINISH

X	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Peristaltic	**SWL – Before:**	4.25
Date:	15/2/21	**Time – Before:**	10:13
Undertaken By:	AM	**Total Vol Removed:**	12
Pump Program No:	85937	**PID (ppm):**	0.3

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
10:18	4.55	1		21.2	1.1	16977	6.93	-32.7
10:23	4.84	2		20.9	0.5	16912	6.89	-30.4
10:28	5.16	3		20.9	0.4	16906	6.89	-29.5
10:13	5.44	4		20.9	0.4	16904	6.89	-30.8
10:38	5.71	5		20.9	0.6	16906	6.89	-35.0
10:43	6.02	6		21.3	0.6	17026	6.89	-41.6
10:48	6.25	7		21.2	0.5	16966	6.88	-45.1
10:53	6.48	8		21.2	0.4	16870	6.88	-45.3
10:58	6.71	9		21.1	0.4	16845	6.88	-47.4
11:03	7.00	10		21.1	0.4	16868	6.87	-52.4
	Stopped		Sampling					

Comments: Odours (YES / NO) NAPL/PSH (YES / NO) Sheen (YES / NO) Steady State Achieved (YES / NO)

2x PFAS

Sampling Containers Used: 4 x glass amber, 8 x BTEX vials, 2 x HNO3 plastic, 0 x H2SO4 plastic, 1 x unpreserved plastic

YSI used: 5 Low 5.14 Load WDUP2

Tested By: ~~Craig Ridley~~ AM	**Remarks:**
Date Tested: 15/2/21	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 17/2/21.	

4C

JKEnvironments

Client:	Woolworths Group	Job No.:	E31888BR
Project:	Additional Site Investigation	Well No.:	189
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	Depth (m):	7.0

WELL FINISH

X	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Peristaltic	SWL – Before:	4.71
Date:	15/2/21	Time – Before:	8:14
Undertaken By:	AM	Total Vol Removed:	7
Pump Program No:	85937	PID (ppm):	0

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
8:19	5.02	1		22.8	1.0	22539	5.99	-16.5
8:23	5.36	2		22.9	0.5	21884	5.97	-18.9
8:27	5.62	3		23.0	0.4	21640	5.88	-19.1
8:31	5.94	4		23.0	0.3	21707	5.90	-22.5
			Sampling Started					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

Sampling Containers Used: 4 x glass amber, 8 x BTEX vials, 2 x HNO3 plastic, 0 x H2SO4 plastic, 1 x unpreserved plastic, 2x PFAS

YSI used: 5 low silt load WDUP1

Tested By: ~~Craig Ridley~~ AM	**Remarks:**
Date Tested: 15/2/21	- Steady state conditions
Checked By: CR	- difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Date: 17/2/21	

JKEnvironments

Client:	Woolworths Group	**Job No.:**	E31888BR
Project:	Additional Site Investigation	**Well No.:**	143
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW	**Depth (m):**	7.6

WELL FINISH

X	Gatic Cover		Standpipe		Other (describe)

WELL PURGE DETAILS:

Method:	Peristaltic	**SWL – Before:**	3.08
Date:	16/2/21	**Time – Before:**	10:23
Undertaken By:	AM	**Total Vol Removed:**	12
Pump Program No:	85937	**PID (ppm):**	0.3

PURGING / SAMPLING MEASUREMENTS

Time (min)	SWL (m)	Vol (L)	Notes	Temp (°C)	DO (mg/L)	EC (µS/cm)	pH	Eh (mV)
10:28	3.68	1	leave with pump ↓	21.8	4.9	24460	6.67	-10.1
10:45	4.16	2	↓	21.4	4.6	24743	6.74	-25.7
10:48	4.54	3		21.2	4.0	24847	6.56	-25.8
1:16	4.65	4		22.1	4.5	24897	6.57	-41.6
1:20	4.92	5		21.9	4.4	24626	6.51	-28.8
1:24	5.29	6		21.8	4.3	24074	6.56	-24.9
1.28	5.75	7		21.7	4.2	24542	6.47	-22.1
1:32	5.97	8		21.9	4.1	24892	6.45	-22.0
1.36	6.35	9		21.6	3.9	24653	6.45	-16.1
1:40	6.57	10		21.9	3.8	24849	6.48	-14.8
			Started Sampling					

1:11 restarted

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

2xPFAS

Sampling Containers Used: 4 x glass amber, 8 x BTEX vials, 2 x HNO3 plastic, 0 x H2SO4 plastic, 1 x unpreserved plastic

YSI used: 5 Low silt Gad WDCP4

Tested By: ~~Craig Ridley~~ AM	**Remarks:**
Date Tested: 16/2/21	- Steady state conditions - difference in the pH less than 0.2 units, difference in conductivity less than 10% 10% and SWL stable/not in drawdown
Checked By: ON	
Date: 17/2/21	

PFAS Sampling Checklist

Job No: E31888 BR	**Date:** 15/2/21 – 17/2/21
Address: 250 Victoria St Wetherill Park	**JKE Personnel:** AM
Proposed development: Highbay Distribution Warehouse	**Weather conditions:**
Media to be sampled: Water	**Current site activity:**

Laboratory and sampling preservation	**Yes or No**	**In no:**	**Comments:**
Has the laboratory been notified of PFAS sampling requirements	Yes	Discuss with requirements with the laboratory and notify when sending PFAS samples for analysis	
Are the sampling vessels provided confirmed suitable for PFAS sampling?	Yes	Discuss the requirements with the laboratory prior to commencing sampling	
Is the laboratory experienced in handling and analysing PFAS samples?	Yes	Engage NATA accredited laboratory with experience with PFAS sampling.	
Personal Protective Equipment/clothing	**Yes or No**	**In yes:**	**Comments:**
Has all clothing been washed less than 6 times since purchase?	Yes	Wash all field clothing at least six times to remove surface coatings	
Has clothing been washed with fabric softener's?	No	Avoid using fabric softener's	
Is clothing stain-resistant, rain-resistant, or treated with waterproof coatings/ treated fabric (e.g. GORE-TEX)?	No	Do not wear rain proof or water-resistant clothing. Avoid sampling in the rain.	
Are boots stain-resistant, rain-resistant or treated with waterproof coatings/ treated fabric (e.g. GORE-TEX)?	No	Steel-capped boots made with polyurethane and polyvinyl chloride (PVC) are acceptable alternatives	
Is Tyvek clothing being worn?	No	Tyvek clothing not to be worn	
Are sunscreen and or/insect repellents worn?	Yes	Do not wear sunscreen or use a PFAS free sunscreen (eg. baby sunscreen). Sampling could occur early in the morning or late in the afternoon.	Baby sunscreen

PFAS Sampling Checklist

Sampling Equipment	Yes or No	If yes:	Comments:
Are Teflon containers or coated field equipment (tubing, bailers etc.) being used?	No	High Density Polyethylene (HDPE), silicone tubing and polypropylene field equipment recommended.	
Are Teflon lined lids on containers (eg. sample containers, rinstate water storage containers) being used on site?	No	Polypropylene lids for sample containers and polypropylene or HDPE containers for rinsate. PFAS sampling containers should be stored separately to other sampling containers.	
Are glass sample containers with lined lids being used on-site?	Yes	Use polypropylene or HDPE sampling containers for PFAS analysis (PFAS adsorbs strongly to glass).	Gloves changed between handling glass and PFAS sample containers
Is disposable sampling equipment being decontaminated and reused at different locations?	No	Use dedicated disposable tubing, gloves etc between sampling locations and when appropriate	
Are the samples preserved with chemical ice packs?	No	Avoid using chemical ice packs, use fresh ice in zip lock bags.	
Other Products	**Yes or No**	**If yes:**	**Comments:**
Is aluminium foil used on site?	No	Avoid use of aluminium foil. Thin HDPE sheeting can be used.	
Are stick notes (eg. 3m Post-its) being used?	No	Avoid using these products on site, use standard paper and ball point pens.	
Are waterproof paper, notebooks and labels being used?	No	Avoid using these products on site, use standard paper and ball point pens.	
Are detergents and/or decontamination solutions (eg. Decon 90) being used?	No	Follow 'water only' decontamination approach.	
Sampling Personnel	**Yes or No**	**If no:**	**Comments:**
Are there provisions for handwashing between sampling locations and before every glove change?	Yes	Ensure that the sample has access to soap and water between sampling locations. Wash hands thoroughly before every glove change.	

PFAS Sampling Checklist

Are support personnel at least 2-3m away from sampling processing?	N/A	Support personnel should be at least 2-3m away from sample collection and adhere to the same PPE and sampling considerations.	
Other Considerations	**Yes or No**	**If yes:**	**Comments:**
Are fast food wrappers and containers or pre-wrapped foods and snacks (eg, chocolate bar, chips etc) used or handled by the sampler?	No	Use rigid plastic containers or bags for all food bought to site.	
Is the sample being taken from a drinking water supply?	No	For PFAS sampling of drinking water an additive may be required to remove the chlorine from the drinking water. Confirm the need for additive with the selected laboratory prior to sampling.	

JKEnvironments

PID FIELD CALIBRATION FORM

Client:	Woolworths Group		
Project:	Additional Site Investigation		
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW		
Job Number:	E31888BR		
PID			
Make: Mini Rae Lite	Model: PGM 7350	Unit: Green	Date of last factory calibration: 4/2/21
Date of calibration: 12/2/21		Name of Calibrator: AM	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: 100.1 ppm		Error in measured reading: ± 0	ppm
Measured reading Acceptable (Yes/No):			
PID			
Make:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading: ±	ppm
Measured reading Acceptable (Yes/No):			
PID			
Make:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading: ±	ppm
Measured reading Acceptable (Yes/No):			
PID			
Make:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading: ±	ppm
Measured reading Acceptable (Yes/No):			
PID			
Make:	Model:	Unit:	Date of last factory calibration:
Date of calibration:		Name of Calibrator:	
Calibration gas: Iso-butylene		Calibration Gas Concentration:	100.0 ppm
Measured reading: ppm		Error in measured reading: ±	ppm
Measured reading Acceptable (Yes/No):			

JKEnvironments

WATER QUALITY METER CALIBRATION FORM

Client:	Woolworths Group		
Project:	Additional Site Investigation		
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW		
Job Number:	E31888BR		
DISSOLVED OXYGEN			
Make:		Model:	
Date of calibration: 8/2/21		Name of Calibrator: AM	
Span value: 70% to 130%			
Measured value: 100			
Measured reading Acceptable (Yes/No):			
pH			
Make:		Model:	
Date of calibration: 8/2/21 15/2/21		Name of Calibrator: AM	
Buffer 1: Theoretical pH = 7.01± 0.01		Expiry date: 12/21	Lot No: 3/515904
Buffer 2: Theoretical pH = 4.01± 0.01		Expiry date: 9/21	Lot No: 351749
Measured reading of Buffer 1: 7.19		6.87	
Measured reading of Buffer 2: 4.21		4.13	
Slope:		Measured reading Acceptable (Yes/No):	
EC			
Make:		Model:	
Date: 8/2/21	Name of Calibrator: AM		Temperature: 24 °C
Calibration solution: Conductivity Standard		Expiry date: 12/20	Lot No: 388237
Theoretical conductivity at temperature (see solution container):		1386	µS/cm
Measured conductivity: 1410 µS/cm		Measured reading Acceptable (Yes/No):	
REDOX			
Make:		Model:	
Date of calibration: 8/2/21		Name of Calibrator: AM	
Calibration solution: ORP Test Solution		Expiry date: 10/25	Lot No: 5766
Theoretical redox value:	240mV		
Measured redox reading: 2771 mV		Measured reading Acceptable (Yes/No):	

JKEnvironments

WATER QUALITY METER CALIBRATION FORM

Client:	Woolworths Group		
Project:	Due Diligence Investigation		
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW		
Job Number:	~~E31888KD~~ E31888BR		
DISSOLVED OXYGEN			
Make:		Model:	
Date of calibration: 17/2/21		Name of Calibrator: AM	
Span value: 70% to 130%			
Measured value: 108%			
Measured reading Acceptable (Yes/No):			
pH			
Make:		Model:	
Date of calibration: 17/2/21		Name of Calibrator: AM	
Buffer 1: Theoretical pH = 7.01± 0.01		Expiry date: 5/22	Lot No: 363536
Buffer 2: Theoretical pH = 4.01± 0.01		Expiry date: 3/22	Lot No: 360389
Measured reading of Buffer 1: 7.07			
Measured reading of Buffer 2: 4.11			
Slope:		Measured reading Acceptable (Yes/No):	
EC			
Make:		Model:	
Date: 17/2/21	Name of Calibrator: AM		Temperature: 21 °C
Calibration solution: Conductivity Standard		Expiry date: 11/21	Lot No: 354762
Theoretical conductivity at temperature (see solution container): 1805 µS/cm			
Measured conductivity: 1298 µS/cm		Measured reading Acceptable (Yes/No):	
REDOX			
Make:		Model:	
Date of calibration: 17/2/21		Name of Calibrator: AM	
Calibration solution: ORP Test Solution		Expiry date: 12/25	Lot No: 5931
Theoretical redox value: 240mV			
Measured redox reading: 239.4 mV		Measured reading Acceptable (Yes/No):	

JKEnvironments

WATER QUALITY METER CALIBRATION FORM

Client:	Woolworths Group		
Project:	Due Diligence Investigation		
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW		
Job Number:	~~E31888K~~D E31888BR		
DISSOLVED OXYGEN			
Make: 16/2/21	Model:		
Date of calibration:	Name of Calibrator: AM		
Span value: 70% to 130%			
Measured value: 83			
Measured reading Acceptable (Yes/No):			
pH			
Make:	Model:		
Date of calibration: 16/2/21	Name of Calibrator: AM		
Buffer 1: Theoretical pH = 7.01± 0.01	Expiry date: 5/22	Lot No: 363536	
Buffer 2: Theoretical pH = 4.01± 0.01	Expiry date: 6/21	Lot No: 346922	
Measured reading of Buffer 1: 7.4			
Measured reading of Buffer 2: 4.10			
Slope:	Measured reading Acceptable (Yes/No):		
EC			
Make:	Model:		
Date: 16/2/21	Name of Calibrator: AM	Temperature: 21 °C	
Calibration solution: Conductivity Standard	Expiry date: 11/21	Lot No: 354762	
Theoretical conductivity at temperature (see solution container): 1305 µS/cm			
Measured conductivity: 1287 µS/cm	Measured reading Acceptable (Yes/No):		
REDOX			
Make:	Model:		
Date of calibration: 15/2/21	Name of Calibrator: AM		
Calibration solution: ORP Test Solution	Expiry date: 4/25	Lot No: 5235	
Theoretical redox value: 240mV			
Measured redox reading: 239.8 mV	Measured reading Acceptable (Yes/No):		

JKEnvironments

WATER QUALITY METER CALIBRATION FORM

Client:	Woolworths Group		
Project:	Due Diligence Investigation		
Location:	250 VICTORIA STREET , WETHERILL PARK, NSW		
Job Number:	~~E31888KD~~ E31888BR		
DISSOLVED OXYGEN			
Make:		Model:	
Date of calibration:	15/2/21	Name of Calibrator:	AM
Span value: 70% to 130%			
Measured value:	104		
Measured reading Acceptable (Yes/No):			
pH			
Make:		Model:	
Date of calibration:	15/2/21	Name of Calibrator:	AM
Buffer 1: Theoretical pH = 7.01± 0.01		Expiry date: 5/22	Lot No: 363536
Buffer 2: Theoretical pH = 4.01± 0.01		Expiry date: 6/21	Lot No: 346922
Measured reading of Buffer 1:	6.87		
Measured reading of Buffer 2:	4.13		
Slope:		Measured reading Acceptable (Yes/No):	
EC			
Make:		Model:	
Date: 15/2/21	Name of Calibrator: AM		Temperature: 23 °C
Calibration solution: Conductivity Standard		Expiry date: 11/21	Lot No: 354762
Theoretical conductivity at temperature (see solution container):		1359	µS/cm
Measured conductivity: 1369 µS/cm		Measured reading Acceptable (Yes/No):	
REDOX			
Make:		Model:	
Date of calibration:	15/2/21	Name of Calibrator:	AM
Calibration solution: ORP Test Solution		Expiry date: 4/25	Lot No: 5235
Theoretical redox value:	240mV		
Measured redox reading: 240.9 mV		Measured reading Acceptable (Yes/No):	

Appendix I: Guidelines and Reference Documents

Acid Sulfate Soils Management Advisory Committee (ASSMAC), (1998). Acid Sulfate Soils Manual

Australian and New Zealand Environment Conservation Council (ANZECC), (2000). Australian and New Zealand Guidelines for Fresh and Marine Water Quality

Canadian Council of Ministers of the Environment, (1999). Canadian soil quality guidelines for the protection of environmental and human health: Benzo(a)Pyrene (1997)

CRC Care, (2011). Technical Report No. 10 – Health screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document

Contaminated Land Management Act 1997 (NSW)

Department of Land and Water Conservation, (1997). 1:25,000 Acid Sulfate Soil Risk Map Series

Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land (1998)

National Health and Medical Research Council (NHMRC), (2018). National Water Quality Management Strategy, Australian Drinking Water Guidelines 2011

NSW Department of Environment and Conservation, (2007). Guidelines for the Assessment and Management of Groundwater Contamination

NSW EPA, (1995). Contaminated Sites Sampling Design Guidelines

NSW EPA, (2014). Waste Classification Guidelines - Part 1: Classifying Waste

NSW EPA, (2015). Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997

NSW EPA, (2017). Guidelines for the NSW Site Auditor Scheme, 3rd Edition

NSW EPA, (2020). Consultants Reporting on Contaminated Land, Contaminated Land Guidelines

National Environment Protection Council (NEPC), (2013). National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013)

Olszowy, H., Torr, P., and Imray, P., (1995). Trace Element Concentrations in Soils from Rural and Urban Areas of Australia. Contaminated Sites Monograph Series No. 4. Department of Human Services and Health, Environment Protection Agency, and South Australian Health Commission

Protection of the Environment Operations Act 1997 (NSW)

State Environmental Planning Policy No.55 – Remediation of Land 1998 (NSW)

World Health Organisation (WHO), (2008). Petroleum Products in Drinking-water, Background document for the development of WHO Guidelines for Drinking Water Quality

Western Australia Department of Health, (2009). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia